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Catalog | March 2020



Harmony iPC

Industrial PC, Edge Box and Display

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- **Harmony** HMI Operator Terminals, IPC and EdgeBox
- **Harmony** Signaling Devices
- **Harmony** Electrical Relays
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Quick access to product information

Get technical information about your product

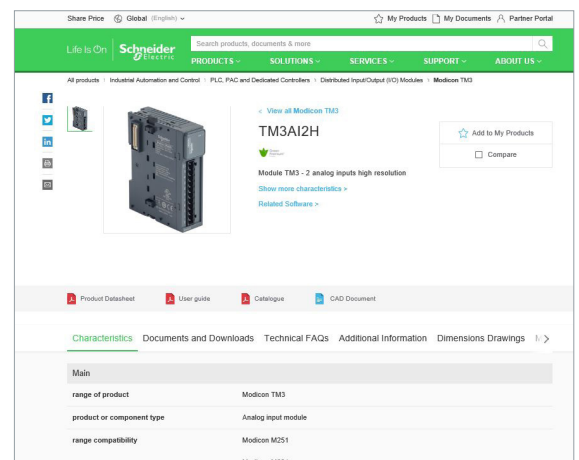
References

Modicon TM3
I/O expansion modules for Modicon controllers
Analog I/O modules

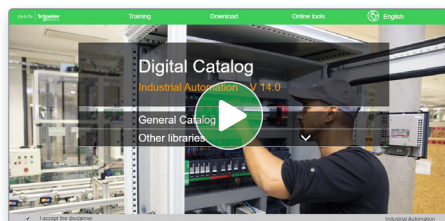
Number and type of channels	Input range	Output range	Resolution	Aperture time (typical)	Reference	Weight (kg)
2 voltage/current inputs	-15...+15 VDC 0...25 mA, 4...20 mA	15 000 of 15 000 + sign	15 000 of 15 000 + sign	100 ns	TM3AI2H	0.110
4 voltage/current inputs	-15...+15 VDC 0...25 mA, 4...20 mA	15 000 of 15 000 + sign	15 000 of 15 000 + sign	100 ns	TM3AI2H	0.110
4 voltage/current or temperature inputs	-15...+15 VDC 0...25 mA, 4...20 mA	15 000 of 15 000 + sign	15 000 of 15 000 + sign	100 ns	TM3AI2H	0.110
4 differential temperature inputs	-15...+15 VDC 0...25 mA, 4...20 mA	15 000 of 15 000 + sign	15 000 of 15 000 + sign	100 ns	TM3AI2H	0.110

Each commercial reference presented in a catalog contains a hyperlink. Click on it to obtain the technical information of the product:

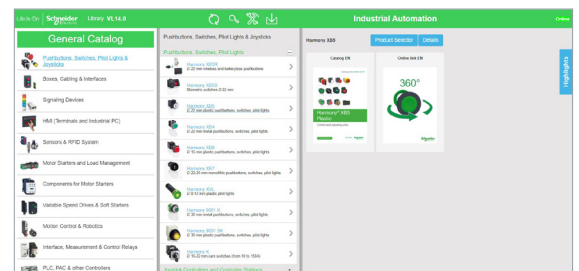
- Characteristics, Dimensions and drawings, Mounting and clearance, Connections and schemas, Performance curves
- Product image, Instruction sheet, User guide, Product certifications, End of life manual



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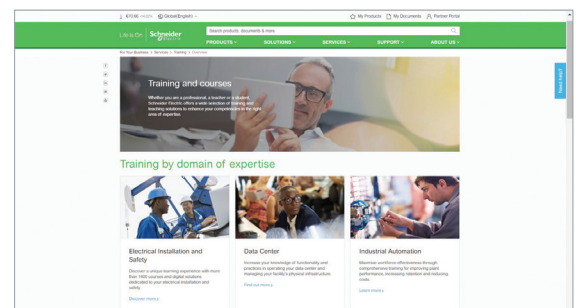


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Harmony Industrial PC, Edge Box and Display

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Harmony iPC

Industrial PC, Edge Box, and Display

EcoStruxure is Schneider Electric's innovative IoT architecture addressing the needs of automation applications for a wide range of industries.

Harmony Edge Box meets IIoT challenges at the Edge Control level by enabling secured communication from connected products on the shop floor to the required software and applications on the top floor.

This provides improved profitability and new business opportunities, through enhanced asset performance for more efficient operation and maintenance of capital assets. Harmony iPC and Harmony Edge Box offer smart application design and engineering to leverage asset performance with end-to-end cybersecurity.



Smart design and engineering

Configurable hardware

- ❑ Millions of possible combinations
- ❑ 12 main units, making 3x IIoT Edge Box, 6x Box PC, 36x Panel PC or Thin client, etc.
- ❑ Dual Ethernet, wireless, choice of memory, displays, storage, and extensions, etc.
- ❑ Up to 7 displays can be connected remotely over a maximum distance of 400 m/1,312 ft

Versatile Edge Control software

- ❑ Open operating system for any software (HMI, EcoStruxure Machine SCADA Expert, engineering and maintenance tools, thin clients, IT/OT connections, etc.)
- ❑ For engineering by automation experts

Benefits

- ❑ Reduced implementation time
- ❑ Best-fit application
- ❑ Consistency of operator workstations
- ❑ Designed for fast and easy maintenance/replacement



Cybersecurity

ISA/IEC-62443 approved

- ❑ Designed according to standards (analyses, threat model, user document, etc.)
- ❑ Hardware encryption with TPM
- ❑ Secured password boot and operating system settings
- ❑ McAfee whitelisting
- ❑ Node-RED parallel wiring model does not interfere with automation
- ❑ IT infrastructure security
- ❑ EcoStruxure Secure Connect Advisor for remote connections

Benefits

- ❑ System security helps to protect data and assets
- ❑ Business continuity

+ Simplify your machine interfaces with intuitive Harmony iPCs



Product Selector

Click to open the Product Selector and select the right product.



Asset performance

Industrial design

- No rotating parts, 0-55°C/32-131 °F operating temperature
- Industrial certifications including hazardous locations and marine
- Conformal coating, UPS
- 11+ years of availability and 4 years of repair service

IIoT wiring with Node-RED

- Shared operational data with IT and Cloud applications
- Analytics for business enablers
- Secondary sensing connection

Benefits

- Leverage crew reactivity for business maximization
- Asset reliability and optimization
- Predictive maintenance with advanced analytics
- Control system sustainability

Harmony iPC and Edge Box with Node-RED for IIoT wiring

Harmony iPC and Edge Box runs Node-RED to wire devices on the Industrial Internet of Things. Node-RED is a simple, open source graphical programming tool for designing the communication data flow from OT to IT.

The Node-RED community count thousands of nodes ready-to use, to get data from connected products, manage the communication at the Edge Box level, and connect to the IT systems.

Schneider Electric provides some nodes that are tested, validated, and supported to run with Node-RED on the Harmony iPC and Edge Box.

For instance, the Node-RED wiring can be made up of Modbus or UMAs nodes to get data from connected products to EcoStruxure Machine Advisor, Schneider AVEVA Insight Cloud application, or other IT or Cloud application, thus dynamically sharing business information from the shop floor to leverage asset performance.

Harmony iPC and Edge Box family

As a global specialist in industrial automation, Schneider Electric offers integrated solutions across multiple markets. Harmony iPC provides solutions to applications that need to run on Windows or Linux operating systems in industrial environments. They are a comprehensive range of intuitive Harmony Edge Box and industrial PCs for improved productivity to enhance operator experience.

Harmony Edge Box

Harmony HMIBSC/HMIBMI/HMIBMO can be used for IIoT at the edge of EcoStruxure for direct connection to Cloud applications (running Node-RED to wire from OT to IT) with enhanced cybersecurity by design.

Harmony HMIBSC Core

- 2 Gigabit Ethernet, 1x RS-232/422/485, 2x USBs, 1x display port, 1x HDMI
- Qualcomm ARM Cortex-A53 quad-core fanless processor
- 1x full-size mini PCIe slot with optional interface, 1x M.2 slot for extension, 1x SD card slot
- Node-RED

Harmony HMIBMI Basic

- 2 Gigabit Ethernet, 1x RS-232/422/485, 2x USBs, 1x display port
- Intel Atom Apollo Lake E3930 dual-core fanless processor
- 1x full-size mini PCIe slot with optional interface
- Node-RED, default or to be installed depending on the model

Harmony HMIBMO Optimized

- 2 Gigabit i210 Ethernet, 1x RS-232/422/485, 4x USBs, 2x display ports
- Intel Atom Apollo Lake E3930 dual-core fanless processor
- 1x full-size mini PCIe slot with optional interface
- Node-RED, default or to be installed depending on the model



Harmony iPCs and Edge Box at Edge Control level for EcoStruxure Machine and EcoStruxure Plant

1



Harmony Modular Box PC

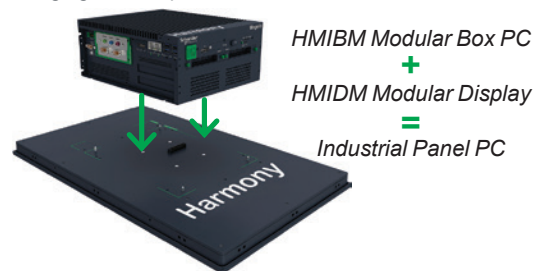
Harmony HMIBM Modular Box PC cater to some of the most demanding field applications running on a Windows operating system platform. They make the complete Panel PC when mounted with Harmony HMIDM Modular Displays. Depending on the model, they are conformal coated, and cULus certified for industrial control, hazardous location and marine. They can run also Trusted Platform Module (TPM) for cybersecured hardware encryption.

Harmony HMIBM Modular Box PC (Universal/Performance)

- 2 Gigabit Ethernet, 1x RS-232/422/485, 4x USBs, 2x display ports, 3x antenna connectors
- Intel Celeron 2980U dual-core (Universal)/Intel Core i7-4650U (Performance) fanless processors
- 2x full-size mini PCIe expansion slots and 2x optional PCI/PCIe card slots
- 1x CFast card slot, 2x SSD/HDD hot-swappable slot and optional battery backup

Harmony Modular Display

Harmony HMIDM Modular Displays are the companion of Harmony HMIBM Modular Box PCs. They can be directly mounted on to the Box PC or remotely via cables. This modularity not only allows multiple variations with reduced inventories, it also facilitates maintenance. The Box PC or the Display can be easily replaced without changing the complete Panel PC unit.



Harmony HMIDM Modular Display

- 4:3 12" and 15" single-touch resistive with front USB
- 16:9 12"/15"/19"/22" multi-touch projected capacitive technology, 7H hardness, anti-scratch
- IP66, Nema 4X indoor front panel

With Harmony HMIDAD Display Adapter, the Harmony Modular Display can be used as a:

- Local display (over a maximum distance of 5 m/16.40 ft)
- Remote display (up to 4 daisy chain displays with same screen definition, and over a maximum distance of 100 m/328 ft for the 1st display to 400 m/1,312 ft for the 4th display)



Harmony iDisplay

Harmony HMIDID iDisplays are robust monitors with an excellent screen size/dimensions ratio and can be used in conjunction with industrial PCs. They have the same cut-out dimensions as Harmony Panel PCs and Harmony HMI operator panels, which makes it easy to upgrade installations.

Harmony HMIDID iDisplay

- 12" and 15" size color TFT LCDs
- 1x USB on front panel, 1x DVI-D video, 1x USB
- IP67/66 and Nema 4X front screen
- Industrial certifications (hazardous location and marine)



New digital technologies are opening up unprecedented opportunities for efficiency and productivity in the industry



Harmony S-Panel and Enclosed Panel PCs

Harmony HMIPS S-Panel PCs are simple and compact all-in-one hardware, with fanless Intel CPUs, HDD/SSD storage drive slots, and mini PCIe slots for optional interfaces.

Harmony HMIPSO S-Panel PC (Optimized)

- ❑ Intel Atom E3827 dual-core fanless processor, 4 GB DDR3 RAM
- ❑ Expansion kit allowing 1x SATA HDD/SSD slot and 1x mini PCIe slot
- ❑ W10" and W15" multi-touch projected capacitive technology screens

Harmony HMIPSP S-Panel PC (Performance)

- ❑ Intel i3-4010U dual-core fanless processor, 8 GB DDR3 RAM
- ❑ 1x full-size mini PCIe slot and 1x optional interface slot
- ❑ W15" and W19" HD multi-touch projected capacitive technology screens

Harmony Enclosed Panel PCs are completely enclosed PCs with IP66 protection on 6 faces and M12 connectors. They are ready to be directly installed on a VESA arm, without any additional enclosure.

Harmony HMIPEP Enclosed Panel PC (Performance)

- ❑ Intel i3-4010U dual-core fanless processor, 8 GB DDR3 RAM
- ❑ W19" multi-touch projected capacitive technology screen



Harmony Rack PC

Harmony HMIR Rack PCs offer a one-stop shop for a complete plant solution that has been tested and validated by Schneider Electric, along with EcoStruxure Hybrid DCS Engineering. Harmony HMIRs can be easily installed in Actassi 19" enclosures and connected to Harmony iDisplay monitors.

Harmony HMIR●O Rack PC 2U (Optimized) ⁽¹⁾

- ❑ Intel Core G540 or G850 processor, 2 GB RAM
- ❑ 2x PCI Express (x8) + 1x PCI
- ❑ 2 Gigabit Ethernet, 2x RS-232 (+ 4 optional), 6x USB, 1x VGA, 1x DVI
- ❑ 1x internal SATA3 slot and 2x external SATA2 trays, 1x DVD-RW drive

Harmony HMIRSP Rack PC 4U (Performance) ⁽¹⁾

- ❑ Intel Xeon E3-1225 processor, 4 to 16 GB RAM
- ❑ 4x PCI Express (x16) + 3x PCI
- ❑ 2 Gigabit Ethernet, 2x RS-232 (+ 4x optional), 6x USB, 1x VGA, 1x DVI
- ❑ Dedicated models with Windows Server operating systems

Companion products ⁽²⁾

EcoStruxure™ Secure Connect Advisor provide a secure connection between remote display units on the work site (via SiteManager Embedded) and computers or smart devices in the office (via LinkManager) over a secure central server (GateManager). With EcoStruxure Machine Secure Connect Advisor, maintenance personnel can access Schneider Electric software and update it remotely and securely via the Harmony iPC and Harmony Edge Box, and other connected devices as if they were on site. Troubleshooting and repair can also be performed remotely upon request.

⁽¹⁾ Rack 2U or 4U is a unit used to measure the height of a device to be mounted in a 19" rack enclosure. 1 unit = 44.45 mm/1.75 in. high.

⁽²⁾ For more information, please refer to "EcoStruxure Secure Connect Advisor catalog [DIA5ED2190101EN](#)."



Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIPS S-Panel and
HMIPEP Enclosed Panel PCs

Type of Harmony iPC		Harmony HMIPS S-Panel PC
		HMIPSO Optimized
		
Fanless		★★★★★
Mounting type		Panel PC
Display	Touch screen	W10" and W15" multi-touch projected capacitive technology screen
	Definition	W10": HD WSVGA, 1280 × 800 pixels W15": HD WFXGA, 1366 × 768 pixels
	Front protection	IP66 front panel, NEMA 4X indoor, and 7H hardness anti-scratch
CPU	Processor	Intel®Atom E3827 dual-core (1.75 GHz)
	Expansion slots	1x optional full-size mini PCIe slot with optional interface slot (1)
	Storage	CFast card ≥ 32 GB, or SSD flash disk ≥ 128 GB with 1.5 million hours MTBF (1), or HDD hard disk ≥ 500 GB Enterprise 24/7 (1)
	RAM	4 GB (not user-expandable)
	Hot-swap RAID HDD and battery backup	—
Operating system		None, or WES 7 Premium SP1 (64-bit), or Windows 8.1 Industry (64-bit Multi-language) (2) (4), or Windows 10 IoT Enterprise (64-bit Multi-language)
Supply voltage		24 V $\pm$ 20%. AC power supply with external AC/DC power adapter HMIYPSOMAC1.
Standards and certifications		CE, cULus (UL IT 60950, CSA IT 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)
Software		EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Machine SCADA Expert Run Time (4), EcoStruxure Secure Connect Advisor (5)
References		HMIPSO●552D1●01, HMIPSO●752D1●01
Pages		2/2 and 2/3
Configured-To-Order		See configured Harmony S-Panel PC on page 2/23

(1) With HMIYPADPSOSTO1 expansion kit for HMIPSO allowing 1 HDD/SSD slot and 1 mini PCIe slot.
(2) Windows 8.1 requires user activation.
(3) To be installed and activated by unlimited license HMIRTCZLSPAZZ (Digital) or HMIRTCZLSPMZZ (Paper).

Harmony HMIPS S-Panel PC	Harmony HMIPEP Enclosed Panel PC
HMIPSP Performance	HMIPEP Performance
	
★★★★★	★★★★★
Panel PC	Enclosed PC
W15" and W19" multi-touch projected capacitive technology screen	W19" multi-touch projected capacitive technology screen
HD WFXGA, 1366 × 768 pixels	
IP66 front panel, NEMA 4X indoor, and 7H hardness anti-scratch	IP66 on all 6 faces, NEMA 4X indoor, and 7H hardness anti-scratch
Intel Core™ i3-4010U dual-core 4 th generation (1.7 GHz)	
1x full-size mini PCIe slot with optional interface slot	1x full-size mini PCIe slot
CFast card ≥ 32 GB, or SSD flash disk ≥ 128 GB or ≥ 256 GB with 1.5 million hours MTBF (1), or HDD hard disk ≥ 500 GB Enterprise 24/7 (1)	SSD flash disk ≥ 128 GB with 1.5 million hours MTBF
8 GB (not user-expandable)	
—	
None, or WES 7 Premium SP1 (64-bit), or Windows 8.1 Industry (64-bit Multi-language) (2) (4), or Windows 10 IoT Enterprise (64-bit Multi-language)	
24 V $\pm$ 20%. AC power supply with external AC/DC power adapter HMIYPSPMAC1.	
CE, cULus (UL IT 60950, CSA IT 60950), RCM, EEcoStruxure Secure Connect Advisor, CCC, FCC (part 15 EMC Class A)	
EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Machine SCADA Expert Run Time (4), EcoStruxure Secure Connect Advisor (5)	
HMIPSP●752D1●01, HMIPSP●952D1●01	HMIPEP●952D1●01
2/4 to 2/7	2/8 and 2/9
See configured Harmony S-Panel PC on page 2/23	

(4) With Configured-To-Order Harmony S-Panel PC.
(5) To be installed and activated with subscription.

Harmony iPC
Industrial PC, Edge Box, and Display
Harmony Edge Box and Modular Box PC

Type of Harmony Edge Box and iPC		Harmony HMIBSC Core Box	
			
Fanless		★★★★★	
Mounting	Box PC	HMIBM Box wall/book/DIN rail/Flat	
	Panel PC	–	
CPU (1)	Processor	Qualcomm ARM Cortex-A53 Quad core up to 1.2 GHz	
	Expansion slots, interfaces	1x full-size slot with optional interface (1), 1x M.2 slot (not for storage) (2)	
	Storage	8 GB eMMC	
	RAM	1 GB or 2 GB (not user-expandable)	
	Battery backup	–	
Operating system (1)		Linux Yocto	
Conformal Coating		Only for HMIBSCEA53D1L0A	
Supply voltage		12-24 V ⎓ or 100...240 V~ with power adapter HMIYPSOMAC1	
Standards and certifications		CE, cULus ITE (UL IT 60950, CSA IT 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)	
Software, IIoT and Cybersecurity		Secure password boot , Node-RED pre-installed, TPM for Cybersecurity (5)	
References		HMIBSCEA53D1L0●	
Pages		3/2 and 3/3	
Configured-To-Order		See configured Harmony Modular Box PC on page 4/32	

(1) For mini PCIe card, cellular 4G or 8x analog input interface 0-10 V.
(2) For M.2 card, 2x analog input interface 0-10 V / 4-20 mA.
(3) To be installed and activated by unlimited license HMIRTCWZLSPAZZ (Digital) or HMIRTCWZLSPMZZ (Paper).
(4) M.2 SSD 1.5 Millions H. MTBF, 3 years manufacturer warranty.
(5) Cybersecurity TPM optional module HMIYBINLTPM201 for hardware encryption with Linux.

Harmony HMIBM Modular Box				
HMIBMI Basic IIoT			HMIBMO Optimized	
				
★★★★★			★★★★★	
HMIBM Box wall/book/DIN rail/Flat			HMIBM Box wall/book/ DIN rail/ Flat	
HMIBM Box + associated HMIDM Display (9)			HMIBM Box + associated HMIDM Display (9)	
Intel Atom Apollo Lake E3930 dual-core 1.8 GHz			Intel Atom Apollo Lake E3930 dual-core 1.8 GHz	
1x mini PCIe full slot with optional interface			1x mini PCIe full slot without optional interface	1x mini PCIe full slot with optional interface
64 GB eMMc (soldered)	128 GB eMMc (soldered)	128 GB eMMc (soldered)	64 GB M.2 SSD (4) or None	250 GB M.2 SSD (4) or None
4 GB (not user-expandable)			4 GB (not user-expandable)	4 GB or 8 GB (not user-expandable)
Optional			Optional	
None or Windows 10 IoT Enterprise LTSC (64-bit)	Windows 10 IoT Enterprise LTSC (64-bit)	None or Configured-To-Order offer	None or Windows 10 IoT Enterprise LTSC (64-bit)	None or Windows 10 IoT Enterprise LTSC (64-bit)
No	No	Yes	No	Only for HMIBMO0A5DDF10A
12-24 V ~ or 100...240 V~ with power adapter HMIYPSOMAC1			12-24 V ~ or 100...240 V~ with power adapter HMIYPSOMAC1	
CE, cULus ITE (UL IT 60950, CSA IT 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)			CE, RCM, EAC, CCC, cULus Industrial Control (UL 61010, CSA 22.2 No.142), cULus Hazardous locations (ANSI/ISA 12.12.01 and CSA C22.2 No. 213, Class I, Division 2), CE ATEX and IECEx Hazardous Locations 3GD Zone 2/22, Marine DNV (without HDD)	
EcoStruxure Operator Terminal Expert (3) , EcoStruxure Secure Connect Advisor (10), McAfee whitelisting (6), TPM (8), Secure password boot UEFI, Node-RED pre-installed/to be installed (7) or None	EcoStruxure Operator Terminal Expert (3), EcoStruxure Secure Connect Advisor (10), McAfee whitelisting (6), TPM (8), Secure password boot UEFI, Node-RED to be installed (7) or None	None or Configured-To-Order offer	EcoStruxure Operator Terminal Expert (3), EcoStruxure Machine SCADA Expert Run Time (11), EcoStruxure Secure Connect Advisor (10), McAfee whitelisting (6), TPM (8), Secure password boot UEFI, Node-RED to be installed (7) or None	EcoStruxure Operator Terminal Expert (3), EcoStruxure Machine SCADA Expert Run Time (11), EcoStruxure Secure Connect Advisor (10), McAfee whitelisting (6), TPM (8), Secure password boot UEFI, Node-RED to be installed (7) or None
HMIBMIEA5DD1●01	HMIBMIEA5DD110L	HMIBMIEA5DD100A	HMIBMOMA5DD1●01	HMIBMOMA5DDF10●
4/2 and 4/3			4/4 and 4/5	
See configured Harmony Modular Box PC on page 4/32				

(6) McAfee whitelisting to be installed and requires license sticker HMIYYMACWLIOT1.
(7) Node-RED to be installed or through USB key Windows 10 Recovery process ("Windows 10 with Node-RED for IIoT Box" option to be selected).
(8) Cybersecurity TPM optional module HMIYMINATPM201 for hardware encryption with Windows bit-locker.
(9) For more information, refer to [page 1/8](#).
(10) To be installed and activated with subscription.
(11) With Configured-To-Order Harmony Modular Box PC.



Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIBM Modular Box PC

Type of Harmony iPC		Harmony HMIBM Modular Box PC	
		HMIBMU Universal	
			
Fanless		★★★★★ (1)	
Mounting	Box PC	HMIBM Box wall/book mounting	
	Panel PC	HMIBM Box + associated HMIDM Display (8)	
CPU (1)	Processor	Intel Celeron® 2980U dual-core (1.6 GHz)	
	Expansion slots	2x full-size mini PCIe with 2x optional interface slots, PCI/PCIe (none or 2)	
	Storage	None, or CFast card ≥ 32 GB, or SSD flash disk ≥ 128 GB with 1.5 million hours MTBF, or HDD hard disk ≥ 500 GB Enterprise 24/7	None or Configured-To-Order offer
	RAM	4 GB (not user-expandable)	8 GB (not user-expandable)
	Hot-swap RAID HDD and battery backup	Optional	
Operating system		None, or WES 7 Premium SP1 (64-bit), or Windows 8.1 Industry (64-bit Multi-language) (2),(4), or Windows 10 IoT Enterprise (64-bit Multi-language)	None or Configured-To-Order offer
Conformal coating		–	Yes
Supply voltage		18...36 V ⎓ or 100...240 V ~ with modular power adapter HMIYMMAC1	
Standards and certifications		CE, RCM, EAC, CCC, cULus Industrial Control (UL 61010, CSA 22.2 No.142), cULus Hazardous locations (ANSI/ISA 12.12.01 and CSA C22.2 No. 213, Class I, Division 2), CE ATEX and IECEx Hazardous Locations 3GD Zone 2/22	
Software, IIoT and Cybersecurity		EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Machine SCADA Expert Run Time (4), Node-RED to be installed, McAfee whitelisting (5), EcoStruxure Secure Connect Advisor (6), TPM for Cybersecurity (7)	None or Configured-To-Order offer
References		HMIBMU•I29D••01	HMIBMU0I29D•00A
Pages		4/6 and 4/7	
Configured-To-Order		See configured Harmony Modular Box PC on page 4/32	

(1) HMIYBFT4BM11 fan kit is required only when PCI/PCIe expansions cards above 3W are installed.
(2) Windows 8.1 requires user activation.
(3) To be installed and activated by unlimited license HMIRWCZLSPAZZ (Digital) or HMIRWCZLSPMZZ (Paper).
(4) With Configured-To-Order Harmony Modular Box PC.

Harmony HMIBM Modular Box PC	
HMIBMP Performance	
	
★★★★★ (1)	
HMIBM Box wall/book mounting	
HMIBM Box + associated HMIDM Display (8)	
Intel Core i7-4650U (1.7 GHz low power with turbo boost at 3.3 GHz)	
2x full-size mini PCIe with 2x optional interface slots, PCI/PCIe (none or 2)	
None, or SSD flash disk ≥ 128 GB with 1.5 million hours MTBF, or HDD hard disk ≥ 500 GB Enterprise 24/7	None or Configured-To-Order offer
8 GB (not user-expandable)	16 GB (not user-expandable)
Optional	
None, or WES 7 Premium SP1 (64-bit) (2), or Windows 8.1 Industry (64-bit Multi-language) (2),(4), or Windows 10 IoT Enterprise (64-bit Multi-language)	None or Configured-To-Order offer
–	
Yes	
18...36 V ⎓ or 100...240 V ~ with modular power adapter HMIYMMAC1	
CE, RCM, EAC, CCC, cULus Industrial Control (UL 61010, CSA 22.2 No.142), cULus Hazardous Locations (ANSI/ISA 12.12.01 and CSA C22.2 No. 213, Class I, Division 2), CE ATEX and IECEx Hazardous Locations 3GD Zone 2/22, Marine DNV (without HDD)	
EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Machine SCADA Expert Run Time (4), Node-RED to be installed, McAfee whitelisting (5), EcoStruxure Secure Connect Advisor (6), TPM for Cybersecurity (7)	None or Configured-To-Order offer, Node-RED to be installed, McAfee whitelisting (5), EcoStruxure Secure Connect Advisor (6), TPM for Cybersecurity (7)
HMIBMP•I74D••01	HMIBMP0I74D•00A
4/8 and 4/9	
See configured Harmony Modular Box on page 4/32	

(5) McAfee whitelisting to be installed, and requires license sticker HMIYYMACWLIOT1.
(6) To be installed and activated with subscription.
(7) Cybersecurity TPM optional module HMIYMINATPM201 for hardware encryption with Windows bit-locker.
(8) For more information, refer to [page 1/8](#).



Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIDM Modular Display and HMIDID iDisplay

Modular displays for Panel PC mounting		Harmony HMIDM Modular Display			
					
Display	Touch screen	4:3 12" single-touch resistive	4:3 15" single-touch resistive	W12" multi-touch capacitive	W15" multi-touch capacitive
	Definition	XGA, 1024 x 768 pixels		WHD/WXGA, 1280 x 800 pixels	WHD/FWXGA, 1366 x 768 pixels
	Front protection	IP66, NEMA 4X indoor, and 7H hardness anti-scratch			
	Front USB port	1x USB 2.0 port		—	
Supply voltage		—			
Standards and certifications		CE, Marine DNV, RCM, EAC, CCC, cULus Industrial Control (UL 61010, CSA 22.2 No. 142), cULus HazLoc (ANSI/ISA 12.12.01 and CSA C22.2 No. 213, Class I, Division 2), CE ATEX and IECEx HazLoc 3GD Zone (15" only), FCC (part 15 EMC Class A).			
Marine certifications		—			
Compatibility		All HMIBM Modular Boxes			
Mounting	Panel PC	HMIBM Box + Associated HMIDM Display			
	Panel monitor	HMIDAD Adapter + Associated HMIDM Display			
References		HMIDM6421	HMIDM7421	HMIDM6521	HMIDM7521
Pages		4/24			

(1) To be installed and activated by unlimited license HMIRTCZLSPAZZ (Digital) or HMIRTCZLSPMZZ (Paper).
(2) For more information, please refer to Harmony Display Adapter on [page 4/28](#).

Harmony HMIDM Modular Display		Harmony HMIDAD Display Adapter (2)
		
W19" multi-touch capacitive	W22" multi-touch capacitive	HMIDM Modular Display with HMIDAD Display Adapter, making remote monitors as: □ Local display (maximum distance of 5 m/16.4 ft) □ Remote display (up to 4 daisy chain displays with same screen definition, and maximum distance of 100 m/328 ft for 1 st display to 400 m/1312 ft for 4 th display)
WHD FWXGA, 1366 x 768 pixels	Full HD, 1920 x 1080 pixels	
IP66, NEMA 4X indoor, and 7H hardness anti-scratch		
—		1x USB 2.0 (Type B), 1 display port
—		
CE, Marine DNV, CCC, EAC, RCM, cULus (UL IT 60950, CSA IT 60950), FCC (part 15 EMC Class A)		CE, cULus HazLoc, ATEX, CCC
—		—
All HMIBM Modular Boxes		All Harmony HMI Displays
HMIBM Box + Associated HMIDM Display		—
HMIDAD Adapter + Associated HMIDM Display		Harmony HMIDM Display mounted on front
HMIDM9521	HMIDMA521	HMIDADP11
4/25		4/31



Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIR Rack PC and HMIDID Display

Type of Harmony iPC		Harmony HMIR Rack PC
		HMIRXO Optimized PC 2U (2)
		
Fanless		—
CPU (1)	Processor	Intel Core G540 (2.5 GHz)
	PCI slot	2x PCIe (x8) + 1 PCI
	Storage	No storage drive or 1 HDD
	RAM	2 GB DDR3
Operating system		None
Supply voltage		110...240 V ~ (300 W single power supply)
Standards and certifications		CE, cULus, EAC, CCC, RCM
Software		Vijeo Designer Run Time Demo (21 day trial version) (1), EcoStruxure Operator Terminal Expert Run Time Demo (3)
Compatible display models		Compatible with all screens of Harmony iDisplay range
References		HMIRXOHC3001
Pages		5/2 and 5/3
Modular displays for Panel PC mounting		Harmony HMIDID iDisplay - Remote monitors with DVI port



Display	Touch screen	12" color multi-touch resistive
	Definition	XGA, 1024 × 768 pixels
	Front protection	IP65
Front USB port		1x USB 2.0 port
Supply voltage		12...24 V ~
Standards and certifications		CE, cULus, EAC, RCM, KC, ATEX/IECEX
Marine certifications		BV, CCS, DNV, GL, LR, RINA, ABS
Compatibility		All PCs with video port
Mounting	Panel PC	—
	Panel monitor	Yes
References		HMIDID64DTD1
Pages		6/2

(1) Require Vijeo Designer V6.2 SP2 or later to build and download HMI application.
(2) Rack 2U or 4U is a unit used to measure the height of a device that will be mounted in an 19" rack enclosure. 1 unit = 44.45 mm/1.75 in. high.

Harmony HMIR Rack PC		HMIRSP Performance PC 4U (2)
		
—		
Intel Xeon™ Quad core E3-1225 (3.1 GHz)		
Up to 7 slots: 4x PCIe (x16) + 3x PCI		
1x HDD, 2x HDD RAID, or 1x SSD		
4 GB DDR3, 8 GB ECC, or 16 GB DDR3		
Windows Server 2012 R2		
110...240 V ~ (500 W single or redundant power supply)		
CE, cULus, EAC, CCC, RCM		
Vijeo Designer Run Time Demo (21 day trial version) (1), EcoStruxure Operator Terminal Expert Run Time Demo, None, or EcoStruxure Hybrid DCS leaflet		
Compatible with all screens of Harmony iDisplay range		
HMIRSPXR6T01		
5/2 and 5/3		
Harmony HMIDID iDisplay		Alternate Display option with Harmony HMIDAD Display Adapter (4)



15" color multi-touch resistive	XGA, 1024 × 768 pixels	HMIDM Modular Display with HMIDAD Display Adapter, making remote monitors as: ☐ Local display (maximum distance of 5 m/16.40 ft) ☐ Remote display (up to 4 daisy chain displays with same screen definition, and maximum distance of 100 m/328 ft for 1 st display to 400 m/1312 ft for 4 th display)
	IP65	
	1x USB 2.0 port	1x USB 2.0 (Type B), 1x display port
12...24 V ~		12...24 V ~
CE, cULus, EAC, RCM, KC, ATEX/IECEX		CE, cULus HazLoc, ATEX, CCC
BV, CCS, DNV, GL, LR, RINA, ABS		—
All PCs with video port		All Harmony HMI Displays
—		—
Yes		Harmony HMIDM Display mounted on front
HMIDID73DTD1		HMIDADP11
6/3		4/31

(3) To be installed and activated by unlimited license HMIRWCZLSPAZZ (Digital) or HMIRWCZLSPMZZ (Paper).
(4) For more information, please refer to Harmony Display Adapter on page 4/28.



Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIPS S-Panel and HMIPEP Enclosed Panel PCs

Harmony HMIPS S-Panel and HMIPEP Enclosed Panel PCs

Selection guide [page 2/2](#)

■ HMIPSO Optimized

- Presentation [page 2/10](#)
- Description [page 2/11](#)
- References
 - Harmony HMIPSO Optimized: 10" touch screen [page 2/12](#)
 - Harmony HMIPSO Optimized: 15" touch screen [page 2/13](#)

■ HMIPSP Performance

- Presentation [page 2/14](#)
- Description [page 2/15](#)
- References
 - Harmony HMIPSP Performance: 15" touch screen [page 2/16](#)
 - Harmony HMIPSP Performance: 19" touch screen [page 2/17](#)

■ HMIPEP Performance

- Presentation [page 2/18](#)
- Description [page 2/19](#)
- References
 - Harmony HMIPEP Performance: 19" touch screen [page 2/19](#)

■ References

- Separate components
 - Drives [page 2/20](#)
 - Interfaces [page 2/20](#)
 - Accessories [page 2/22](#)
- Configured-To-Order:
 - Harmony HMIPSO/HMIPSP/HMIPEP Panel PCs [page 2/23](#)
- Equivalent product table [page 2/23](#)

Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIPS S-Panel PC
HMIPSO Optimized - 10" and 15" touch screens

Type of Harmony iPC		Harmony HMIPSO Optimized S-Panel PC - 10" touch screen			
					
Fanless		★★★★★			
Mounting type		Panel PC			
Screen	Type	LED LCD 5-point multi-touch projected capacitive technology screen			
	Size	W 10.1"			
	Resolution	HD WSVGA, 1280 × 800 pixels, 267,000 colors			
	Degree of protection	IP66 front panel, NEMA 4X indoor, and 7H hardness anti-scratch			
	View angle	Vertical 160°, horizontal 160°			
	Backlight	Life span > 50,000 hrs @ 25 °C/77 °F			
	Operate with water on screen	Yes			
CPU	Processor	Intel® Atom E3827 dual-core (1.75 GHz, low power)			
	Storage	Main drive	CFast ≥ 32 GB		–
			SSD flash disk ≥ 128 GB (5-year manufacturer warranty and 1.5 million hours MTBF) (1)		
	Slots	HDD hard disk ≥ 500 GB Enterprise 24/7 (1)			
	□ 1 CFast card slot □ 1x 2.5" SATA HDD/SSD storage slot, user-accessible (1)				
	Expansion kit (1)	Optional	Default	Default	Optional
	RAM	4 GB DDR3 (not user-expandable)			
	Integrated ports	□ 2 RJ45 Ethernet 10/100/1,000 Mbps □ 1 USB 3.0 (Type A), 1 USB 2.0 (Type A) □ 1 RS-232, 1 RS-232C/422/485			
		Timer with 255 levels/intervals, programmable, 1...255 s			
Watchdog timer					
Operating system		WES 7 Premium SP1 (64-bit Multi-language) (5)	Windows 10 IIoT Enterprise (64-bit Multi-language)		None or configured-to-order offer
Power supply	Supply voltage	24 V ~ (± 20%). AC power supply with external AC/DC power adapter HMIYPSOMAC1.			
	Current consumption	1.9 A typical			
Dimensions	Overall (W × H × D)	283.1 × 202.3 × 61.3 mm (11.15 × 7.96 × 2.41 in.)			
	Mounting cut-out (W × H) with snap hook (3)	274.6 × 193.8 mm (10.81 × 7.63 in.)			
Temperature	During operation (1)	0...55 °C/32...131 °F		0...45 °C/32...113 °F	0...55 °C/32...131 °F
	During storage	-30...70 °C/-22...158 °F			
Vibration resistance	During operation	2 g from 5...500 Hz with SSD/CFast and 1 g from 5...500 Hz with HDD			
Standards and certifications		CE, cULus ITE (UL IT 60950, CSAIT 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)			
Software		EcoStruxure Operator Terminal Expert (2)	EcoStruxure Operator Terminal Expert (2)	EcoStruxure Operator Terminal Expert (2)	–
		EcoStruxure Machine SCADA Expert (5), EcoStruxure Secure Connect Advisor (6)			
References		HMIPSOC552D1W01	HMIPSOS552D1801	HMIPSOH552D1801	HMIPSO0552D1001
Page		2/12			
Configured-To-Order		See configured Harmony Optimized S-Panel PC on page 2/23			

(1) HMIYPADPSOSTO1 expansion kit for HMIPSO allowing 1 SATA HDD/SSD slot and 1 mini PCIe slot with its optional interface slot. Mini PCIe is limited to 0...45° C/32...113° F operating temperature.
(2) EcoStruxure Operator Terminal Expert Run Time: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to unlimited version by purchasing the license HMIRWCZLSPAZZ (Digital) or HMIRWCZLSPMZZ (Paper).
(3) Snap hook allows mounting of S-Panel PC in the panel cut-out single-handedly.

Harmony HMIPSO Optimized S-Panel PC - 15" touch screen



★★★★★

Panel PC				
LED LCD 5-point multi-touch projected capacitive technology screen				
W 15.6"				
HD FWXGA, 1366 × 768 pixels, 16.7 million colors				
IP66 front panel, NEMA 4X indoor, and 7H hardness anti-scratch				
Vertical 140°, horizontal 150°				
Life span > 50,000 hrs @ 25 °C/77 °F				
Yes				
Intel Atom E3827 dual-core (1.75 GHz, low power)				
CFast card ≥ 32 GB	SSD flash disk ≥ 128 GB (5-year manufacturer warranty and 1.5 million hours MTBF) (1)	HDD hard disk ≥ 500 GB Enterprise 24/7 (1)	–	
□ 1 CFast card slot □ 1x 2.5" SATA HDD/SSD storage slot, user-accessible (1)				
Optional	Default	Default	Optional	
4 GB DDR3 (not user-expandable)				
□ 2 RJ45 Ethernet 10/100/1,000 Mbps □ 1 USB 3.0 (Type A), 1 USB 2.0 (Type A) □ 1 RS-232, 1 RS-232C/422/485				
Timer with 255 levels/intervals, programmable, 1...255 s				
WES 7 Premium SP1 (64-bit Multi-language) (4)	Windows 10 IoT Enterprise (64-bit Multi-language)			None or configured-to-order offer
24 V ~ (± 20%). AC power supply with external AC/DC power adapter HMIYPSOMAC1.				
1.7 A typical				
419.7 × 269 × 61.9 mm (16.52 × 10.59 × 2.44 in.)				
412.4 × 261.7 mm (16.24 × 10.30 in.)				
0...55 °C/32...131 °F		0...45 °C/32...113 °F		0...55 °C/32...131 °F
-30...70 °C/-22...158 °F				
2 g from 5...500 Hz with SSD/CFast and 1 g from 5...500 Hz with HDD				
CE, cULus ITE (UL 60950, CSA22.2 n° 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)				
EcoStruxure Operator Terminal Expert (2)	EcoStruxure Operator Terminal Expert (2)	EcoStruxure Operator Terminal Expert (2)	–	
EcoStruxure Machine SCADA Expert (5), EcoStruxure Secure Connect Advisor (6)				
HMIPSOC752D1W01	HMIPSOS752D1801	HMIPSOH752D1801	HMIPSO0752D1001	

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See configured Harmony Optimized S-Panel PC on [page 2/23](#)

(4) WES 7 Premium SP1 (64-bit Multi-language) supplied in 9 languages (English, French, German, Italian, Portuguese, Spanish, Swedish, Chinese, Russian). Also includes:
- Microsoft Word/Excel/Power Point Viewer
- Framework.Net 3.5
- Web browser
(5) EcoStruxure Machine SCADA Expert Run Time with Configured-To-Order Harmony S-Panel PCs.
(6) To be installed and activated with subscription.

Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIPS S-Panel PC
HMIPSP Performance - 15" touch screen

Type of Harmony iPC		Harmony HMIPSP Performance S-Panel PC - 15" touch screen	
			
Fanless		★★★★★	
Mounting type		Panel PC	
Screen	Type	LED LCD 5-point multi-touch projected capacitive technology screen	
	Size	W 15.6"	
	Resolution	HD WFXGA, 1366 × 768 pixels, 16.7 million colors	
	Degree of protection	IP66 front panel, NEMA 4X indoor, and 7H hardness anti-scratch	
	View angle	Vertical 160°, horizontal 170°	
	Backlight	Life span > 50,000 hrs @ 25 °C/77 °F	
	Operate with water on screen	Yes	
CPU	Processor	Intel® Core™ i3-4010U dual-core 4 th generation (1.7 GHz)	
	Expansion slot	1 full-size mini PCIe slot with 1 optional interface slot (1)	
	Storage	Main drive	CFAST card ≥ 32 GB
			SSD flash disk ≥ 128 GB (5-year manufacturer warranty and 1.5 million hours MTBF)
	Slots		1 CFAST card slot
			1x 2.5" SATA HDD/SSD storage slot, user-accessible
	RAM	8 GB DDR3 (not user-expandable)	
	Integrated ports	□ 2 RJ45 Ethernet 10/100/1,000 Mbps	
		□ 2 USB 3.0	
		□ 1 RS-232, 1 RS-232C/422/485	
		□ 1 HDMI port	
		□ 1 Audio out	
		□ 3 SMA connectors for the external antennas	
	Watchdog timer	Timer with 255 levels/intervals, programmable, 1...255 s	
Operating system		WES 7 Premium SP1 (64-bit) (5)	Windows 10 IoT Enterprise (64-bit Multi-language)
Power supply	Supply voltage	24 V ~ (± 20%). AC power supply with external AC/DC power adapter HMIYPSPMAC1.	
	Power consumption	18 W typical, 60 W max.	
Dimensions	Overall (W × H × D)	419.7 × 269 × 56.7 mm (16.52 × 10.59 × 2.23 in.)	
	Mounting cut-out (W × H) with snap hook (3)	412.4 × 261.7 mm (16.24 × 10.30 in.)	
Temperature	During operation	0...55 °C/32...131 °F	
	During storage	-20...60 °C/-4...140 °F	
Vibration resistance	During operation	2 g from 5...500 Hz with SSD/CFAST and 1 g from 5...500 Hz with HDD	
Standards and certifications		CE, cULus ITE (UL 60950, CSA22.2 No. 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)	
Software		EcoStruxure Operator Terminal Expert (2)	EcoStruxure Operator Terminal Expert (2)
		EcoStruxure Machine SCADA Expert (5), EcoStruxure Secure Connect Advisor (6)	
References		HMIPSPC752D1W01	HMIPSPS752D1801
Page		2/16	
Configured-To-Order		See configured Harmony Performance S-Panel PC on page 2/23	

(1) See accessories ([page 2/17](#)) for additional ports through Mini PCIe and optional interface.
(2) EcoStruxure Operator Terminal Expert Run Time: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to unlimited version by purchasing the license HMIRTCZLSPAZZ (Digital) or HMIRTCZLSPMZZ (Paper).
(3) Snap hook allows mounting of S-Panel PC in the panel cut-out single-handedly.

Harmony HMIPSP Performance S-Panel PC - 15" touch screen	
	
★★★★★	
Panel PC	
LED LCD 5-point multi-touch projected capacitive technology screen	
W 15.6"	
HD WFXGA, 1366 × 768 pixels, 16.7 million colors	
IP66 front panel, NEMA 4X indoor, and 7H hardness anti-scratch	
Vertical 160°, horizontal 170°	
Life span > 50,000 hrs @ 25 °C/77 °F	
Yes	
Intel Core i3-4010U dual-core 4 th generation (1.7 GHz)	
1 full-size mini PCIe slot with 1 optional interface slot (1)	
SSD flash disk ≥ 256 GB (5-year manufacturer warranty and 1.5 million hours MTBF)	HDD hard disk ≥ 500 GB Enterprise 24/7
1 CFAST card slot	–
1x 2.5" SATA HDD/SSD storage slot, user-accessible	
8 GB DDR3 (not user-expandable)	
□ 2 RJ45 Ethernet 10/100/1,000 Mbps	
□ 2 USB 3.0	
□ 1 RS-232, 1 RS-232C/422/485	
□ 1 HDMI port	
□ 1 Audio out	
□ 3 SMA connectors for the external antennas	
Timer with 255 levels/intervals, programmable, 1...255 s	
Windows 10 IoT Enterprise (64-bit Multi-language)	
None or configured-to-order offer	
24 V ~ (± 20%). AC power supply with external AC/DC power adapter HMIYPSPMAC1.	
18 W typical, 60 W max.	
419.7 × 269 × 56.7 mm (16.52 × 10.59 × 2.23 in.)	
412.4 × 261.7 mm (16.24 × 10.30 in.)	
0...55 °C/32...131 °F	0...45 °C/32...113 °F
-20...60 °C/-4...140 °F	0...55 °C/32...131 °F
2 g from 5...500 Hz with SSD/CFAST and 1 g from 5...500 Hz with HDD	
CE, cULus ITE (UL 60950, CSA22.2 No. 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)	
EcoStruxure Operator Terminal Expert (2)	EcoStruxure Operator Terminal Expert (2)
–	
EcoStruxure Machine SCADA Expert (5), EcoStruxure Secure Connect Advisor (6)	
HMIPSPS752D180L	HMIPSPH752D1801
	HMIPSP0752D1001
2/16	
See configured Harmony Performance S-Panel PC on page 2/23	

(4) WES 7 Premium SP1 (64-bit) supplied in 9 languages (English, French, German, Italian, Portuguese, Spanish, Swedish, Chinese, Russian). Also includes:
- Microsoft Word/Excel/Power Point Viewer
- Framework.Net 3.5
- Web browser
(5) With Configured-To-Order Harmony iPC.
(6) To be installed and activated with subscription.

Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIPS S-Panel PC
HMIPSP Performance - 19" touch screen

Type of Harmony iPC		Harmony HMIPSP Performance S-Panel PC - 19" touch screen		
				
Fanless		★★★★★		
Mounting type		Panel PC		
Screen	Type	LED LCD 5-point multi-touch projected capacitive technology screen		
	Size	W 18.5"		
	Resolution	HD WFXGA, 1366 × 768 pixels, 16.7 million colors		
	Degree of protection	IP66 front panel, NEMA 4X indoor, and 7H hardness anti-scratch		
	View angle	Vertical 160°, horizontal 170°		
	Backlight	Life span > 50,000 hrs @ 25 °C/77 °F		
	Operate with water on screen	Yes		
CPU	Processor	Intel Core i3-4010U dual-core 4 th generation (1.7 GHz)		
	Expansion slot	1 full-size mini PCIe slot with 1 optional interface slot (1)		
	Storage	Main drive	CFAST card ≥ 32 GB	SSD flash disk ≥ 128 GB (5-year manufacturer warranty and 1.5 million hours MTBF)
		Slots	☐ 1 CFAST card slot ☐ 1x 2.5" SATA HDD/SSD storage slot, user-accessible	
	RAM	8 GB DDR3 (not user-expandable)		
	Integrated ports	☐ 2 RJ45 Ethernet 10/100/1,000 Mbps ☐ 2 USB 3.0 ☐ 1 RS-232, 1 RS-232C/422/485 ☐ 1 HDMI port ☐ 1 Audio out ☐ 3 SMA connectors for the external antennas		
	Watchdog timer	Timer with 255 levels/intervals, programmable, 1...255 s		
Operating system		WES 7 Premium SP1 (64-bit) (5) Windows 10 IoT Enterprise (64-bit Multi-language)		
Power supply	Supply voltage	24 V ~ (± 20%). AC power supply with external AC/DC power adapter HMIYPSPMAC1.		
	Power consumption	28 W typical, 60 W max.		
Dimensions	Overall (W × H × D)	488 × 309 × 56.7 mm (19.21 × 12.16 × 2.23 in.)		
	Mounting cut-out (W × H) with snap hook (3)	479.3 × 300.3 mm (18.87 × 11.82 in.)		
Temperature	During operation	0...55 °C/32...131 °F		
	During storage	-20...60 °C/-4...140 °F		
Vibration resistance	During operation	2 g from 5...500 Hz with SSD/CFAST and 1 g from 5...500 Hz with HDD		
Standards and certifications		CE, cULus ITE (UL 60950, CSA22.2 No. 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)		
Software		EcoStruxure Operator Terminal Expert (2)	EcoStruxure Operator Terminal Expert (2)	
		EcoStruxure Machine SCADA Expert (5), EcoStruxure Secure Connect Advisor (6)		
References		HMIPSPC952D1W01	HMIPSPS952D1801	
Page		2/17		
Configured-To-Order		See configured Harmony Performance S-Panel PC on page 2/23		

(1) See accessories ([page 2/17](#)) for additional ports through Mini PCIe and optional interface.
(2) EcoStruxure Operator Terminal Expert Run Time: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to unlimited version by purchasing the license HMIRTCZLSPAZZ (Digital) or HMIRTCZLSPMZZ (Paper).
(3) Snap hook allows mounting of S-Panel PC in the panel cut-out single-handedly.

Harmony HMIPSP Performance S-Panel PC - 19" touch screen		
		
★★★★★		
Panel PC		
LED LCD 5-point multi-touch projected capacitive technology screen		
W 18.5"		
HD WFXGA, 1366 × 768 pixels, 16.7 million colors		
IP66 front panel, NEMA 4X indoor, and 7H hardness anti-scratch		
Vertical 160°, horizontal 170°		
Life span > 50,000 hrs @ 25 °C/77 °F		
Yes		
Intel Core i3-4010U dual-core 4 th generation (1.7 GHz)		
1 full-size mini PCIe slot with 1 optional interface slot (1)		
SSD flash disk ≥ 256 GB (5-year manufacturer warranty and 1.5 million hours MTBF)	HDD hard disk ≥ 500 GB Enterprise 24/7	–
☐ 1 CFAST card slot ☐ 1x 2.5" SATA HDD/SSD storage slot, user-accessible		
8 GB DDR3 (not user-expandable)		
☐ 2 RJ45 Ethernet 10/100/1,000 Mbps ☐ 2 USB 3.0 ☐ 1 RS-232, 1 RS-232C/422/485 ☐ 1 HDMI port ☐ 1 Audio out ☐ 3 SMA connectors for the external antennas		
Timer with 255 levels/intervals, programmable, 1...255 s		
Windows 10 IoT Enterprise (64-bit Multi-language)		None or Configured-to-order offer
24 V ~ (± 20%). AC power supply with external AC/DC power adapter HMIYPSPMAC1.		
28 W typical, 60 W max.		
488 × 309 × 56.7 mm (19.21 × 12.16 × 2.23 in.)		
479.3 × 300.3 mm (18.87 × 11.82 in.)		
0...55 °C/32...131 °F	0...45 °C/32...113 °F	0...55 °C/32...131 °F
-20...60 °C/-4...140 °F		
2 g from 5...500 Hz with SSD/CFAST and 1 g from 5...500 Hz with HDD		
CE, cULus ITE (UL 60950, CSA22.2 No. 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)		
EcoStruxure Operator Terminal Expert (2)		–
EcoStruxure Machine SCADA Expert (5), EcoStruxure Secure Connect Advisor (6)		
HMIPSPS952D180L	HMIPSPH952D1801	HMIPSP0952D1001
2/17		
See configured Harmony Performance S-Panel PC on page 2/23		

(4) WES 7 Premium SP1 (64-bit) supplied in 9 languages (English, French, German, Italian, Portuguese, Spanish, Swedish, Chinese, Russian). Also includes:
- Microsoft Word/Excel/Power Point Viewer
- Framework.Net 3.5
- Web browser
(5) With Configured-To-Order Harmony iPC.
(6) To be installed and activated with subscription.

Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIPEP Enclosed Panel PC
HMIPEP Performance - 19" touch screen

Type of Harmony iPC		Harmony HMIPEP Performance Enclosed Panel PC - 19" touch screen		
				
Fanless		★★★★★		
Mounting type		Enclosed PC		
Screen	Type	LED LCD 5-point multi-touch projected capacitive technology screen		
	Size	W 18.5"		
	Resolution	HD WFGA, 1366 × 768 pixels, 16.7 million colors		
	Degree of protection	IP66 all over with VESA 100 mounting, NEMA 4X indoor, and 7H hardness anti-scratch front panels		
	View angle	Vertical 160°, horizontal 170°		
	Backlight	Life span > 50,000 hrs @ 25 °C/77 °F		
	Operate with water on screen	Yes		
CPU	Processor	Intel Core i3-4010U dual-core 4 th generation (1.7 GHz)		
	Expansion slot	1 full-size mini PCIe slot without external interface slot (1)		
	Storage	Main drive	SSD flash disk ≥ 128 GB (5-year manufacturer warranty and 1.5 million hours MTBF)	
		Slots	☐ 1x 2.5" SATA HDD/SSD storage slot, user-accessible	
	RAM	8 GB DDR3 (not user-expandable)		
	Integrated ports	☐ 2 Ethernet 10/100/1,000 Mbps M12 A-coding 8-pin female connector		
		☐ 1 USB 2.0 with M12 8-pin female connector ☐ 1 RS-232 with M12 8-pin male connector		
	Watchdog timer	Timer with 255 levels/intervals, programmable, 1...255 s		
Operating system		Windows 10 IoT Enterprise (64-bit Multi-language)		
Power supply	Supply voltage	24 V ~ (± 20%). AC power supply with external AC/DC power adapter HMIYPSMAC1.		
	Power consumption	35 W typical, 60 W max.		
Dimensions	Overall (W × H × D)	419.7 × 269 × 56.7 mm (16.52 × 10.59 × 2.23 in.)		
Temperature	During operation	0...55 °C/32...131 °F		
	During storage	-20...60 °C/-4...140 °F		
Vibration resistance	During operation	2 g from 5...500 Hz with SSD and CFast		
Standards and certifications		CE, cULus ITE (UL 60950, CSA22.2 No. 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)		
Software		EcoStruxure Operator Terminal Expert (2)		
		EcoStruxure Machine SCADA Expert (3), EcoStruxure Secure Connect Advisor (4)		
References		HMIPEPS952D1801		
Page		2/19		
Configured-To-Order		See configured Harmony Enclosed Performance S-Panel PC on page 2/23		

(1) See accessories ([page 2/17](#)) for additional ports through Mini PCIe and optional interface.
(2) EcoStruxure Operator Terminal Expert Run Time: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to unlimited version by purchasing the license HMIRWCZLSPAZZ (Digital) or HMIRWCZLSPMZZ (Paper).

Harmony HMIPEP Performance Enclosed Panel PC - 19" touch screen	
	
★★★★★	
Enclosed PC	
LED LCD 5-point multi-touch projected capacitive technology screen	
W 18.5"	
HD WFGA 1366 × 768 pixels, 16.7 million colors	
IP66 all over with VESA 100 mounting, NEMA 4X indoor, and 7H hardness anti-scratch front panels	
Vertical 160°, horizontal 170°	
Life span > 50,000 hrs @ 25 °C/77 °F	
Yes	
Intel Core i3-4010U dual-core 4 th generation (1.7 GHz)	
1 full-size mini PCIe slot without external interface slot (1)	
–	
□ 1x 2.5" SATA HDD/SSD storage slot, user-accessible	
8 GB DDR3 (not user-expandable)	
□ 2 Ethernet 10/100/1,000 Mbps M12 A-coding 8-pin female connector □ 1 USB 2.0 with M12 8-pin female connector □ 1 RS-232 with M12 8-pin male connector	
Timer with 255 levels/intervals, programmable, 1...255 s	
None or configured-to-order offer	
24 V ~ (± 20%). AC power supply with external AC/DC power adapter HMIYPSMAC1.	
35 W typical, 60 W max.	
419.7 × 269 × 56.7 mm (16.52 × 10.59 × 2.23 in.)	
0...55 °C/32...131 °F	
-20...60 °C/-4...140 °F	
2 g from 5...500 Hz with SSD and CFast	
CE, cULus ITE (UL 60950, CSA22.2 No. 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)	
–	
EcoStruxure Machine SCADA Expert (3), EcoStruxure Secure Connect Advisor (4)	
HMIPEP0952D1001	
2/19	
See configured Harmony Enclosed Performance S-Panel PC on page 2/23	

(3) With Configured-To-Order Harmony iPC.
(4) To be installed and activated with subscription.



Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIPS S-Panel PC

HMIPSO Optimized -10" and 15" touch screens

2



Harmony HMIPSO Optimized S-Panel PCs 10" and 15"

Presentation

Harmony HMIPSO Optimized S-Panel PCs are the entry level Panel PCs in the Harmony iPC range. These simple-in-design PCs with Intel™ Atom dual-core CPU cater for the performance requirements of most automation applications in the field.

Harmony Optimized S-Panel PCs offer improved application and operator efficiency with:

- 10"/15" wide TFT multi-touch screens, LED backlight, IP66 protection, and 7H hardness anti-scratch front
- Maintenance-free non-rotating parts and operation up to +55 °C/131 °F (or up to +45 °C/113 °F for models with HDD or mini PCIe)
- Integration of software applications such as HMI EcoStruxure Operator Terminal Expert software and third-party Windows software
- Expansions with optional interfaces based on mini PCIe (Com, USB, HD audio, Video, networks, wireless, etc.)
- Available with WES 7, Windows 10, without an operating system, or with Windows 8.1 in Configured-To-Order offer

Overview of the offer

Harmony HMIPSO Optimized

The Harmony HMIPSO S-Panel PCs offer comprises 8 references, each equipped with:

- Fanless Intel® Atom E3827 dual-core processor(1.75 GHz)
- 4 GB DDR3 RAM, default mounted
- Connection ports: 1x USB 3.0, 1x USB 2.0, 2x COM (RS-232/422/485), 2 Gigabit Ethernet
- Expansion kit (depending on model): 1x optional/default kit allowing 1x SATA HDD/SSD slot and 1x mini PCIe slot with its optional interface slot
- Power supply: 24 V ~~, AC power supply with external AC/DC power adapter **HMIYPSOMAC1**

The operating systems and storage devices for 10" and 15" touch screens are as follows:

- **HMIPSOC552D1W01** and **HMIPSOC752D1W01**:
 - Operating system: WES 7 Premium SP1 (64-bit)
 - Default storage device: 32 GB CFAST card
- **HMIPSOS552D1801** and **HMIPSOS752D1801**:
 - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
 - Default storage device: 128 GB SSD (5-year manufacturer warranty and 1.5 million hours MTBF)
 - Expansion kit: **HMIYPADPSOSTO1**
- **HMIPSOH552D1801** and **HMIPSOH752D1801**:
 - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
 - Default storage device: 500 GB HDD (Enterprise 24/7)
 - Expansion kit: **HMIYPADPSOSTO1**
- **HMIPSO0552D1001** and **HMIPSO0752D1001**:
 - Operating system: None
 - Default storage device: None

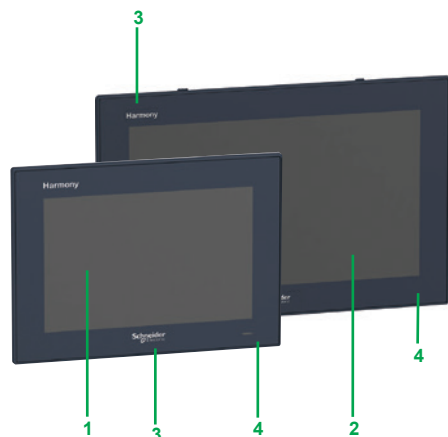
Ready-to-run Software for Harmony HMIPSO

Harmony HMIPSO S-Panel PCs are supported by Schneider Electric HMI software. For HMI applications, EcoStruxure Operator Terminal Expert Run Time demo version can be downloaded and activated to unlimited version with **HMIRTCWZLSPAZZ** (Digital) or **HMIRTCWZLSMZ** (Paper) license. For line management and lite supervision, EcoStruxure Machine SCADA Expert Run Time is available via Configured-To-Order process.

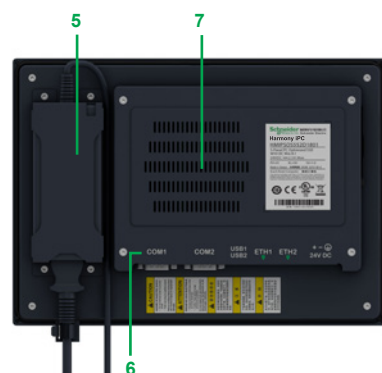
For secure remote access, Harmony HMIPSO are supported with EcoStruxure Secure Connect Advisor that will have to be installed and activated with subscription.

For more information on the supported softwares, refer to the following catalogs:

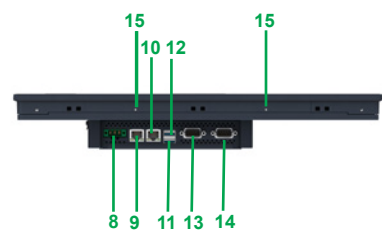
EcoStruxure Operator Terminal Expert ([DIA5ED2140703EN](#)),
EcoStruxure Machine SCADA Expert ([DIA5ED2171201EN](#)),
EcoStruxure Secure Connect Advisor ([DIA5ED2190101EN](#)).



10" and 15" front view



Rear view



Underside view



Underside view with expansion kit

Description

Harmony HMIPSO Optimized: 10" and 15" touch screens

Front view

- 1 10" LCD multi-touch LED screen, HD WSVGA, 1280 × 800 pixels, and 267,000 colors for **HMIPSO●552D1●01**:
 - Brightness: 300 cd/m² (adjustable)
 - Type of touch panel: 5-point projected capacitive technology multi-touch
 - Typical viewing angle: 160° (vertically)/160° (horizontally)
- 2 15" LCD multi-touch LED screen, HD WFXGA, 1366 × 768 pixels, and 16 million colors for **HMIPSO●752D1●01**:
 - Brightness: 300 cd/m² (adjustable)
 - Type of touch panel: 5-point projected capacitive technology multi-touch
 - Typical viewing angle: 140° (vertically)/150° (horizontally)
- 3 Harmony and Schneider Electric removable stickers
- 4 Power status indicator (Green: On, Orange: Stand-by, No light: Off)

Rear view (1)

- 5 Optional AC power supply
- 6 S-Panel PC interface
- 7 Cover for mini PCIe card and HDD/SSD drive

Underside view

- 8 DC power connector
- 9 1x Eth1 (10/100/1,000 Mbps)
- 10 1x Eth2 (10/100/1,000 Mbps)
- 11 1x USB2 (USB 2.0)
- 12 1x USB1 (USB 3.0)
- 13 1x COM2 RS-232/422/485 port
- 14 1x COM1 RS-232 port
- 15 Snap hook (2)
- 16 Expansion kit
- 17 Optional interface
- 18 Optional AC power supply

(1) Cooling method is by passive heat sink.

(2) Snap hook allows mounting of S-Panel PC in the panel cut-out single-handedly.

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIPS S-Panel PC
HMIPSO Optimized - 10" touch screen

2

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HMIPSOS552D1801

PF513850



HMIPSOS552D1801

Harmony HMIPSO Optimized: 10" touch screen (Intel Atom E3827 dual-core processor, 1.75 GHz)

Supply voltage	Operating system (1)	Software	Storage	DDR3 RAM (5)	Reference	Weight kg/lb
24 V ~ (6)	WES 7 Premium SP1 (64-bit) (2)	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), IIoT monitor with Node-RED	CFast card ≥ 32 GB	4 GB	HMIPSOC552D1W01	2.50/ 5.51
			SSD flash disk ≥ 128 GB with 1.5 million hours MTBF (mounted in expansion kit)	4 GB	HMIPSOS552D1801	2.50/ 5.51
			HDD hard disk ≥ 500 GB (mounted in expansion kit)	4 GB	HMIPSOH552D1801	2.50/ 5.51
—	—	—	—	4 GB	HMIPSO0552D1001	2.50/ 5.51

(1) Windows 8.1 Industry SP1 (64-bit Multi-language) operating system is available with Configured-To-Order Harmony HMIPSO (see [page 2/23](#)).

(2) WES 7 Premium SP1 supplied in 9 languages (English, French, German, Italian, Portuguese, Spanish, Swedish, Chinese, Russian). Also includes:

- Microsoft® Word/Excel/Power Point Viewer
- Framework.Net 3.5
- Web browser

(3) EcoStruxure Operator Terminal Expert Run Time: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to unlimited version by purchasing the license HMIRWCZLSPAZZ (Digital) or HMIRWCZLSPMZZ (Paper).

(4) To be installed and activated with subscription.

(5) 4 GB DDR3 RAM is not user-expandable.

(6) AC power supply with external AC/DC power adapter HMIYPSMAC1.

PF513848



HMIPSOS752D1801

PF513850



HMIPSOS752D1801

Harmony HMIPSO Optimized: 15" touch screen (Intel Atom E3827 dual-core processor, 1.75 GHz)

Supply voltage	Operating system (1)	Software	Storage	DDR3 RAM(5)	Reference	Weight kg/lb
24 V ~ (6)	WES 7 Premium SP1 (64-bit) (2)	EcoStruxure Operator Terminal Expert RT Demo (3), EcoStruxure Secure Connect Advisor (4)	CFlash card ≥ 32 GB	4 GB	HMIPSOC752D1W01	3.90/ 8.60
			SSD flash disk ≥ 128 GB with 2 million hours MTBF (mounted in expansion kit)	4 GB	HMIPSOS752D1801	3.90/ 8.60
	Windows 10 IoT Enterprise (64-bit Multi-language)		HDD hard disk ≥ 500 GB (mounted in expansion kit)	4 GB	HMIPSOH752D1801	3.90/ 8.60
—	—	—	—	4 GB	HMIPSO0752D1001	3.90/ 8.60

(1) Windows 8.1 Industry SP1 (64-bit Multi-language) operating system is available with Configured-To-Order Harmony HMIPSO (see [page 2/23](#)).

(2) WES 7 Premium SP1 supplied in 9 languages (English, French, German, Italian, Portuguese, Spanish, Swedish, Chinese, Russian). Also includes:

- Microsoft® Word/Excel/Power Point Viewer
- Framework.Net 3.5
- Web browser

(3) EcoStruxure Operator Terminal Expert RT: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to unlimited version by purchasing the license HMIRWCZLSPAZZ (Digital) or HMIRWCZLSPMZZ (Paper).

(4) To be installed and activated with subscription.

(5) 4 GB DDR3 RAM is not user-expandable.

(6) AC power supply with external AC/DC power adapter HMIYPSPMAC1.

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIPS S-Panel PC

HMIPSP Performance -15" and 19" touch screens

2



Harmony S-Panel Performance PC 15" and 19"

Presentation

Harmony HMIPSP Performance S-Panel PCs are simple all-in-one design performance PCs. The 15"/19" wide screens, HD resolution display, and capacitive multi-touch feature enhances the user experience of these PCs. The fanless Intel Core i3 CPU processor delivers good performance for a wide range of software.

Harmony Performance S-Panel PCs offer improved application and operator efficiency with:

- 15"/19" wide TFT multi-touch screens, LED backlight, IP66 protection, and 7H hardness anti-scratch front
- Slim panels with depth < 57 mm/2.24 in.
- Maintenance-free non-rotating parts and operation up to +55 °C/131 °F
- Integration of software applications such as EcoStruxure Operator Terminal Expert, Lite supervision EcoStruxure Machine SCADA Expert and third-party Windows software
- Expansions with optional interfaces based on mini PCIe (Com, USB, HD audio, Video, networks, wireless, etc.)
- Available with WES 7, Windows 8.1 in Configured-To-Order offer, Windows 10, or without an operating system

Overview of the offer

Harmony HMIPSP Performance

The Harmony HMIPSP Performance PCs offer comprises 10 references, each equipped with:

- Fanless Intel® i3-4010U dual-core processor (1.7 GHz)
- 8 GB DDR3 RAM, default mounted
- Connection ports: 2x USB 3.0, 2x COM (RS-232/422/485), 2x Gigabit Ethernet, 1x HD audio port, 1x HDMI video port, 3x SMA for antennas
- Expansion slot: 1x mini PCI Express® full slot with 1x optional interface slot
- Power supply: 24 V $\overline{\text{---}}$, AC power supply with external AC/DC power adapter HMIYPSMAC1

The operating systems and storage devices for 15" and 19" touch screens are as follows:

- **HMIPSPC752D1W01** and **HMIPSPC952D1W01**:
 - Operating system: WES 7 Premium SP1 (64-bit)
 - Default storage device: 32 GB CFAST card
- **HMIPSPS752D1801** and **HMIPSPS952D1801**:
 - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
 - Default storage device: 128 GB SSD (5-year manufacturer warranty and 1.5 million hours MTBF)
- **HMIPSPS752D180L** and **HMIPSPS952D180L**:
 - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
 - Default storage device: 256 GB SSD (5-year manufacturer warranty and 1.5 million hours MTBF)
- **HMIPSPH752D1801** and **HMIPSPH952D1801**:
 - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
 - Default storage device: 500 GB HDD (Enterprise 24/7)
- **HMIPSP0752D1001** and **HMIPSP0952D1001**:
 - Operating system: None
 - Default storage device: None

Presentation (continued)

Ready-to-run Software for Harmony HMIPSP

Harmony HMIPSP S-Panel PCs are supported by Schneider Electric HMI software. For HMI applications, EcoStruxure Operator Terminal Expert Run Time demo version can be downloaded and activated to unlimited version with **HMIRTWCZLSPAZZ** (Digital) or **HMIRTWCZLSPMZZ** (Paper) license. For line management and life supervision, EcoStruxure Machine SCADA Expert Run Time is available via Configured-To-Order process.

For secure remote access, Harmony HMIPSP are supported with EcoStruxure Secure Connect Advisor that will have to be installed and activated with subscription.

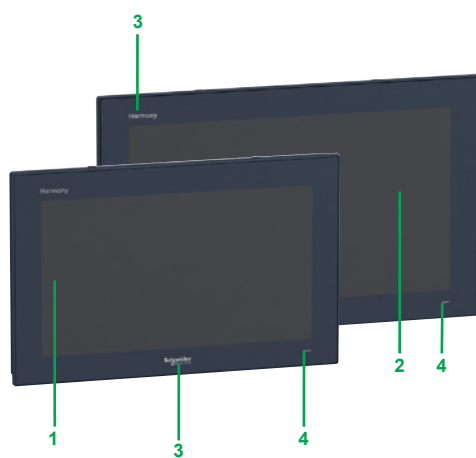
For more information on the supported softwares, refer to the following catalogs: EcoStruxure Operator Terminal Expert ([DIA5ED2140703EN](#)), EcoStruxure Machine SCADA Expert ([DIA5ED2171201EN](#)), EcoStruxure Secure Connect Advisor ([DIA5ED2190101EN](#)).

Description

Harmony HMIPSP Performance: 15" and 19" touch screens

Front view

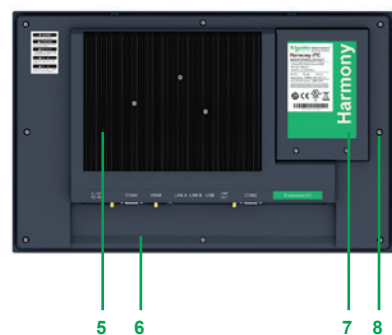
- 1 15" LCD multi-touch LED screen, HD WFXGA, 1366 × 768 pixels, 16 million colors for **HMIPSP•752D1●●●**:
 - Brightness: 300 cd/m² (adjustable)
 - Type of touch panel: 5-point projected capacitive technology multi-touch
 - Typical viewing angle: 160° (vertically)/170° (horizontally)
- 2 19" LCD multi-touch LED screen, HD WFXGA, 1366 × 768 pixels, 16 million colors for **HMIPSP•952D1●●●**:
 - Brightness: 300 cd/m² (adjustable)
 - Type of touch panel: 5-point projected capacitive technology multi-touch
 - Typical viewing angle: 160° (vertically)/170° (horizontally)
- 3 Harmony and Schneider Electric removable stickers
- 4 Power status indicator (Green: On, Orange: Stand-by, No light: Off)



15" and 19" front view

Rear view

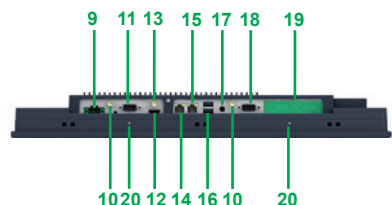
- 5 Heat sink
- 6 S-Panel PC interface
- 7 S-Panel PC cover for storage drives (2.5" SATA HDD/SSD, CFast)
- 8 S-Panel PC rear access to mini PCIe and internal connector for optional interfaces



19" rear view

Underside view

- 9 DC power connector
- 10 SMA connector for the external antenna
- 11 1x COM1, RS-232 port
- 12 1x HDMI
- 13 SMA connector for the external antenna
- 14 1x Eth1 (10/100/1000 Mbps) supports AMT (active management technology)
- 15 1x Eth2 (10/100/1000 Mbps)
- 16 1x USB1 (USB 3.0) and 1x USB2 (USB 3.0)
- 17 1x Audio Line out
- 18 1x COM2, RS-232/422/485 port
- 19 1x optional interface
- 20 Snap hook (1)



19" underside view

(1) Snap hook allows mounting of S-Panel PC in the panel cut-out single-handedly.

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIPS S-Panel PC

HMIPSP Performance - 15" touch screen

2

PF513847



HMIPSPH752D1801

PF513849



HMIPSPH752D1801

Harmony HMIPSP Performance: 15" touch screen (Intel i3-4010U dual-core processor, 1.7 GHz)

Supply voltage Expansion slot	Operating system (1)	Software	Storage	DDR3 RAM (5)	Reference	Weight kg/lb
24 V $\overline{\text{---}}$ (6) 1 mini PCIe slot	WES 7 Premium SP1 (64-bit Multi-language) (2)	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4)	CFast card $\geq$ 32 GB	8 GB	HMIPSPC752D1W01	6.00/ 13.23
	Windows 10 IoT Enterprise (64-bit Multi-language)	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4)	SSD flash disk $\geq$ 128 GB with 1.5 million hours MTBF	8 GB	HMIPSPS752D1801	6.00/ 13.23
			SSD flash disk $\geq$ 256 GB with 1.5 million hours MTBF	8 GB	HMIPSPS752D180L	6.00/ 13.23
		EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4)	HDD hard disk $\geq$ 500 GB	8 GB	HMIPSPH752D1801	6.00/ 13.23
				8 GB	HMIPSP0752D1001	6.00/ 13.23

(1) Windows 8.1 Industry SP1 (64-bit Multi-language) operating system is available with Configured-To-Order: Harmony HMIPSP (see [page 2/23](#)).

(2) WES 7 Premium SP1 supplied in 9 languages (English, French, German, Italian, Portuguese, Spanish, Swedish, Chinese, Russian). Also includes:

- Microsoft (R) Word/Excel/Power Point Viewer
- Framework.Net 3.5
- Web browser

(3) EcoStruxure Operator Terminal Expert Run Time: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to unlimited version by purchasing the license HMIRWCZLSPAZZ (Digital) or HMIRWCZLSPMZZ (Paper).

(4) To be installed and activated with subscription.

(5) 8 GB DDR3 RAM is not user-expandable.

(6) AC power supply with external AC/DC power adapter HMIYSPMAC1.

PF513948



HMIPSPH952D1801

PF513950



HMIPSPH952D1801

Harmony HMIPSP Performance: 19" touch screen (Intel i3-4010U dual-core processor, 1.7 GHz)

Supply voltage Expansion slot	Operating system (1)	Software	Storage	DDR3 RAM (5)	Reference	Weight kg/lb
24 V $\overline{\text{---}}$ (6) 1 mini PCIe slot	WES 7 Premium SP1 (64-bit Multi-language) (2)	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4)	CFast card $\geq$ 32 GB	8 GB	HMIPSPC952D1W01	7.00/ 15.43
			SSD flash disk $\geq$ 128 GB with 1.5 million hours MTBF	8 GB	HMIPSPS952D1801	7.00/ 15.43
	Windows 10 IoT Enterprise (64-bit Multi-language)	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4)	SSD flash disk $\geq$ 256 GB with 1.5 million hours MTBF	8 GB	HMIPSPS952D180L	7.00/ 15.43
			HDD hard disk $\geq$ 500 GB	8 GB	HMIPSPH952D1801	7.00/ 15.43
—	—	—	—	8 GB	HMIPSP0952D1001	7.00/ 15.43

(1) Windows 8.1 Industry SP1 (64-bit Multi-language) operating system is available with Configured-To-Order Harmony HMIPSP (see [page 2/23](#)).

(2) WES 7 Premium SP1 supplied in 9 languages (English, French, German, Italian, Portuguese, Spanish, Swedish, Chinese, Russian). Also includes:

- Microsoft (R) Word/Excel/Power Point Viewer
- Framework.Net 3.5
- Web browser

(3) EcoStruxure Operator Terminal Expert Run Time: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to unlimited version by purchasing the license HMIRTCZLSPAZZ (Digital) or HMIRTCZLSPMZZ (Paper).

(4) To be installed and activated with subscription.

(5) 8 GB DDR3 RAM is not user-expandable.

(6) AC power supply with external AC/DC power adapter HMIYSPMAC1.

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIPEP Enclosed Panel PC

HMIPEP Performance -19" touch screen

2



Harmony HMIPEP Performance Enclosed Panel PC 19"

Presentation

Harmony HMIPEP Enclosed Performance S-Panel PCs are fully enclosed PCs with IP66 protection on all sides. These 19" wide PCs can be directly mounted on a machine or automation system without any additional enclosure. The HD display and multi-touch features enhance the user experience.

Harmony Enclosed Performance S-Panel PCs offer increased application and operator efficiency with:

- 19" wide HD TFT multi-touch screens, LED backlight, and 7H hardness anti-scratch front
- Ready to be VESA mounted with IP65 protection on all sides and M12 connections
- Slim enclosed panels with 65 mm/2.56 in. depth
- Maintenance-free non-rotating parts and operation up to +55 °C/131 °F
- Available with Windows 10, without an operating system, or with Windows 8.1 in Configured-To-Order offer

Overview of the offer

Harmony HMIPEP Performance

The Harmony HMIPEP Enclosed Performance PCs offer comprises 2 references, each equipped with:

- Fanless Intel® i3-4010U dual-core processor (1.7 GHz)
- 8 GB DDR3 RAM, default mounted
- 5x M12 Connection ports: 1x USB 2.0, 1x COM (RS-232), 2x Gigabit Ethernet, 1x 24 V $\overline{\text{---}}$ power supply
- Expansion slot: 1x full-size mini PCIe slot without external interface slot

The operating systems and storage devices for 19" touch screens are as follows:

- **HMIPEPS952D1801:**
 - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
 - Default storage device: 128 GB SSD (5-year manufacturer warranty and 1.5 million hours MTBF)
- **HMIPEP0952D1001:**
 - Operating system: None
 - Default storage device: None

Ready-to-run Software for Harmony HMIPEP

Harmony HMIPEP S-Panel PCs are supported by Schneider Electric HMI software. For HMI applications, EcoStruxure Operator Terminal Expert Run Time demo version can be downloaded and activated to unlimited version with **HMIRTWZLSPAZZ** (Digital) or **HMIRTWZLSPMZZ** (Paper) license. For line management and lite supervision, EcoStruxure Machine SCADA Expert Run Time is available via Configured-To-Order process.

For secured remote access, Harmony HMIPEP are supported with EcoStruxure Secure Connect Advisor that will have to be installed and activated with subscription.

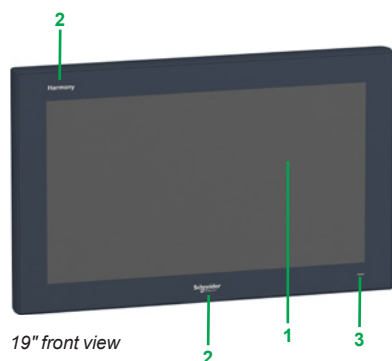
For more information on the supported softwares, refer to the following catalogs:
 EcoStruxure Operator Terminal Expert ([DIA5ED2140703EN](#)),
 EcoStruxure Machine SCADA Expert ([DIA5ED2171201EN](#)),
 EcoStruxure Secure Connect Advisor ([DIA5ED2190101EN](#)).

Harmony iPC

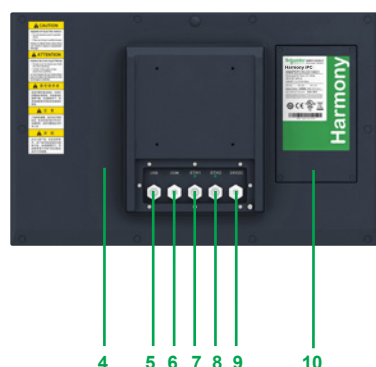
Industrial PC, Edge Box, and Display

Harmony HMIPEP Enclosed Panel PC

HMIPEP Performance - 19" touch screen



19" front view



19" rear view



HMIPEPS952D1801



HMIPEPS952D1801

Description

Harmony HMIPEP Performance: 19" touch screen

Front view

- 1 19" LCD multi-touch LED screen, HD WFXGA 1366 × 768 pixels, 16 million colors for **HMIPEP●952D1●01**:
 - Brightness: 300 cd/m² (adjustable)
 - Type of touch panel: 5-point projected capacitive technology multi-touch
 - Typical viewing angle: 160° (vertically)/170° (horizontally)
- 2 Harmony and Schneider Electric removable stickers
- 3 Power status indicator (Green: On, Orange: Stand-by, No light: Off)

Rear view (1)

- 4 Cover
- 5 1x USB 2.0 with M12 8-pin female connector
- 6 1x RS-232 with M12 8-pin male connector
- 7 1x Eth1 (10/100/1000 Mbps) base-T with M12 8-pin female connector
- 8 1x Eth2 (10/100/1000 Mbps) base-T with M12 8-pin female connector
- 9 1x 24 V power supply with M12 5-pin male connector
- 10 Back cover to access HDD/SSD slot

Harmony HMIPEP Performance: 19" touch screen

(Intel i3-4010U dual-core processor, 1.7 GHz)

Supply voltage	Expansion slot	Storage	Software	Reference	Weight kg/lb
Windows 10 IoT Enterprise (64-bit Multi-language), 8 GB DDR3 RAM (3)					
24 V	1x mini PCIe SSD flash slot	disk ≥ 128 GB with 1.5 million hours MTBF	EcoStruxure Operator Terminal Expert Run Time Demo (2), EcoStruxure Secure Connect Advisor (4)	HMIPEPS952D1801	8.00/ 17.64
No operating system, 8 GB DDR3 RAM (4)					
24 V	1x mini PCIe slot		EcoStruxure Machine SCADA Expert (5)	HMIPEP0952D1001	8.00/ 17.64

(1) Cooling method is by passive heat sink.

(2) EcoStruxure Operator Terminal Expert Run Time: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to unlimited version by purchasing the license HMIRWCZLSPAZZ (Digital) or HMIRWCZLSPMZZ (Paper).

(3) 8 GB DDR3 RAM is not user-expandable.

(4) To be installed and activated with subscription.

(5) With Configured-To-Order Harmony Modular Box PC.



HMIYSSDS240S1



HMIYMINNVRAM1



HMIYMINSL24851



HMIYMINCAN1

Separate components

Description	Details	Compatible with Harmony HMIP			Reference	Weight kg/lb
		Optimized	Performance	Enclosed Performance		
		HMIPSO	HMIPSP	HMIPEP		
Drives						
Blank CFast card	32 GB MLC	Yes	—		HMIYCFA32S	—
Blank SSD with mounting screws	128 GB MLC (5-year warranty and 1.5 million hours MTBF)	All models (1)			HMIYSSDS080S1	—
	256 GB MLC (5-year warranty and 2 million hours MTBF)	All models (1)			HMIYSSDS240S1	—
Blank HDD	Spare 1 TB HDD, blank	All models (1)			HMIYHDD01T21	—
	Spare 500 GB HDD, blank	All models (1)			HMIYHDD50021	—
Interfaces						
NVRAM interface	Mini PCIe with non-volatile RAM, without external connectors	Yes (1)		—	HMIYMINNVRAM1	—
HDMI to DVI interface	HDMI to DVI interface	—	Yes	—	HMIYADHDMIDVIS1	—
2 RS-422/485 isolated interface	Mini PCIe with 2x RS-422/485, isolated external interface with connectors	Yes (1)		—	HMIYMINSL24851	—
4 RS-422/485 interface	Mini PCIe with 4x RS-422/485, external interface with connectors	Yes (1)		—	HMIYMINSL44851	—
2 RS-232 isolated interface	Mini PCIe with 2x RS-232, isolated external interface with connectors	Yes (1)		—	HMIYMINSL22321	—
4 RS-232 interface	Mini PCIe with 4x RS-232, external interface with connectors	Yes (1)		—	HMIYMINSL42321	—
1 Profibus DP Master NVRAM interface	Mini PCIe with 1x Profibus DP Master, non-volatile RAM, external interface with connectors	Yes (1)		—	HMIYMINPRO1	—
2 CANopen/CAN bus interface	Mini PCIe with 2x CAN fieldbus, external interface with connectors, drivers for CANopen and CAN bus	Yes (1)		—	HMIYMINCAN1	—

(1) Require Expansion kit (HMIYPADPSOSTO1) for HMIPSO Optimized S-Panel PC.



Separate components (continued)

Description	Details	Compatible with Harmony HMIP			Reference	Weight
		Optimized	Performance	Enclosed Performance		
		HMIPSO	HMIPSP	HMIPEP		
Interfaces (continued)						
RJ45 Ethernet interface	Interface Mini PCIe, 1x RJ45 Ethernet (3)	Yes (1)	—	—	HMIYMIN1ETH1	—
16DI/8DO interface	Mini PCIe with 16DI/8DO, external interface with connectors, 2 m/6.56 ft cable and DIN rail wiring terminal	Yes (1)	—	—	HMIYMINIO1	—
2 USB 3.0 interface	Mini PCIe with USB 3.0, external interface with connectors	Yes (1)	—	—	HMIYMINUSB1	—
3G cellular interface	Mini PCIe with GPRS, SIM card holder and external antenna	Yes (1)	—	—	HMIYMINGPRS1	—
WiFi interface access point and 2x antennas	Kit with mini PCIe WiFi access point (with Windows 10) + bluetooth and 2x antennas	Yes (1)	—	—	HMIYMINWIFI2	—
Remote wireless LAN antenna cable	5 m/16.4 ft cable to mount a WiFi antenna remotely from Harmony iPC	Yes (1)	—	—	HMIYCABWIFIAN51	—
4G cellular interface for North America	Mini PCIe GPRS 4G for North America frequencies. Kit including SIM card holder and external antenna	Yes	—	—	HMIYMIN4GUS1	—
4G cellular interface for Europe and Asia	Mini PCIe GPRS 4G for Europe and Asia frequencies. Kit including SIM card holder and external antenna	Yes	—	—	HMIYMIN4GEU1	—
Mini PCIe interface DVI-I for iPC	Mini PCIe Graphic video card Full HD 1920 x 1080, with DVI-I connector on an external interface (providing both dual digital and analog signals)	Yes	—	—	HMIYMINDVII1	—
Mini PCIe interface 2VGA + DVI-D	Mini PCIe Graphic video card Full HD 1920 x 1080, with 2x VGA connectors on a single external interface and 1x DVI-D connector in a second external interface	Yes	—	—	HMIYMINVGADVID1	—
Mini PCIe interface audio for iPC	Mini PCIe audio card and one external interface with speaker OUT, Line IN and Mic IN connectors	Yes	—	—	HMIYMINAUD21	—
Mini PCIe interface to Display Adapter	Interface transmitter (2)	Yes	—	—	HMIYMINDP1	—

(1) Require Expansion kit (HMIYPADPSOSTO1) for HMIPSO Optimized S-Panel PC.

(2) For more information, see long distance multi-display adapter on [page 4/31](#).

(3) Available in Q2 2020.

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIPSO/HMIPSP/HMIPEP Panel PCs
Separate components

Separate components (continued)

Description	Details	Compatible with Harmony HMIP			Reference	Weight kg/lb
		Optimized	Performance	Enclosed Performance		
		HMIPSO	HMIPSP	HMIPEP		
Accessories						
USB key blank for iPC recovery	Spare USB memory key blank (1)	All models			HMIYUSBBK111	—
Maintenance kit for HMIPSP PCs	Includes: ■ Screws and dampers for HDD/SSD ■ Screws and clamps for panel mounting ■ Power connector and sticker ■ CFast card pull-out ■ Rubbers for W15" and W19" mounting ■ Bracket, screws, and dampers for mini PCIe	—	Yes		HMIYPMKTPSP1	—
Maintenance kit for HMIPSO PCs	Includes: ■ Screws and dampers for HDD/SSD ■ Screws and clamps for panel mounting ■ Power connector and sticker ■ CFast card pull-out ■ Rubbers for W10" and W15" mounting ■ Bracket, screws, and dampers for mini PCIe	Yes	—		HMIYPMKTPSO1	—
Removable protective sheet	Set of 5 protective sheets for W10"	Yes	—		HMIYP552PS11	—
	Set of 5 protective sheets for W15"	Yes	—		HMIYP752PS11	—
	Set of 5 protective sheets for W19"	—	Yes		HMIYP952PS11	—
AC/DC power adapter 110/220 V ~ to 24 V ⎓	AC/DC power adapter, provided with US and European power cord	—	Yes	—	HMIYPSMAC1	—
AC/DC power adapter 110/220 V ~ to 24 V ⎓	External AC power adapter which can be mounted on the rear side of HMIPSO, provided with US and European power cord	Yes	—		HMIYPSOMAC1	—
M12 connectors	Set of 5 M12 connectors for Enclosed Panel PC	—		Yes	HMIYEM1211	—
M12 cables	Set of 5 cables with M12 connectors on one side to Enclosed Panel PC, and DC/USB/COM/2x LAN connectors on the other side	—		Yes	HMIYCABM1211	—
Expansion kit	Optional expansion kit offering 1 slot for storage drive HDD/SSD and 1 mini PCIe slot with 1 optional interface plate	Yes	—		HMIYPADPSOST01	—
VESA mounting kit	VESA mounting kit for HMIPSO W10"	Yes	—		HMIYPVESAPSO551	—
	VESA mounting kit for HMIPSO W15"	Yes	—		HMIYPVESAPSO751	—
Software (2)						
EcoStruxure Operator Terminal Expert Run Time license	Converts the 21-day trial version of EcoStruxure Operator Terminal Expert Run Time Demo to an unlimited license	All models that support EcoStruxure Operator Terminal Expert HMI software			HMIRTWCZLSPAZZ (Digital)	—
					HMIRTWCZLSPMZZ (Paper)	—
EcoStruxure Secure Connect Advisor	For HMI secure remote access	All models that support EcoStruxure Secure Connect Advisor			VJOCNT (3)	—

(1) USB key including restore image for recovery is supplied with each unit. The spare blank key is only necessary if the default key supplied with the unit is lost.

(2) EcoStruxure Machine SCADA Expert available with Configured-to-Order (see [page 2/23](#)).

(3) For more information, please refer to EcoStruxure Secure Connect Advisor catalog [DIA5ED2190101EN](#).

Configured-To-Order Harmony HMIPSO/HMIPSP/HMIPEP Panel PCs

"Configured-To-Order" industrial PCs offer a vast number of configuration combinations for Harmony iPCs with certifications. The Schneider Electric Customer Care Center can help user configure the right Harmony iPC based on your automation application and provide a quotation. A web configurator <https://www.hmisource.com/wwipcc> is also available to help user easily build the configuration (password = Harmony).

Our Customer Care Center or the Web configurator will provide the complete parts list for the configured Harmony S-Panel PC and a configuration code that will be the part number of the Harmony iPC.

Ordering procedure for a configured Harmony Panel PC

If user have built your Harmony iPC configuration with the Web configurator:

- 1 Please forward the e-mail received from the Web configurator to our Customer Care Center. This e-mail contains a PDF file with your configuration description, and part number code.
- 2 If required, specify the reference root part number GCR_HMIPCCP2.

If user cannot access the Harmony iPC Web configurator:

- 3 Please contact our Customer Care Center and state the reference root part number GCR_HMIPCCP2.
- 4 Configure your Harmony Panel PC (see table below) and get your quote with the support of our Customer Care Center.
- 5 Confirm your order.

Configured-To-Order options for Harmony HMIPSO/HMIPSP/HMIPEP Panel PCs

Option	Description
Panel PC	S-Panel PC Optimized DC 4 GB RAM W10" - WXGA
	S-Panel PC Optimized DC 4 GB RAM W15" - FWXGA
	S-Panel PC Performance DC 8 GB RAM W15" - WHD
	S-Panel PC Performance DC 8 GB RAM W19" - WHD
	Enclosed Panel PC Performance DC 8 GB RAM W19" - FWXGA
Fanless ULV CPU	Performance Core i3-4010U dual-core
	Optimized Atom-E3827 dual-core
Power supply	DC (1)
Windows operating system	None
	WES7 Premium SP1 (64-bit Multi-language)
	Win 8.1 Industry (64-bit Multi-language)
	Windows 10 IoT Enterprise (64-bit Multi-language)
Main storage device for operating system	None
	CFast 32 GB
	HDD 500 GB/1 TB
	SSD 128 GB/256 GB
Optional interfaces (pre-mounted)	None
	NVRAM
	2x RS-422/485 Isolated/4 RS-422/485
	2x RS-232 Isolated/4 RS-232
	16x DI/8 DO
	Audio
	Video (DVI and VGA ports)
	Cellular 3G/4G
	Wireless LAN + 2 antennas
	2 CANopen/CAN bus
	1x Ethernet RJ45
	Profibus DP Master with NVRAM
Software bundle	None
	EcoStruxure Operator Terminal Expert Run Time unlimited license
	EcoStruxure Machine SCADA Expert 1500 tags Run Time license
	EcoStruxure Machine SCADA Expert 4000 tags Run Time license
	EcoStruxure Machine SCADA Expert 64000 tags Run Time license

(1) AC power supply with external AC/DC power adapter HMIYSPMAC1.

Harmony HMIBSC Edge Box Core

Selection guide page 3/2

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■ **Description**..... page 3/5

■ **References**

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□ Drives page 3/6

□ Separate Components

- Accessories..... page 3/6

- Interfaces page 3/7

Harmony iPC
Industrial PC, Edge Box, and Display
Harmony Edge Box
HMIBSC Edge Box Core

Type of Harmony Edge Box		Harmony HMIBSC Edge Box Core	
			
Fanless		★★★★★	
Mounting	Box	Wall / book / DIN rail / Flat	
	Panel PC	No	
CPU	Processor	Qualcomm ARM Cortex-A53 Quad core up to 1.2 GHz	
	Expansion slots	1x full-size slot with optional interface (1), 1x M.2 slot (not for storage) (2)	
	Storage	Main drive	eMMC 8 GB (soldered and not user-expandable)
		Slots	SD 3.0 (supports standard SD 32 mm x 24 mm , SDHC, SDXC)
	RAM/MRAM	1 GB DDR3 (not user-expandable)	
	Hot-swap RAID HDD and battery backup	–	
Cybersecurity encryption		TPM module (pre-installed)	
Operating system		Linux Yocto	
Conformal coating		No	
Supply voltage		12-24 V $\overline{\text{---}}$ or 100...240 V $\sim$ with power adapter HMIYPSOMAC1	
Power consumption		16 W	
Interface	Ethernet	2x RJ45 Ethernet 10/100/1,000 Mbps	
	Serial ports	1x RS-232 (default) and 1x RS-422/485 (software setting), non-isolated	
	USB	2x USB 2.0	
	Embedded I/O	8x GPIO (Digital General Purpose I/O)	
	Video interface	1x HDMI (for configuration only)	
	WLAN embedded	Wi-Fi WCN3620 802.11 b/g/n 2.4 GHz (4), WCN3620 Bluetooth 4.1 (4)	
	Antenna connectors	1x for WLAN antenna, 1x for GPRS antenna	
	Watchdog timer	Timer with 255 levels/intervals, programmable, 1...255 s	
Reset button and buzzer		Yes	
Overall dimensions (W x H x D)		157 x 150 x 46 mm/6.18 x 5.91 x 1.81 in. (with no expandable slots)	
Temperature	During operation	Conforming to EN/IEC 60068-2-30: 0...50 °C/32...122 °F (5)	
	During storage	Conforming to IEC 61000-4/ EN 55011: -40...85 °C/-40...185 °F	
Vibration resistance	During operation	Conforming to IEC 60664-1: 2 g from 5...500 Hz	
Standards and certifications		CE, cULus ITE (UL IT 60950, CSA IT 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)	
Software, IIoT and Cybersecurity		Secure password boot and Node-RED	
References		HMIBSCEA53D1L0T	
Page		3/6	
Configured-To-Order		See configured Harmony Modular Box PC on page 4/32	

(1) For mini PCIe card, cellular 4G or 8x analog input interface 0-10 V.
(2) For M.2 card, 2x analog input interface 0-10 V / 4-20 mA.
(3) Cybersecurity TPM optional module HMIYBINLTPM201 for hardware encryption with Linux.
(4) Radio Frequency Certifications:
- RED for Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, UK
- FCC RF for USA
- IC for Canada
- SRRC for China (pending)
- RCM for Australia, New Zealand
- Anatel for Brazil (pending)
- TEC for India (pending)
(5) Except with optional interface installed: limited to 45 °C/113 °F.

Harmony HMIBSC Edge Box Core	
	
★★★★★	
Wall / book / DIN rail / Flat	
No	
Qualcomm ARM Cortex-A53 Quad core up to 1.2 GHz	
1x full-size slot with optional interface (2)	
eMMC 8 GB (soldered and not user-expandable)	eMMC 64 GB (soldered and not user-expandable)
SD 3.0 (supports standard SD 32 mm x 24 mm , SDHC, SDXC)	
1 GB DDR3 (not user-expandable)	2 GB DDR3 (not user-expandable)
–	–
Connector for TPM module (3)	
Linux Yocto	
No	Yes
12-24 V $\overline{\text{---}}$ or 100...240 V $\sim$ with power adapter HMIYPSOMAC1	
16 W	
2x RJ45 Ethernet 10/100/1,000 Mbps	
1x RS-232 (default) and 1x RS-422/485 (software setting), non-isolated	
2x USB 2.0	
8x GPIO (Digital General Purpose I/O)	
1x HDMI (for configuration only)	
Wi-Fi WCN3620 802.11 b/g/n 2.4 GHz (4), WCN3620 Bluetooth 4.1 (4)	
1x for WLAN antenna, 1x for GPRS antenna	
Timer with 255 levels/intervals, programmable, 1...255 s	
Yes	
157 x 150 x 46 mm/6.18 x 5.91 x 1.81 in. (with no expandable slots)	
Conforming to EN/IEC 60068-2-30: 0...50 °C/32...122 °F (5)	
Conforming to IEC 61000-4/ EN 55011: -40...85 °C/-40...185 °F	
Conforming to IEC 60664-1: 2 g from 5...500 Hz	
CE, cULus ITE (UL IT 60950, CSA IT 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)	
Secure password boot and Node-RED	
HMIBSCEA53D1L01	HMIBSCEA53D1L0A
3/6	
See configured Harmony Modular Box PC on page 4/32	



Harmony HMIBSC

Presentation

Harmony HMIBSC connects OT (Operational Technology) in the field to IT (Information Technology) for an Industrial Internet of Things. With built-in Node-RED, WiFi, and Bluetooth, and a Linux operating system running on a quad-core Qualcomm ARM CPU, it is well adjusted to wire the Internet of Things.

eMMC storage is available by default and can be expanded with an SD card. The two standard Ethernet ports allow OT and IT communications to be separated if necessary. The secure password boot and TPM encryption module afford a high level of cybersecurity by design. The commissioning is made easier and safer with its own HDMI port that connects to an optional screen.

The embedded GPIO and optional cards for analog I/O allow dedicated sensors to be connected to Harmony HMIBSC. The optional cellular 4G card of the Harmony iPC range is supported on Harmony HMIBSC for remote connection to IT systems. All these options can be user mounted or Configured-To-Order (see [page 4/32](#)).

Overview of the offer

Harmony HMIBSC Edge Box Core

The Harmony HMIBSC offer comprises 3 product references, each equipped with:

- Fanless Qualcomm ARM Cortex-A53 quad-core processor up to 1.2 GHz
- Default WLAN: 1x WiFi, 1x Bluetooth
- Connection ports: 2x USB 2.0, 1x COM (RS-232/422/485), 2x Gigabit Ethernet, 1x Display port, 1x HDMI
- Expansion slots: 1x full-size mini PCIe slot with optional interface (2), 1x M.2 slot for extension (not for storage) (3), 1x SD card slot
- Power supply: 12-24 V $\overline{\text{---}}$, AC with optional external adapter HMIYPSOMAC1

The operating systems, storage devices, and expansion slots are as follows:

- **HMIBSCEA53D1L0T**
 - Operating system: Linux Yocto with secure password boot
 - RAM: 1 GB DDR3 (1)
 - Default storage device: 8 GB eMMC
 - Software: Node-RED
 - Default TPM module for encryption
- **HMIBSCEA53D1L01**
 - Operating system: Linux Yocto with secure password boot
 - RAM: 1 GB DDR3 (1)
 - Default storage device: 8 GB eMMC
 - Software: Node-RED
 - Connector for optional TPM module
- **HMIBSCEA53D1L0A**
 - Operating system: Linux Yocto with secure password boot
 - RAM: 2 GB DDR3 (1)
 - Default storage device: 64 GB eMMC
 - Software: Node-RED
 - Conformal coating
 - Connector for optional TPM module

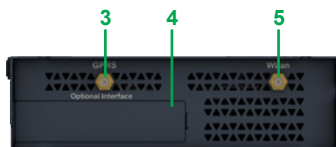
(1) Memory is not user-expandable.

(2) For mini PCIe card, cellular 4G or 8x analog input interface 0-10 V.

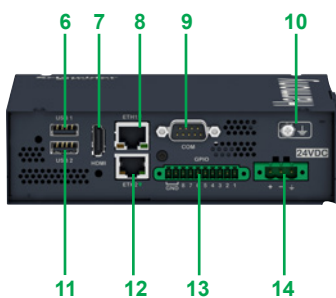
(3) For M.2 card, 2x analog input interface 0-10 V / 4-20 mA.



Front view of Harmony Simple IIoT Core



Top view of Harmony Simple IIoT Core



Underside view of Harmony Simple IIoT Core

Description

Harmony HMIBSC

Front view

- 1 SD card slot (1)
- 2 LEDs and reset button

Top view

- 3 SMA connector for the GPRS/4G external antenna
- 4 Optional interface
- 5 SMA connector for the WLAN external antenna

Underside view

- 6 USB1 (USB 2.0)
- 7 HDMI port
- 8 ETH1 (10/100/1000 Mbps) IEEE1588
- 9 COM port RS-232/422/485 (non-isolated) (2)
- 10 Ground connection pin
- 11 USB2 (USB 2.0)
- 12 ETH2 (10/100/1000 Mbps) IEEE1588
- 13 GPIO
- 14 DC power connector

(1) The default OS can be restored with the SD card.

(2) RS-232 (default setting) and RS-422/485 (software setting).

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony Edge Box

HMIBSC Edge Box Core



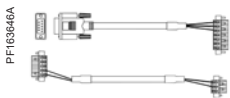
HMIBSCEA53D1L0T



HMIYMMAC1



HMIYMUPSKT1



HMIYCABUPS31

Harmony HMIBSC Edge Box Core

Qualcomm ARM Cortex-A53 quad-core processor up to 1.2 GHz/24 V $\pm$ supply voltage (1)

Mini PCIe slot	Operating system	Software	Storage disk	DDR3 RAM (2)	Reference	Weight kg/lb
With 2 expansion slots						
1x mini PCIe, full-size	Linux Yocto	Node-RED	8 GB eMMC	1 GB	HMIBSCEA53D1L0T (3)	1.00/2.20
					HMIBSCEA53D1L01	1.00/2.20
			64 GB eMMC	2 GB	HMIBSCEA53D1L0A (4)	1.00/2.20

Drives

Description	Compatible with Harmony HMIBSC	Reference	Weight kg/lb
SD card industrial grade 16 GB for HMIBSC	All models	HMIYSD016C1	—
SD card industrial grade 64 GB for HMIBSC	All models	HMIYSD064C1	—

Separate Components

Accessories

Description	Details	Compatible with Harmony HMIBSC	Reference	Weight kg/lb
Maintenance kit for HMIBSC	Includes: screws, USB holder, power connector, rubber	All models	HMIYBMKTBSCT	—
TPM 2.0 cybersecurity module for HMIBSC	TPM cybersecurity module for HMIBSC IIoT Core Box Linux	All models	HMIYBINLTPM201	—
1x WiFi/Bluetooth antenna for Harmony iPC		All models	HMIYCABWIFIAN511	—
AC power supply (60 W)	AC power adapter (60 W)	All models	HMIYPSOMAC1	—
AC power supply (100 W)	Modular AC power adapter (100 W)	All models	HMIYMMAC1	—
UPS battery	UPS battery for HMIBSC (no cables)	All models	HMIYMUPSKT1	—
UPS cable	UPS cables for HMIBSC (3 m/9.84 ft)	All models	HMIYCABUPS31	—

(1) AC with additional power supply module.

(2) Memory is not user-expandable.

(3) With default TPM module.

(4) With conformal coating.

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony Edge Box

HMIBSC Edge Box Core



Separate Components (continued)

Interfaces

Description	Details	Compatible with Harmony HMIBSC	Reference	Weight kg/lb
Mini PCIe 8x analog input interface 0-10 V	Mini PCIe with 8x analog inputs 0-10 V	All models	HMIYMIN8AI1	—
M.2 2x analog input interface 0-10 V/4-20 mA	M.2 with 2x analog inputs 0-10 V or 4-20 mA selected by switch.	All models	HMIYBIN2AIM21	—
Cellular 4G interface for North America	Mini PCIe GPRS 4G for North America frequencies. Kit including SIM card holder and external antenna	All models	HMIYMIN4GUS1	—
Cellular 4G interface for Europe and Asia	Mini PCIe GPRS 4G for Europe and Asia frequencies. Kit including SIM card holder and external antenna	All models	HMIYMIN4GEU1	—

Accessories

Cable for 4G card in HMIBSC 5 m/16.40 ft	Remote cable for 4G card in IIoT Box Core HMIBSC (5 m/16.40 ft)	All models	HMIYCAB4GAN51	—
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Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIBM Edge Box/Modular Box PC and
HMIDM Modular Display

Harmony HMIBM Edge Box/Modular Box PC

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■ HMIBMO Optimized

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■ HMIBMU Universal and HMIBMP Performance

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Harmony HMIDM Modular Display

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Harmony HMIDAD Display Adapter

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Harmony iPC
Industrial PC, Edge Box, and Display
Harmony Edge Box and Modular Box PC
HMIBMI Basic

Type of Harmony Edge Box and iPC		Harmony HMIBMI Edge Box Modular	Harmony HMIBMI Basic Modular Box PC
			
Fanless		★★★★★	
Mounting	Box PC	HMIBM Box wall/book/ DIN rail/ Flat	
	Panel PC	HMIBM Box + associated HMIDM Display	
CPU	Processor	Intel Atom Apollo Lake E3930 dual-core 1.8 GHz	
	Mini PCIe expansion slots	1x full-size slot with optional interface	
	Storage	Main drive	64 GB eMMC (soldered and not user-expandable)
	RAM	4 GB DDR3 (not user-expandable)	Optional
	Battery backup	TPM 2.0 module (pre-installed)	Connector for TPM 2.0 module (5)
Cybersecurity encryption		Windows 10 IoT Enterprise LTSC(64-bit)	Windows 10 IoT Enterprise LTSC(64-bit)
Operating system		No	
Conformal coating		12-24 V $\square$ or 100...240 V $\sim$ with power adapter HMIYPSOMAC1	
Supply voltage		20 W	
Power consumption		2x RJ45 Ethernet 10/100/1,000 Mbps	
Interface	Ethernet	1x RS-232/422/485 non isolated	
	Serial ports	1x USB 2.0, 1x USB 3.0	
	USB	1x display port	
	Video	Interface	Up to 3200 × 2000 at 60 Hz
		Resolution	2x for WLAN antenna, 1 for GPRS antenna
	Antenna connectors	Timer with 255 levels/intervals, programmable, 1...255 s	
	Watchdog timer	Yes	
Reset button and buzzer		187 x 150 x 46 mm/7.36 x 5.91 x 1.81 in.	
Overall dimensions (W x H x D)		Conforming to EN/IEC 60068-2-30: 0...50 °C /32...122 °F (6)	
Temperature	During operation	Conforming to IEC 61000-4/ EN 55011:-20...60 °C /-4...140 °F	
	During storage	Conforming to IEC 60664-1: 2 g from 5...500 Hz	
Vibration resistance		CE, cULus ITE (UL IT 60950, CSA IT 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)	
Standards and certifications		EcoStruxure Operator Terminal Expert Run Time Demo (1), McAfee whitelisting (2), EcoStruxure Secure Connect Advisor (3), Secure password boot UEFI	
Software, IIoT and Cybersecurity		Node-RED pre-installed	Node-RED (4)
References		HMIBMIEA5DD1E01	HMIBMIEA5DD1101
Page		4/18	
Configured-To-Order		See configured Harmony Modular Box PC on page 4/32	

(1) To be installed and activated by unlimited license HMIRTWZLSPAZZ (Digital) or HMIRTWZLSPMZZ (Paper).
(2) McAfee whitelisting to be installed and requires licence sticker HMIYYMACWLIOT1 to be applied.
(3) To be installed and activated with subscription.
(4) Node-RED to be installed or through USB key Windows 10 Recovery process ("Windows 10 with Node-RED for IIoT Box" option to be selected).
(5) For Cybersecurity TPM, optional module HMIYMINATPM201 for hardware encryption with Windows bit-locker.
(6) Except with optional interface installed: limited to 45 °C/113 °F.

Harmony HMIBMI Basic Modular Box PC



★★★★★

HMIBM Box wall/book/ DIN rail/ Flat

HMIBM Box + associated HMIDM Display

Intel Atom Apollo Lake E3930 dual-core 1.8 GHz

1x full-size slot with optional interface

128 GB eMMC (soldered and not user-expandable)

64 GB eMMC (soldered and not user-expandable)

128 GB eMMC (soldered and not user-expandable)

4 GB DDR3 (not user-expandable)

Optional

Connector for TPM 2.0 module (5)

Windows 10 IoT Enterprise LTSC (64-bit)

No

No

No

Yes

12-24 V $\square$ or 100...240 V $\sim$ with power adapter HMIYPSOMAC1

20 W

2x RJ45 Ethernet 10/100/1,000 Mbps

1x RS-232/422/485 non isolated

1x USB 2.0, 1x USB 3.0

1x display port

Up to 3200 × 2000 at 60 Hz

2x for WLAN antenna, 1x for GPRS antenna

Timer with 255 levels/intervals, programmable, 1...255 s

Yes

187 x 150 x 46 mm/7.36 x 5.91 x 1.81 in.

Conforming to EN/IEC 60068-2-30: 0...50 °C /32...122 °F (6)

Conforming to IEC 61000-4/ EN 55011:-20...60 °C /-4...140 °F

Conforming to IEC 60664-1: 2 g from 5...500 Hz

CE, cULus ITE (UL IT 60950, CSA IT 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)

EcoStruxure Operator Terminal Expert Run Time Demo (1), McAfee whitelisting (2), EcoStruxure Secure Connect Advisor (3), Secure password boot UEFI, Node-RED (4)

HMIBMIEA5DD110L

HMIBMIEA5DD1001

HMIBMIEA5DD100A

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See configured Harmony Modular Box PC on [page 4/32](#)

Harmony iPC
Industrial PC, Edge Box, and Display
Harmony Edge Box and Modular Box PC
HMIBMO Optimized

Type of Harmony Edge Box and iPC		Harmony HMIBMO Edge Box Modular	Harmony HMIBMO Optimized Modular Box PC (regular)
			
Fanless		★★★★★	
Mounting	Box PC	HMIBM Box wall/book/ DIN rail/ Flat	
	Panel PC	HMIBM Box + associated HMIDM Display	
CPU	Processor		Intel Atom Apollo Lake E3930 dual-core 1.8 GHz
	Mini PCIe expansion slots with interface		1x full-size slot without optional interface
	Storage	M.2 SSD 64 GB (2)	
		M.2	
	RAM	4 GB DDR3 (not user-expandable)	
Battery backup		Optional	
Cybersecurity encryption		TPM 2.0 module (pre-installed)	Connector for TPM 2.0 module
Operating system		Windows 10 IoT Enterprise LTSC (64-bit)	Windows 10 IoT Enterprise LTSC (64-bit) + TPM 2.0
Conformal coating		No	
Supply voltage		12-24 V $\overline{\text{---}}$ or 100...240 V $\sim$ with power adapter HMIYPSOMC1	
Power consumption		25 W	
Interface	Ethernet		2x RJ45 Ethernet 10/100/1,000 Mbps "i210 IEEE1588"
	Serial ports		1x RS-232/422/485 non isolated
	USB		2x USB 2.0, 2x USB 3.0
	Video	2x display ports	
		Up to 3200 × 2000 at 60 Hz	
	Antenna connectors		2x for WLAN antenna, 1x for GPRS antenna
Watchdog timer		Timer with 255 levels/intervals, programmable, 1...255 s	
Reset button and buzzer		Yes	
Overall dimensions (W x H x D)		187 x 150 x 38 mm/7.36 x 5.91 x 1.50 in.	
Temperature	During operation		Conforming to EN/IEC 60068-2-30: 0...55 °C/32...131 °F (8)
	During storage		Conforming to IEC 61000-4/ EN 55011:-30...70 °C/-22...158 °F
Vibration resistance During operation		Conforming to IEC 60664-1: 2 g from 5...500 Hz	
Standards and certifications		CE, cULus industrial control (UL 61010-2-201, CSA 22.2 No. 142), cULus HazLoc (ANSI/ISA 12.12.01 and CSA C22.2 No. 213, Class I, Division 2), RCM, CCC, CE ATEX and IECEx HazLoc 3GD Zone 2/22, EAC, Marine DNV (without HDD)	
Software, IIoT and Cybersecurity		EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Machine SCADA Expert Run Time (4), McAfee whitelisting (5), EcoStruxure Secure Connect Advisor (6), Secure password boot UEFI	
		Node-RED pre-installed	Node-RED (7)
References		HMIBMOMA5DD1E01	HMIBMOMA5DD1101
Page		4/18	
Configured-To-Order		See configured Harmony Modular Box PC on page 4/32	

(1) M.2 SSD 1,5 Millions H. MTBF, 3 Years manufacturer warranty.
(2) Requires HMIYBADHDDMO1 adapter.
(3) To be installed and activated by unlimited license HMIRTCWZLSPAZZ (Digital) or HMIRTCWZLSPMZZ (Paper).
(4) With Configured-To-Order Harmony Modular Box PC.
(5) McAfee whitelisting to be installed and requires licence sticker HMIYYMACWLIOT1 to be applied.
(6) To be installed and activated with subscription.
(7) Node-RED to be installed or through USB key Windows 10 Recovery process ("Windows 10 with Node-RED for IIoT Box" option to be selected).
(8) Except with optional interface or HDD installed: limited to 45 °C/113 °F.

Harmony HMIBMO Optimized Modular Box PC (regular)		Harmony HMIBMO Optimized Modular Box PC (expandable)	
★★★★★			
HMIBM Box wall/book/ DIN rail/ Flat			
HMIBM Box + associated HMIDM Display			
Intel Atom Apollo Lake E3930 dual-core 1.8 GHz			
1x full-size slot without optional interface		1x full-size slot with optional interface	
No	M.2 SSD 250 GB (2)	No	
M.2	M.2, 1x HDD/SSD slot (3) with optional interface slot		
4 GB DDR3 (not user-expandable)			8 GB DDR3 (not user-expandable)
Optional			
Connector for TPM 2.0 module			
No	Windows 10 IoT Enterprise LTSC (64-bit)	No	
No		Yes	
12-24 V $\overline{\text{---}}$ or 100...240 V $\sim$ with power adapter HMIYPSOMAC1			
25 W			
2x RJ45 Ethernet 10/100/1,000 Mbps "i210 IEEE1588"			
1x RS-232/422/485 non isolated			
2x USB 2.0, 2x USB 3.0			
2x display ports			
Up to 3200 × 2000 at 60 Hz			
2x for WLAN antenna, 1x for GPRS antenna			
Timer with 255 levels/intervals, programmable, 1...255 s			
Yes			
187 x 150 x 38 mm/7.36 x 5.91 x 1.50 in.		187 x 150 x 54 mm/7.36 x 5.91 x 2.13 in.	
Conforming to EN/IEC 60068-2-30: 0...55 °C/32... 131 °F (8)			
Conforming to IEC 61000-4/ EN 55011:-30...70 °C/-22... 158 °F			
Conforming to IEC 60664-1: 2 g from 5...500 Hz			
CE, cULus industrial control (UL 61010-2-201, CSA 22.2 No. 142), cULus HazLoc (ANSI/ISA 12.12.01 and CSA C22.2 No. 213, Class I, Division 2), RCM, CCC, CE ATEX and IECEx HazLoc 3GD Zone 2/22, EAC, Marine DNV (without HDD)			
EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Machine SCADA Expert Run Time (4), McAfee whitelisting (5), EcoStruxure Secure Connect Advisor (6), Secure password boot UEFI, Node-RED (7)			
HMIBMO0A5DD1001		HMIBMOMA5DDF10L	HMIBMO0A5DDF101
			HMIBMO0A5DDF10A
4/18			
See configured Harmony Modular Box PC on page 4/32			

See configured Harmony Modular Box PC on [page 4/32](#)

Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIBM Modular Box PC
HMIBMU Universal

Type of Harmony IIoT Box and iPC

Harmony HMIBMU Universal Modular Box PC



Fanless	
Mounting	Box PC
	Panel PC
CPU	Processor
	Mini PCIe expansion slots
	Storage
	Main drive
	Slots (7)
	RAM/MRAM
	Hot-swap RAID HDD and battery backup
Cybersecurity encryption	
Operating system	
Conformal coating	
Supply voltage	
Power consumption	
Interface	Ethernet
	Serial ports
	USB
	Video
	Interface
	Resolution
	Antenna connectors
	Watchdog timer
Reset button and buzzer	
Overall dimensions (W x H x D)	With 2 slots (2 mini PCIe)
	With 4 slots (2 mini PCIe + 2 PCI/PCIe)
Temperature	During operation
	During storage
Vibration resistance	
Standards and certifications	
Software, IIoT and Cybersecurity	
References	No PCIe/PCI expansion slots
	1 PCIe (x4) + 1 PCI
	2 PCI
	1 PCIe (x1) + 1 PCIe (x4)
Page	
Configured-To-Order	

★★★★★ (1)	
Box PC: HMIBM Box wall/book (4)/flat (5) mounting	
Panel PC: HMIBM Box + associated HMIDM Display	
Intel® Celeron® 2980U dual-core (1.6 GHz, low power)	
2x full-size slots with 2x optional interface slots	
CFAST card ≥ 32 GB	SSD ≥ 128 GB (2)
1x CFAST card slot and 2x HDD/SSD slots (hot-swappable)	
4 GB DDR3 (not user-expandable)/512 KB non-volatile RAM with 300 KB for user	
Optional	
Connector for TPM 1.2 module (8)	
WES 7 Premium SP1 (64-bit)	Windows 10 IoT Enterprise (64-bit Multi-language)
–	
18...36 V $\overline{\sim}$ or 100...240 V $\frown$ supply with modular power adapter HMIYMMAC1	
17.8 W typical, 33.6 W max.	
2x RJ45 Ethernet 10/100/1,000 Mbps "i210 IEEE1588"	
1x RS-232/422/485 isolated with auto flow control	
2x USB 2.0, 2 USB 3.0	
2x display ports (1 port is disabled when HMIDM Modular Display is mounted on the front)	
Up to 3200 × 2000 at 60 Hz	
2x for WLAN antenna, 1x for GPRS antenna	
Timer with 255 levels/intervals, programmable, 1...255 s	
Yes	
254 × 207 × 65.2 mm/10 × 8.15 × 2.57 in.	
254 × 207 × 103.2 mm/10 × 8.15 × 4.06 in.	
Conforming to EN/IEC 60068-2-30 for wall/book mounting: 0...55 °C/32...131 °F (4), for flat mounting: 50 °C/122 °F (5)	
Conforming to IEC 61000-4/ EN 55011: -30...70 °C/-22...158 °F	
Conforming to IEC 60664-1: 2 g from 5...500 Hz	
CE, cULus industrial control (UL 61010-2-201, CSA 22.2 No. 142), cULus HazLoc (ANSI/ISA 12.12.01 and CSA C22.2 No. 213, Class I, Division 2), RCM, CCC, CE ATEX and IECEx HazLoc 3GD Zone 2/22, EAC	
EcoStruxure Operator Terminal Expert Run Time Demo (3)	EcoStruxure Operator Terminal Expert Run Time Demo (3)
EcoStruxure Machine SCADA Expert Run Time (10), Node-RED and McAfee whitelisting (6), EcoStruxure Secure Connect Advisor (9)	
HMIBMUCI29D2W01	HMIBMUSI29D2801
HMIBMUCI29D4W01	HMIBMUSI29D4801
–	–
–	–
4/19	
See configured Harmony Modular Box PC on page 4/32	

(1) HMIYBFT4BM11 fan kit is required only when PCI/PCIe expansion cards above 3 W are installed.
(2) 5-year Intel warranty and 1.5 million hours MTBF. For high performance, user can preferably use the configuration with 240 GB SSD.
(3) EcoStruxure Operator Terminal Expert Run Time demo to be installed and activated by unlimited license HMIRTWCZLSPAZZ (Digital) or HMIRTWCZLSPMZZ (Paper).
(4) Except with HDD + HMIDM Modular Display or with PCI/PCIe up to 45 °C/158 °F.
(5) Except with HDD, mini PCIe card or PCI/PCIe card mounted which is up to 40 °C/ 104 °F.

Harmony HMIBMU Universal Modular Box PC



★★★★★ (1)

Box PC: HMIBM Box wall/book (4)/flat (5) mounting		
Panel PC: HMIBM Box + associated HMIDM Display		
Intel® Celeron® 2980U dual-core (1.6 GHz, low power)		
2x full-size slots with 2x optional interface slots		
HDD ≥ 500 GB, 24/7 Enterprise	None or Configured-To-Order offer	
1x CFast card slot and 2x HDD/SSD slots (hot-swappable)		
4 GB DDR3 (not user-expandable)/512 KB non-volatile RAM with 300 KB for user	8 GB DDR3 (not user-expandable)/512 KB non-volatile RAM with 300 KB for user	
Optional		
Connector for TPM 1.2 module (8)		
Windows 10 IoT Enterprise (64-bit Multi-language)	None or Configured-To-Order offer	
–	Yes	
18...36 V $\overline{\sim}$ or 100...240 V $\frown$ supply with modular power adapter HMIYMMAC1		
17.8 W typical, 33.6 W max.		
2x RJ45 Ethernet 10/100/1,000 Mbps "i210 IEEE1588"		
1x RS-232/422/485 isolated with auto flow control		
2x USB 2.0, 2 USB 3.0		
2x display ports (1 port is disabled when HMIDM Modular Display is mounted on the front)		
Up to 3200 × 2000 at 60 Hz		
2x for WLAN antenna, 1x for GPRS antenna		
Timer with 255 levels/intervals, programmable, 1...255 s		
Yes		
254 × 207 × 65.2 mm/10 × 8.15 × 2.57 in.		
254 × 207 × 103.2 mm/10 × 8.15 × 4.06 in.		
Conforming to EN/IEC 60068-2-30 for wall/book mounting: 0...55 °C/32...131 °F (4), for flat mounting: 50 °C/122 °F (5)		
Conforming to IEC 61000-4/ EN 55011: -30...70 °C/-22...158 °F		
Conforming to IEC 60664-1: 1 g from 5...500 Hz		
CE, cULus industrial control (UL 61010-2-201, CSA 22.2 No. 142), cULus HazLoc (ANSI/ISA 12.12.01 and CSA C22.2 No. 213, Class I, Division 2), RCM, CCC, CE ATEX and IECEx HazLoc 3GD Zone 2/22, EAC		
EcoStruxure Operator Terminal Expert Run Time Demo (3)		
EcoStruxure Machine SCADA Expert Run Time (10), Node-RED and McAfee whitelisting (6), EcoStruxure Secure Connect Advisor (9)		
HMIBMUHI29D2801	HMIBMU0I29D2001	HMIBMU0I29D200A
HMIBMUHI29D4801	HMIBMU0I29D4001	HMIBMU0I29D400A
–	–	HMIBMU0I29DI00A
–	–	HMIBMU0I29DE00A

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See configured Harmony Modular Box PC on [page 4/32](#)

(6) Node-RED to be installed or through USB key Windows 10 Recovery process ("Windows 10 with Node-RED for IIoT Box" option to be selected). McAfee whitelisting to be installed and requires licence sticker HMIYYMACWL10T1 to be applied.
(7) Free storage slot requires slide-in HMIYMADSDD1 to mount HDD/SSD 2.5".
(8) For Windows 10 operating system. Requires user downgrade to TPM 1.2, with utility tool provided.
(9) To be installed and activated with subscription.
(10) With Configured-To-Order Harmony Modular Box PC.



Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIBM Modular Box PC
HMIBMP Performance

Type of Harmony IIoT Box and iPC

Fanless	
Mounting	Box PC
	Panel PC
CPU	Processor
	Mini PCIe expansion slots
	Storage
	Main drive
	Slots (7)
	RAM/MRAM
	Hot-swap RAID HDD and battery backup
Cybersecurity encryption	
Operating system	
Conformal coating	
Supply voltage	
Power consumption	
Interface	Ethernet
	Serial ports
	USB
	Video
	Interface
	Resolution
	Antenna connectors
	Watchdog timer
Reset button and buzzer	
Overall dimensions (W x H x D)	With 2 slots (2 mini PCIe)
	With 4 slots (2 mini PCIe + 2 PCI/PCIe)
Temperature	During operation
	During storage
Vibration resistance During operation	
Standards and certifications	
Software, IIoT and Cybersecurity	
References	No PCIe/PCI expansion slots
	1 PCIe (x4) + 1 PCI
	2 PCI
	1 PCIe (x1) + 1 PCIe (x4)
Page	
Configured-To-Order	

(1) HMIYBFKT4BM11 fan kit is required only when PCI/PCIe expansion cards above 3 W are installed.
(2) 5-year Intel warranty and 1.5 million hours MTBF.
(3) EcoStruxure Operator Terminal Expert Run Time Demo to be installed and activated by unlimited license HMIRTWCZLSPAZZ (Digital) or HMIRTWCZLSPMZZ (Paper).
(4) Except with HDD + HMIDM Modular Display or with PCI/PCIe up to 45 °C/158 °F.
(5) Except with HDD, mini PCIe card or PCI/PCIe card mounted which is up to 40 °C/ 104 °F.

Harmony HMIBMP Performance Modular Box PC



★★★★★ (1)	
Box PC: HMIBM Box wall/book (4)/flat (5) mounting	
Panel PC: HMIBM Box + associated HMIDM Display	
Intel Core i7-4650U (1.7 GHz, low power with turbo boost at 3.3Ghz)	
2x full-size slots with 2x optional interface slots	
SSD ≥ 128 GB (2)	HDD ≥ 500 GB, 24/7 Enterprise
1x CFast card slot and 2x HDD/SSD slots (hot-swappable)	
8 GB DDR3 (not user-expandable)/512 KB non-volatile RAM with 300 KB for user	
Optional	
Connector for TPM 1.2 module (8)	
Windows 10 IoT Enterprise (64-bit Multi-language)	
–	
18...36 V or 100...240 V supply with modular power adapter HMIYMMAC1	
18.1 W typical, 38.4 W max.	
2x RJ45 Ethernet 10/100/1,000 Mbps "i210 IEEE1588"	
1x RS-232/422/485 isolated with auto flow control	
2x USB 2.0, 2 USB 3.0	
2x display ports (1 port is disabled when HMIDM Modular Display is mounted on the front)	
Up to 3200 × 2000 at 60 Hz	
2x for WLAN antenna, 1 for GPRS antenna	
Timer with 255 levels/intervals, programmable, 1...255 s	
Yes	
254 × 207 × 65.2 mm/10 × 8.15 × 2.57 in.	
254 × 207 × 103.2 mm/10 × 8.15 × 4.06 in.	
Conforming to EN/IEC 60068-2-30: 0...55 °C/32...131 °F (5)	
Conforming to IEC 61000-4/ EN 55011: -30...70 °C/-22...158 °F	
Conforming to IEC 60664-1: 2 g from 5...500 Hz	
CE, cULus industrial control (UL 61010-2-201, CSA 22.2 No. 142), cULus HazLoc (ANSI/ISA 12.12.01 and CSA C22.2 No. 213, Class I, Division 2), CE Atex and IECEx HazLoc 3GD Zone 2/22, Marine DNV (without HDD), RCM, CCC, EAC	
EcoStruxure Operator Terminal Expert Run Time Demo (3)	EcoStruxure Operator Terminal Expert Run Time Demo (3)
EcoStruxure Machine SCADA Expert Run Time (10), Node-RED and McAfee whitelisting (6), EcoStruxure Secure Connect Advisor (9)	
HMIBMPSI74D2801	HMIBMPHI74D2801
HMIBMPSI74D4801	HMIBMPHI74D4801
–	–
–	–
4/20	
See configured Harmony Modular Box PC on page 4/32	

Harmony HMIBMP Performance Modular Box PC



★★★★★ (1)	
Box PC: HMIBM Box wall/book (4)/flat (5) mounting	
Panel PC: HMIBM Box + associated HMIDM Display	
Intel Core i7-4650U (1.7 GHz, low power with turbo boost at 3.3 GHz)	
2x full-size slots with 2x optional interface slots	
None or Configured-To-Order offer	
1x CFast card slot and 2x HDD/SSD slots (hot-swappable)	
8 GB DDR3 (not user-expandable)/512 KB non-volatile RAM with 300 KB for user	16 GB DDR3 (not user-expandable)/512 KB non-volatile RAM with 300 KB for user
Optional	
Connector for TPM 1.2 module (8)	
None or Configured-To-Order offer	
–	Yes
18...36 V or 100...240 V supply with modular power adapter HMIYMMAC1	
18.1 W typical, 38.4 W max.	
2x RJ45 Ethernet 10/100/1,000 Mbps "i210 IEEE1588"	
1x RS-232/422/485 isolated with auto flow control	
2x USB 2.0, 2 USB 3.0	
2x display ports (1 port is disabled when HMIDM Modular Display is mounted on the front)	
Up to 3200 × 2000 at 60 Hz	
2x for WLAN antenna, 1 for GPRS antenna	
Timer with 255 levels/intervals, programmable, 1...255 s	
Yes	
254 × 207 × 65.2 mm/10 × 8.15 × 2.57 in.	
254 × 207 × 103.2 mm/10 × 8.15 × 4.06 in.	
Conforming to EN/IEC 60068-2-30: 0...55 °C/32...131 °F (5)	
Conforming to IEC 61000-4/ EN 55011: -30...70 °C/-22...158 °F	
Conforming to IEC 60664-1: 1 g from 5...500 Hz	
CE, cULus industrial control (UL 61010-2-201, CSA 22.2 No. 142), cULus HazLoc (ANSI/ISA 12.12.01 and CSA C22.2 No. 213, Class I, Division 2), CE Atex and IECEx HazLoc 3GD Zone 2/22, Marine DNV (without HDD), RCM, CCC, EAC	
EcoStruxure Operator Terminal Expert Run Time Demo (3)	
EcoStruxure Machine SCADA Expert Run Time (10), Node-RED and McAfee whitelisting (6), EcoStruxure Secure Connect Advisor (9)	
HMIBMP0I74D2001	HMIBMP0I74D200A
HMIBMP0I74D4001	HMIBMP0I74D400A
–	HMIBMP0I74DI00A
–	HMIBMP0I74DE00A
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See configured Harmony Modular Box PC on page 4/32	

(6) Node-RED to be installed or through USB key Windows 10 Recovery process ("Windows 10 with Node-RED for IIoT Box" option to be selected). McAfee whitelisting to be installed and requires licence sticker HMIYYMACWLIOT1 to be applied.
(7) Free storage slot requires slide-in HMIYMADSDD1 to mount HDD/SSD 2.5".
(8) For Windows 10 operating system. Requires user downgrade to TPM 1.2, with utility tool provided.
(9) To be installed and activated with subscription.
(10) With Configured-To-Order Harmony Modular Box PC.



Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIBM Edge Box and Modular Box PC

HMIBMI Basic



HMIBMI Basic Box PC

Presentation

Harmony HMIBM support advanced automation applications requiring Windows operating systems, with powerful CPUs, expansion capabilities, high-availability options (RAID HDD, UPS), and advanced certifications. Their modularity means that HMIBM Box PCs can be converted to Panel PCs by combining them with HMIDM Displays. They can be used for IIoT at the edge of EcoStruxure for direct connection to Cloud applications (running Node-RED to wire from OT to IT) with enhanced cybersecurity by design.

In addition to the referenced offer, the flexibility offered by the modular design allows Configured-To-Order Harmony Box PC versions (see [page 4/32](#)).

Overview of the offer

Harmony HMIBMI Basic

The Harmony HMIBMI Basic offer comprises 5 product references, each equipped with:

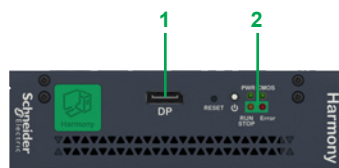
- Fanless Intel Atom Apollo Lake E3930 dual-core processor, 1.8 GHz
- 4 GB DDR3 RAM (1)
- Connection ports: 1x USB 3.0, 1x USB 2.0, 1x COM (RS-232/422/485), 2 Gigabit Ethernet, and 1x Display port
- Expansion slots: 1x full-size mini PCIe slot with optional interface
- Power supply: 12-24 V $\overline{\text{DC}}$, AC with optional external adapter HMIYPSOMAC1

The operating systems, storage devices, and expansion slots are as follows:

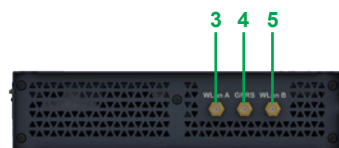
- **HMIBMIEA5DD1E01 Edge Box**
 - Operating system: Windows 10 IoT Enterprise LTSC (64-bit) + TPM 2.0
 - Default storage device: 64 GB eMMC (soldered, not user-expandable)
 - TPM encryption module, default mounted
 - Software: EcoStruxure Operator Terminal Expert + Node-RED (default)
- **HMIBMIEA5DD1101**
 - Operating system: Windows 10 IoT Enterprise LTSC (64-bit)
 - Default storage device: 64 GB eMMC (soldered, not user-expandable)
 - Software: EcoStruxure Operator Terminal Expert + Node-RED (2)
- **HMIBMIEA5DD110L**
 - Operating system: Windows 10 IoT Enterprise LTSC (64-bit)
 - Default storage device: 128 GB eMMC (soldered, not user-expandable)
 - Software: EcoStruxure Operator Terminal Expert + Node-RED (2)
- **HMIBMIEA5DD1001**
 - Operating system: None
 - Default storage device: 64 GB eMMC (soldered, not user-expandable)
 - Node-RED (2)
- **HMIBMIEA5DD100A**
 - Operating system: None
 - Default storage device: 128 GB eMMC (soldered, not user-expandable)
 - Node-RED (2)
 - Conformal coating: Yes

(1) Memory is not user-expandable.

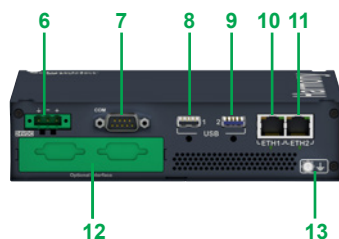
(2) Node-RED can be directly installed by user or through USB key Windows 10 Recovery process where "Windows 10 with Node-RED for IIoT Box" option has to be selected.



Front view of Basic Box PC



Top view of Basic Box PC



Underside view of Basic Box PC

Description

Harmony HMIBMI Basic

Front view

- 1 Display port
- 2 LEDs and power/reset button

Top view

- 3 SMA connector for the WLAN A external antenna
- 4 SMA connector for the cellular 4G external antenna
- 5 SMA connector for the WLAN B external antenna

Underside view, 1 expansion slot

- 6 DC power connector
- 7 COM port RS-232 (non-isolated), RS-422/485 (non-isolated)
- 8 USB1 (USB 2.0)
- 9 USB2 (USB 3.0)
- 10 Eth1 (10/100/1000 Mbps) IEEE1588
- 11 Eth2 (10/100/1000 Mbps) IEEE1588
- 12 Optional interface
- 13 Ground connection pin



HMIBMO Optimized Box PC,
regular version



HMIBMO Optimized Box PC,
expandable version

Presentation (continued)

Overview of the offer (continued)

Harmony HMIBMO Optimized

The Harmony HMIBMO Optimized Box PC offer comprises 6 references, each equipped with:

- Fanless Intel Atom Apollo Lake E3930 dual-core processor, 1.8 GHz
- Connection ports: 2x USB 3.0, 2x USB 2.0, 1x COM (RS-232/422/485), 2 Gigabit i210 Ethernet, and 2x Display port
- Expansion slots: 1x full-size mini PCIe slot
- Power supply: 12-24 V $\overline{\text{DC}}$, AC with additional power supply module HMIYPSOMAC1
- Expandable models have 1x optional interface for external connection to mini PCIe cards mounted in the internal slot and 1x HDD/SSD 2.5" slot (3)

The operating systems, storage devices, and expansion slots are as follows:

HMIBMOMA5DD1E01 Edge Box

- Operating system: Windows 10 IoT Enterprise LTSC (64-bit) + TPM 2.0
- RAM: 4 GB DDR3 (1)
- Default storage device: 64 GB M.2 SSD
- TPM encryption module, default mounted
- Software: EcoStruxure Operator Terminal Expert + Node-RED (default)
- 1x mini PCIe without optional interface (for wireless cards only)

□ HMIBMOMA5DD1101

- Operating system : Windows 10 IoT Enterprise LTSC (64-bit)
- RAM: 4 GB DDR3 (1)
- Default storage device: 64 GB M.2 SSD
- Software: EcoStruxure Operator Terminal Expert + Node-RED (2)
- 1x mini PCIe without optional interface (for wireless cards only)

□ HMIBMO0A5DD1001

- Operating system: None
- RAM: 4 GB DDR3 (1)
- Default storage device: None
- Software: None
- 1x mini PCIe without optional interface (for wireless cards only)

□ HMIBMOMA5DDF10L

- Operating system: Windows 10 IoT Enterprise LTSC (64-bit)
- RAM: 4 GB DDR3 (1)
- Default storage device: 250 GB M.2 SSD
- Software: EcoStruxure Operator Terminal Expert + Node-RED (2)
- Expandable with 1x optional interface for mini PCIe + 1x HDD/SSD 2.5" slot (3)

HMIBMO0A5DDF101

- Operating system: None
- RAM: 4 GB DDR3 (1)
- Default storage device: None
- Expandable with 1x optional interface for mini PCIe + 1x HDD/SSD 2.5" slot (3)

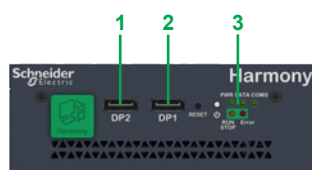
HMIBMO0A5DDF10A

- Operating system: None
- RAM: 8 GB DDR3 (1)
- Default storage device: None
- Conformal coating
- Expandable with 1x optional interface for mini PCIe + 1x HDD/SSD 2.5" slot (3)

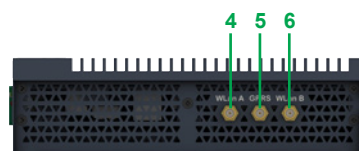
(1) Memory is not user-expandable.

(2) Node-RED can be directly installed by user or through USB key Windows 10 Recovery process where "Windows 10 with Node-RED for IIoT Box" option has to be selected.

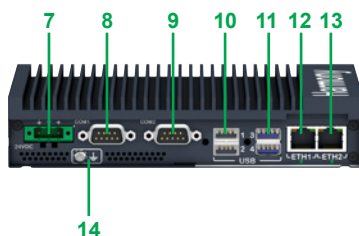
(3) 2.5" HDD/SSD requires HMIYBADHDDBMO1 adapter to be mounted.



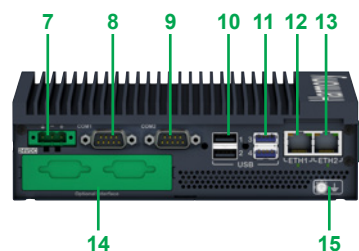
Front view of Optimized Box PC



Top view of Optimized Box PC



Underside view of Optimized Box PC, regular version



Underside view of Optimized Box PC, expandable version

Description

Harmony HMIBMO Optimized

Front view

- 1 Display Port 2
- 2 Display Port 1
- 3 LEDs and power/reset button

Top view

- 4 SMA connector for the WLAN A external antenna
- 5 SMA connector for the cellular 4G external antenna
- 6 SMA connector for the WLAN B external antenna

Underside view "regular version" (1)

- 7 DC power connector
- 8 COM1 port RS-232 (non-isolated)
- 9 COM2 port RS-232 (non-isolated), RS-422/485 (non-isolated)
- 10 USB1 and USB2 (USB 2.0)
- 11 USB3 and USB4 (USB 3.0)
- 12 Eth1 (10/100/1000 Mbps) IEEE1588
- 13 Eth2 (10/100/1000 Mbps) IEEE1588
- 14 Ground connection pin

Underside view "expandable version" (2)

- 7 DC power connector
- 8 COM1 port RS-232 (non-isolated)
- 9 COM2 port RS-232 (non-isolated), RS-422/485 (non-isolated)
- 10 USB1 and USB2 (USB 2.0)
- 11 USB3 and USB4 (USB 3.0)
- 12 Eth1 (10/100/1000 Mbps) IEEE1588
- 13 Eth2 (10/100/1000 Mbps) IEEE1588
- 14 Optional interface
- 15 Ground connection pin

(1) Regular version: HMIBMOMA5DD1101, HMIBMOMA5DD1E01, HMIBMO0ADD1001

(2) Expandable version: HMIBMOMA5DDF10L, HMIBMO0A5DDF101, HMIBMO0A5DDF10A



HMIBMU Universal Box PC
2 mini PCIe slots



HMIBMU Universal Box PC
2 mini PCIe + 2 PCI/PCIe slots

Presentation (continued)

Overview of the offer (continued)

Harmony HMIBMU Universal

The Harmony HMIBMU Universal Box PC offer comprises 12 references, each equipped with:

- Fanless Intel® Celeron 2980U processor (1.6 GHz) (2)
- 4 GB or 8 GB DDR3 RAM (3)
- 512 KB non-volatile MRAM with 300 KB for user
- Connection ports: 2 USB 3.0, 2 USB 2.0, 1 COM (RS-232, RS-232/422/485), 2 Gigabit Ethernet, and 2 Display ports (1)
- Expansion slots: 2 full-size mini PCIe slots, 0 or 2 full-size PCI/PCIe slots (2)
- Power supply: 24 V $\overline{\text{DC}}$, AC with additional power supply module HMIYMMAC1

The operating systems, storage devices, and expansion slots are as follows:

- With 4 GB DDR3 RAM (3), and 2 full-size mini PCIe slots:
 - **HMIBMU0I29D2W01**
 - Operating system: WES 7 Premium SP1 (64-bit Multi-language)
 - Default storage device: 32 GB CFAST card
 - **HMIBMUSI29D2801**
 - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
 - Default storage device: 128 GB SSD (5-year manufacturer warranty and 1.5 million hours MTBF)
 - **HMIBMUHI29D2801**
 - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
 - Default storage device: 500 GB HDD (Enterprise 24/7)
 - **HMIBMU0I29D2001**
 - Operating system: None
 - Default storage device: None
- With 4 GB DDR3 RAM (3), 2 full-size mini PCIe slots and 1 PCI + 1 PCIe (x4) (2):
 - **HMIBMU0I29D4W01**
 - Operating system: WES 7 Premium SP1 (64-bit Multi-language)
 - Default storage device: 32 GB CFAST card
 - **HMIBMUSI29D4801**
 - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
 - Default storage device: 128 GB SSD (5-year manufacturer warranty and 1.5 million hours MTBF)
 - **HMIBMUHI29D4801**
 - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
 - Default storage device: 500 GB HDD (Enterprise 24/7)
 - **HMIBMU0I29D4001**
 - Operating system: None
 - Default storage device: None
- With 8 GB DDR3 RAM (3), conformal coating, and without operating system/ default storage device:
 - **HMIBMU0I29D200A**
 - 2 full-size mini PCIe slots
 - **HMIBMU0I29D400A**
 - 2 full-size mini PCIe slots, 1 PCI + 1 PCIe (x4) (2)
 - **HMIBMU0I29D100A**
 - 2 full-size mini PCIe slots, 2 PCI (2)
 - **HMIBMU0I29DE00A**
 - 2 full-size mini PCIe slots, 1 PCIe (x1) + 1 PCIe (x4) (2)

(1) When Modular Box PC is mounted on Display, Display port 2 has no function.

(2) HMIYBFT4BM11 fan kit is required only when PCI/PCIe expansion cards above 3 W are installed.

(3) Memory is not user-expandable.



HMIBMP Performance Box PC
2 mini PCIe slots



HMIBMP Performance Box PC
2 mini PCIe + 2 PCI/PCIe slots

Presentation (continued)

Overview of the offer (continued)

Harmony HMIBMP Performance

The Harmony HMIBMP Performance Box PC offer comprises 10 references, each equipped with:

- Fanless Intel®Core i7-4650U processor (1.7 GHz) (2)
- 8 GB or 16 GB DDR3 RAM (3)
- 512 KB non-volatile MRAM with 300 KB for user
- Connection ports: 2 USB 3.0, 2 USB 2.0, 1 COM (RS-232/422/485), 2 Gigabit Ethernet, and 2 Display ports (1)
- Expansion slots: 2 full-size mini PCIe slots, 0 or 2 full-size PCI/PCIe slots
- Power supply: 24 V $\overline{\text{---}}$, AC with additional power supply module HMIYMMAC1

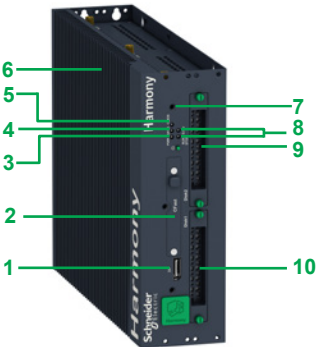
The operating systems, storage devices, and expansion slots are as follows:

- With 8 GB DDR3 RAM (3), and 2 full-size mini PCIe slots (2):
 - **HMIBMP0I74D2801**
 - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
 - Default storage device: 128 GB SSD (5-year manufacturer warranty and 1.5 million hours MTBF)
 - **HMIBMP0I74D2801**
 - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
 - Default storage device: 500 GB HDD (Enterprise 24/7)
 - **HMIBMP0I74D2001**
 - Operating system: None
 - Default storage device: None
- With 8 GB DDR3 RAM (3), 2 full-size mini PCIe slots and 1 PCI + 1 PCIe (x4) (2):
 - **HMIBMP0I74D4801**
 - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
 - Default storage device: 128 GB SSD (5-year manufacturer warranty and 1.5 million hours MTBF)
 - **HMIBMP0I74D4801**
 - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
 - Default storage device: 500 GB HDD (Enterprise 24/7)
 - **HMIBMP0I74D4001:**
 - Operating system: None
 - Default storage device: None
- With 16 GB DDR3 RAM (3), conformal coating, and without operating system and default storage device:
 - **HMIBMP0I74D200A**
 - 2 full-size mini PCIe slots
 - **HMIBMP0I74D400A**
 - 2 full-size mini PCIe slots, 1 PCI + 1 PCIe (x4) (2)
 - **HMIBMP0I74DI00A**
 - 2 full-size mini PCIe slots, 2 PCI (2)
 - **HMIBMP0I74DE00A**
 - 2 full-size mini PCIe slots, 1 PCIe (x1) + 1 PCIe (x4) (2)

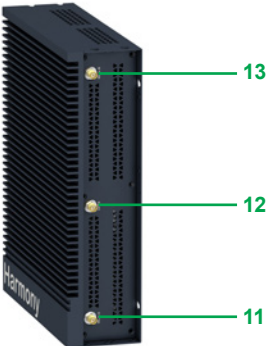
(1) When Modular Box PC is mounted on Display, Display Port 2 has no function.

(2) HMIYBKT4BM11 fan kit is required only when PCI/PCIe expansion cards above 3 W are installed.

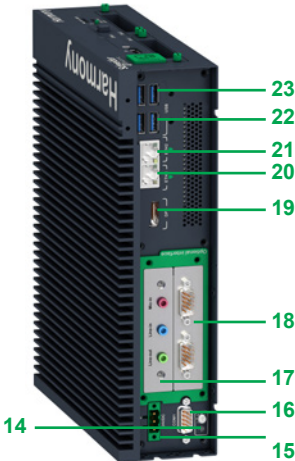
(3) Memory is not user-expandable.



Front view of Harmony Modular Box PC, 2 expansion slots



Top view of Harmony Modular Box PC, 2 expansion slots



Underside view of Harmony Modular Box PC, 2 expansion slots

Description

Harmony HMIBMU Universal and HMIBMP Performance, 2 expansion slots

Front view

- 1 Display port 2 (1)
- 2 Slide-in CFast card slot
- 3 Power status indicator (Green: On, Orange: Stand-by, No light: Off)
- 4 SATA status indicator (Green: On (Storage data transmit), Off (No storage data transmit))
- 5 CMOS status indicator (Orange: On (RTC voltage < 3 V ---), Off (RTC voltage > 3 V ---))
- 6 Fanless heat sink
- 7 Power supply/Reset button
- 8 Programmable status indicators (RUN/STOP and ERR LEDs)
- 9 HDD/SSD 2 (hot-swap and can be redundant RAID configuration) (2)
- 10 HDD/SSD 1 (hot-swap and can be redundant RAID configuration) (2)

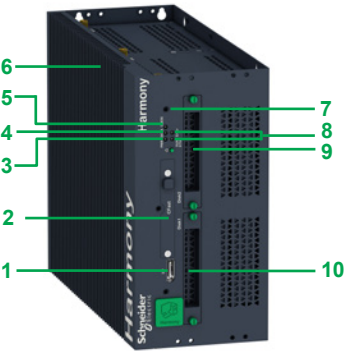
Top view

- 11 SMA connector for wireless LAN external antenna
- 12 SMA connector for Cellular 4G external antenna
- 13 SMA connector for wireless LAN external antenna

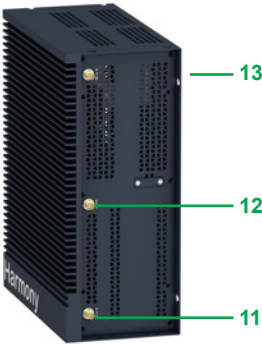
Underside view

- 14 DC power connector
- 15 Ground connection pin
- 16 COM1 port RS-232/422/485 (isolated), can be used for communication with HMIYMUPSKT1 UPS battery
- 17 Optional interface 2 with full-size mini PCIe slot
- 18 Optional interface 1 with full-size mini PCIe slot
- 19 Display port 1
- 20 Eth1 (10/100/1,000 Mbps) IEEE1588
- 21 Eth2 (10/100/1,000 Mbps) IEEE1588
- 22 USB1 and USB2 (USB 3.0)
- 23 USB3 and USB4 (USB 2.0)

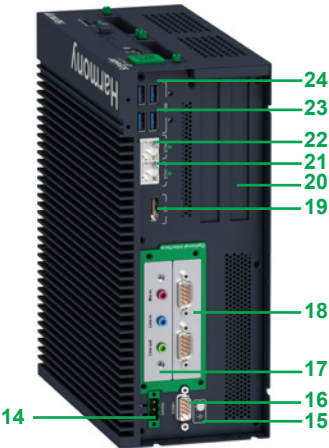
(1) When Modular Box PC is mounted on Display, Display port 2 has no function.
(2) Free storage slot requires slide-in HMIYMADSDD1 to mount HDD/SSD 2.5".



Front view of Harmony Modular Box PC, 4 expansion slots



Top view of Harmony Modular Box PC, 4 expansion slots



Underside view of Harmony Modular Box PC, 4 expansion slots

Description

Harmony HMIBMU Universal and HMIBMP Performance, 4 expansion slots

Front view

- 1 Display port 2 (1)
- 2 Slide-in CFast card slot
- 3 Power status indicator (Green: On, Orange: Stand-by, No light: Off)
- 4 SATA status indicator (Green: On (Storage data transmit), Off (No storage data transmit))
- 5 CMOS status indicator (Orange: On (RTC voltage < 3 V ---), Off (RTC voltage > 3 V ---))
- 6 Fanless heat sink
- 7 Power supply/Reset button
- 8 Programmable status indicators (RUN/STOP and ERR LEDs)
- 9 HDD/SSD 2 (hot-swap and can be redundant RAID configuration) (2)
- 10 HDD/SSD 1 (hot-swap and can be redundant RAID configuration) (2)

Top view

- 11 SMA connector for wireless LAN external antenna
- 12 SMA connector for Cellular 4G external antenna
- 13 SMA connector for wireless LAN external antenna

Underside view

- 14 DC power connector
- 15 Ground connection pin
- 16 COM1 port RS-232/422/485 (isolated), can be used for communication with HMIYMUPSKT1 UPS battery
- 17 Optional interface 1 with full-size mini PCIe slot
- 18 Optional interface 2 with full-size mini PCIe slot
- 19 Display port 1
- 20 2x PCI/PCIe slots (3)
- 21 Eth1 (10/100/1,000 Mbps) IEEE1588 (3)
- 22 Eth2 (10/100/1,000 Mbps) IEEE1588 (3)
- 23 USB1 and USB2 (USB 3.0)
- 24 USB3 and USB4 (USB 2.0)

(1) When Modular Box iPC is mounted on Display, Display port 2 has no function.

(2) Free storage slot requires slide-in HMIYMADSDD1 to mount HDD/SSD 2.5".

(3) HMIYBFKT4BM11 fan kit is required only when PCI/PCIe expansion cards above 3 W are installed.

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIBM Edge Box and Modular Box PC
HMIBMI Basic and HMIBMO Optimized

Ready-to-run Software, IIoT and Cybersecurity

Harmony HMIBM are supported by Schneider Electric HMI software. For HMI applications, EcoStruxure Operator Terminal Expert Run Time demo version can be downloaded and activated to unlimited version with **HMIRTWZLSPAZZ** (Digital) or **HMIRTWZLSPMZZ** (Paper) license. For line management and lite supervision, EcoStruxure Machine SCADA Expert Run Time is available via Configured-To-Order process.

For secure remote access, Harmony HMIBM are supported with EcoStruxure Secure Connect Advisor that will have to be installed and activated with subscription.

For more information on EcoStruxure Operator Terminal Expert, EcoStruxure Secure Connect Advisor and EcoStruxure Machine SCADA Expert, please refer to our website www.schneider-electric.com.

The mother board of latest Harmony Modular Box PC are equipped with a pin header to install Cybersecurity TPM optional module **HMIYMINATPM201** for hardware encryption with Windows bit-locker.

For IIoT connections to Cloud applications, Harmony HMIBM can run Node-RED. To activate McAfee whitelisting, the license sticker **HMIYMACWLIOT1** is required to be applied.

Harmony HMIBMI Basic

Intel Atom Apollo Lake E3930 dual-core 1.8 GHz processor/24 V --- supply voltage (1)

Expansion slot	Operating system	Software	Storage disk	DDR3 RAM (2)	Reference	Weight kg/lb
1x mini PCIe, full-size with optional interface	Windows 10 IoT Enterprise LTSC (64-bit)	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (5)	64 GB eMMC (soldered)	4 GB	HMIBMIEA5DD1101	1.20/2.64
	Windows 10 IoT Enterprise LTSC (64-bit) + TPM 2.0	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (5)	64 GB eMMC (soldered)	4 GB	HMIBMIEA5DD1E01 (8)	1.20/2.64
	Windows 10 IoT Enterprise LTSC (64-bit)	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (5)	128 GB eMMC (soldered)	4 GB	HMIBMIEA5DD110L	1.20/2.64
	No		64 GB eMMC (soldered)	4 GB	HMIBMIEA5DD1001	1.20/2.64
	No		128 GB eMMC (soldered)	4 GB	HMIBMIEA5DD100A (7)	1.20/2.64

Harmony HMIBMO Optimized

Intel Atom Apollo Lake E3930 dual-core 1.8 GHz processor/24 V --- supply voltage (1)

Regular version (without optional interface)

1x mini PCIe, full-size without optional interface	Windows 10 IoT Enterprise LTSC (64-bit)	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (5)	M.2 SSD 64 GB	4 GB	HMIBMOMA5DD1101	1.25/2.75
	Windows 10 IoT Enterprise LTSC (64-bit) + TPM 2.0	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (default)	M.2 SSD 64 GB	4 GB	HMIBMOMA5DD1E01 (8)	1.25/2.75
	No		No	4 GB	HMIBMO0A5DD1001	1.25/2.75

Expandable version (with Optional interface and HDD/SSD 2.5" slot (6))

1x mini PCIe, full-size with optional interface	Windows 10 IoT Enterprise LTSC (64-bit)	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (5)	M.2 SSD 250 GB	4 GB	HMIBMOMA5DDF10L	1.30/2.86
	No		No	4 GB	HMIBMO0A5DDF101	1.30/2.86
	No		No	8 GB	HMIBMO0A5DDF10A (7)	1.30/2.86

(1) AC with additional power supply module **HMIYPSOMAC1** (or **HMIYMMAC1** for HMIBMO in hazardous locations).

(2) Memory is not user-expandable.

(3) EcoStruxure Operator Terminal Expert Run Time Demo to be installed and activated by unlimited license **HMIRTWZLSPAZZ** (Digital) or **HMIRTWZLSPMZZ** (Paper).

(4) EcoStruxure Secure Connect Advisor license has to be purchased. For more information please refer to our website www.schneider-electric.com.

(5) Node-RED can be directly installed by user or through USB key Windows 10 Recovery process where "Windows 10 with Node-RED for IIoT Box" option has to be selected.

(6) 2.5" HDD/SSD requires **HMIYBADHDDBMO1** adapter to be mounted.

(7) With conformal coating.

(8) Edge Box with TPM 2.0 default module.



HMIBMIEA5DD110L



HMIBMOMA5DD1E01



HMIBMO0A5DDF101

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIBM Modular Box PC

HMIBMU Universal



HMIBMUSI29D2801



HMIBMUCI29D4W01

Harmony HMIBMU Universal

Intel Celeron 2980U 1.6 GHz processor/24 V $\overline{\text{DC}}$ supply voltage (1)

Expansion slot	Operating system	Software	Storage disk	DDR3 RAM (2)	Reference	Weight kg/lb
With 2 expansion slots						
2x mini PCIe, full-size with optional interface	WES 7 Premium SP1 (64-bit Multi-language)	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (7)	CFast card $\geq$ 32 GB	4 GB	HMIBMUCI29D2W01	3.100/6.800
		Windows 10 IoT Enterprise (64-bit Multi-language)	SSD flash disk $\geq$ 128 GB with 1.5 million hours MTBF	4 GB	HMIBMUSI29D2801	3.100/6.800
		EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (7)	HDD Enterprise 24/7 $\geq$ 500 GB	4 GB	HMIBMUHI29D2801	3.100/6.800
No	No	EcoStruxure Secure Connect Advisor (4), Node-RED (7)	No	4 GB	HMIBMU0I29D2001	3.100/6.800
No	No	No	No	8 GB	HMIBMU0I29D200A (6)	3.100/6.800

With 4 expansion slots (5)

2x mini PCIe, full-size with optional interface + 1x PCI + 1x PCIe (x4), full-size	WES 7 Premium SP1 (64-bit Multi-language)	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (7)	CFast card $\geq$ 32 GB	4 GB	HMIBMUCI29D4W01	3.900/8.600
		Windows 10 IoT Enterprise (64-bit Multi-language)	SSD flash disk $\geq$ 128 GB with 1.5 million hours MTBF	4 GB	HMIBMUSI29D4801	3.900/8.600
		EcoStruxure Secure Connect Advisor (4), Node-RED (7)	HDD Enterprise 24/7 $\geq$ 500 GB	4 GB	HMIBMUHI29D4801	3.900/8.600
No	No	EcoStruxure Secure Connect Advisor (4), Node-RED (7)	No	4 GB	HMIBMU0I29D4001	3.900/8.600
No	No	No	No	8 GB	HMIBMU0I29D400A	3.900/8.600
2x mini PCIe, full-size with optional interface + 2x PCI, full-size	No	No	No	8 GB	HMIBMU0I29DI00A (6)	3.900/8.600
2x mini PCIe, full-size with optional interface + 1x PCIe (x1) + 1x PCIe (x4), full-size	No	No	No	8 GB	HMIBMU0I29DE00A (6)	3.900/8.600

(1) AC with additional power supply module HMIYMMAC1.

(2) Memory is not user-expandable.

(3) EcoStruxure Operator Terminal Expert Run Time Demo to be installed and activated by unlimited license HMIRTWZLSPAZZ (Digital) or HMIRTWZLSPMZZ (Paper).

(4) EcoStruxure Secure Connect Advisor license has to be purchased. For more information please refer to our website www.schneider-electric.com.

(5) HMIYBFKT4BM11 fan kit is required only when PCI/PCIe expansion cards above 3 W are installed.

(6) With conformal coating.

(7) Node-RED can be directly installed by user or through USB key Windows 10 Recovery process where "Windows 10 with Node-RED for IoT Box" option has to be selected.

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIBM Modular Box PC

HMIBMP Performance

PF14364DB



HMIBMPSI74D2801

PF143643B



HMIBMPSI74D4801

Harmony HMIBMP Performance

Intel Core i7-4650U 1.7 GHz processor/24 V --- supply voltage (1)

PCI slot	Operating system	Software	Storage disk	DDR3 RAM (2)	Reference	Weight kg/lb
With 2 expansion slots						
2x mini PCIe, full-size with optional interface	Windows 10 IoT Enterprise (64-bit Multi-language)	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (7),	SSD flash disk ≥ 128 GB with 1.5 million hours MTBF	8 GB	HMIBMPSI74D2801	3.100/6.800
		EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (7)	HDD Enterprise 24/7 ≥ 500 GB	8 GB	HMIBMPHI74D2801	3.100/6.800
	No	EcoStruxure Secure Connect Advisor (4), Node-RED (7)	No	8 GB	HMIBMP0I74D2001	3.100/6.800
	No		No	16 GB	HMIBMP0I74D200A (6)	3.100/6.800

With 4 expansion slots (5)

2x mini PCIe, full-size with optional interface + 1x PCI + 1x PCIe (x4), full-size	Windows 10 IoT Enterprise (64-bit Multi-language)	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (7),	SSD flash disk ≥ 128 GB with 1.5 million hours MTBF	8 GB	HMIBMPSI74D4801	3.900/8.600
		EcoStruxure Secure Connect Advisor (4), Node-RED (7),	HDD Enterprise 24/7 ≥ 500 GB	8 GB	HMIBMPHI74D4801	3.900/8.600
	No	EcoStruxure Secure Connect Advisor (4), Node-RED (7)	No	8 GB	HMIBMP0I74D4001	3.900/8.600
	No		No	16 GB	HMIBMP0I74D400A (6)	3.900/8.600
2x mini PCIe, full-size with optional interface + 2x PCI, full-size	No		No	16 GB	HMIBMP0I74DI00A (6)	3.900/8.600
2x mini PCIe, full-size with optional interface + 1x PCIe (x1) + 1x PCIe (x4), full-size	No		No	16 GB	HMIBMP0I74DE00A (6)	3.900/8.600

(1) AC with additional power supply module HMIYMMAC1.

(2) Memory is not user-expandable.

(3) EcoStruxure Operator Terminal Expert Run Time Demo to be installed and activated by unlimited license HMIRTCZLSPAZZ (Digital) or HMIRTCZLSPMZZ (Paper).

(4) EcoStruxure Secure Connect Advisor license has to be purchased. For more information please refer to our website www.schneider-electric.com.

(5) HMIYBFKT4BM11 fan kit is required only when PCI/PCIe expansion cards above 3 W are installed.

(6) With conformal coating.

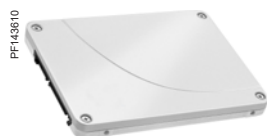
(7) Node-RED can be directly installed by user or through USB key Windows 10 Recovery process where "Windows 10 with Node-RED for IoT Box" option has to be selected.

Harmony iPC

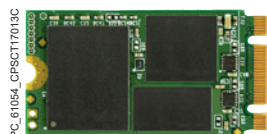
Industrial PC, Edge Box, and Display

Harmony HMIBM Modular Box PC

Separate components



HMIYSSDS240S1



HMIYM2256M1



HMIYMADSD1



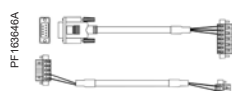
HMIYM2256M1



HMIYMMAC1



HMIYMUPSKT1



HMIYCABUPS31

Separate components

Description	Details	Compatible with Harmony HMIBM	Reference	Weight kg/lb
Drives				
CFast card	32 GB MLC, blank	HMIBMU, HMIBMP	HMIYCFA32S	—
Blank SSD with mounting screws	128 GB MLC (5-year warranty and 1.5 million hours MTBF)	HMIBMO (expandable), HMIBMU, HMIBMP	HMIYSSDS080S1	—
	256 GB MLC (5-year warranty and 2 million hours MTBF)		HMIYSSDS240S1	—
M.2 SSD	64 GB MLC (3-years warranty and 1.5 million hours MTBF)	HMIBMO	HMIYM2064M1	—
	128 GB MLC (3-years warranty and 1.5 million hours MTBF)	HMIBMO	HMIYM2128M1	—
	250 GB MLC (3-years warranty and 1.5 million hours MTBF)	HMIBMO	HMIYM2256M1	—
Blank HDD	Spare 1 TB HDD, blank	HMIBMO (expandable), HMIBMU, HMIBMP	HMIYHDD01T21	—
	Spare 500 GB HDD, blank	HMIBMO (expandable), HMIBMU, HMIBMP	HMIYHDD50021	—
Slide-in for HDD/SSD	Slide-in to mount HDD/SSD 2.5" in a storage slot of modular Box PC	HMIBMU, HMIBMP	HMIYMADSD1	—
Carrier for HDD/SSD	Carrier to mount an HDD/SSD 2.5" in a storage slot of Harmony HMIBMO expandable model	HMIBMO (expandable)	HMIYBADHDDBMO1	—
Accessories				
Maintenance kit for HMIBM Box PCs + HMIDM Modular Displays	Includes: ■ Screws and dampers for HDD/SSD ■ Screws and clamps for panel mounting ■ Modular Box cover screws ■ Screws for mounting Box to Display ■ Power connector and sticker ■ CFast card pull-out ■ Rubbers for display mounting ■ Filter for fan kit ■ Bracket, screws, and dampers for mini PCIe	All models	HMIYBMKTBM1	—
Fan kit for HMIBM Box PC	Fan kit to mount PCI/PCIe cards with a power consumption between 3 W to 10 W on a HMIBM Modular Box PC	HMIBMU and HMIBMP (2 slot models)	HMIYBFKT4BM11	—
USB key blank for iPC recovery	Spare USB memory key blank (1)	All models	HMIYUSBBK111	—
AC power supply (60 W)	AC power adapter (60 W)	HMIBMI, HMIBMO	HMIYPSOMAC1	—
AC power supply for HMIBM	Modular AC power adapter (100 W) (2)	All models	HMIYMMAC1	—
UPS battery	UPS battery for HMIBM (no cables)	All models	HMIYMUPSKT1	—
UPS cable	UPS cables for HMIBM (3 m/9.84 ft)	All models	HMIYCABUPS31	—
VESA mounting kit	VESA mounting kit for HMIBM Box PC + HMIDM6 4:3 12" and W12" Display	HMIBMI, HMIBMO HMIBMU and HMIBMP (2 slot models)	HMIYPVESA21	—
	VESA mounting kit for HMIBM Box PC + HMIDM7/9/A 4:3 15", W15", W19" and W22" Display	HMIBMI, HMIBMO HMIBMU and HMIBMP (2 slot models)	HMIYPVESA21	—
	VESA mounting kit for HMIBM Box PC + HMIDM7/9/A 4:3 15", W15", W19" and W22" Display	HMIBMU and HMIBMP (4 slot models)	HMIYPVESA41	—
DP to DVI adapter	DP to DVI-D adapter	All models	HMIYADDPDVI11	—
DP to DVI cable	DP to DVI-D cable 3 m/9.84 ft	All models	HMIYCABDPDVI31	—
Display adaptation plate	Display adaptation plate from legacy Panel PC 19" display HMIPU9... to Modular Display 15" HMIDM7421	All models with HMIDM7421	HMIYAD1915D1	—
DIN rail adapter		HMIBMI, HMIBMO	HMIYADBMODIN11	—

(1) USB key including restore image for recovery is supplied with each unit. The spare blank key is only necessary if the default key supplied with the unit is lost.

(2) Certified for IECEx Zone 22 (Dust) only. HMIYPSPMAC1 is not certified for IECEx Zone 2 (Gas).

(3) EcoStruxure Machine SCADA Expert available in Configured-To-Order (see [page 4/32](#)).

(4) For more information, please refer to EcoStruxure Secure Connect Advisor catalog [DIA5ED2190101EN](#).

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIBM Modular Box PC

Separate components

Separate components (continued)

Description	Details	Compatible with Harmony HMIBM	Reference	Weight kg/lb
Software and Secure remote access (1)				
EcoStruxure Operator Terminal Expert Run Time license	Converts the 21-day trial version of EcoStruxure Operator Terminal Expert Run Time Demo to an unlimited license.	All models with EcoStruxure Operator Terminal Expert	HMIRTW CZLSPA ZZ (Digital)	—
			HMIRTW CZLSPM ZZ (Paper)	—
EcoStruxure Secure Connect Advisor	For HMI secure remote access	All models that support EcoStruxure Secure Connect Advisor	VJOCNT (2)	—
Interfaces				
RJ45 Ethernet interface	Interface Mini PCIe, 1x RJ45 Ethernet (3)	All models with optional interfaces	HMIYMIN1ETH1	—
NVRAM interface	Mini PCIe with non-volatile RAM, without external connectors	HMIBMU, HMIBMP	HMIYMINNVRAM1	—
2x RS-422/485 isolated interface	Mini PCIe with 2x RS-422/485, isolated external interface with connectors	All models with optional interfaces	HMIYMINSL24851	—
4x RS-422/485 interface	Mini PCIe with 4x RS-422/485, external interface with connectors	All models with optional interfaces	HMIYMINSL44851	—
2x RS-232 isolated interface	Mini PCIe with 2x RS-232, isolated external interface with connectors	All models with optional interfaces	HMIYMINSL22321	—
4x RS-232 interface	Mini PCIe with 4x RS-232, external interface with connectors	All models with optional interfaces	HMIYMINSL42321	—
1x Profibus DP Master NVRAM interface	Mini PCIe with 1x Profibus DP Master, non-volatile RAM, external interface with connectors	All models with optional interfaces	HMIYMINPRO1	—
2x CANopen/CAN bus interface	Mini PCIe with 2x CAN fieldbus, external interface with connectors, drivers for CANopen and CAN bus	All models with optional interfaces	HMIYMINCAN1	—
16x DI/8 DO interface	Mini PCIe with 16x DI/8 DO, external interface with connectors, 2 m/6.56 ft cable and DIN rail wiring terminal	All models with optional interfaces	HMIYMINIO1	—
2x USB 3.0 interface	Mini PCIe with USB 3.0, external interface with connectors	All models with optional interfaces	HMIYMINUSB1	—
Audio interface	Module with Audio (line in, line out and mic), external interface with connectors	All models with optional interfaces	HMIYMINAUD1	—

(1) EcoStruxure Machine SCADA Expert available in Configured-To-Order (see [page 4/32](#)).

(2) For more information, please refer to EcoStruxure Secure Connect Advisor catalog [DIA5ED2190101EN](#)

(3) Available in Q2 2020.



HMIYMINNVRAM1



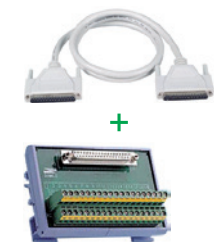
HMIYMINSL24851



HMIYMINCAN1



HMIYMINIO1



HMIYMINUSB1

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIBM Modular Box PC

Separate components

Separate components (continued)

Description	Details	Compatible with Harmony HMIBM	Reference	Weight kg/lb
Interfaces (continued)				
Wireless LAN interface + 2x antennas kit	Kit with mini PCIe WiFi (access point with Windows 10) + Bluetooth and 2x antennas	All models	HMIYMINWIFI2	—
Remote wireless LAN antenna cable	5 m/16.4 ft cable to mount a WiFi antenna remotely from Harmony iPC	All models	HMIYCABWIFIAN51	—
Cybersecurity TPM for iPC	Trusted Platform Module (1) for cyber secured hardware encryption on HMIBM with related connector on mother board, to be activated with Windows bit-locker	All models	HMIYMINATPM201	—
McAfee whitelisting	License sticker and a USB stick with software application for Cybersecurity whitelisting on Windows 10	All models	HMIYYMACWLIOT1	—
Cellular 3G interface	Mini PCIe with GPRS, SIM card holder, and external antenna	All models	HMIYMINGPRS1	—
Cellular 4G interface for North America	Mini PCIe GPRS 4G for North America frequencies. Kit including SIM card holder and external antenna	All models	HMIYMIN4GUS1	—
Cellular 4G interface for Europe and Asia	Mini PCIe GPRS 4G for Europe and Asia frequencies. Kit including SIM card holder and external antenna	All models	HMIYMIN4GEU1	—
Mini PCIe interface to Display Adapter	Mini PCIe Interface transmitter with RJ45 port, graphic video card	All models with optional interfaces (5)	HMIYMINDP1	—
Mini PCIe interface DVI-I for iPC	Mini PCIe Graphic video card Full HD 1920 x 1080, with DVI-I connector on an external interface (providing both dual digital and analog signals)	All models with optional interfaces (5)	HMIYMINDVII1	—
Mini PCIe interface 2VGA + DVI-D	Mini PCIe Graphic video card Full HD 1920 x 1080, with 2xVGA connectors on a single external interface and 1x DVI-D connector in a second external interface	All models with optional interfaces (5)	HMIYMINVGADVID1	—
Mini PCIe interface Audio for iPC	Mini PCIe audio card and one external interface with speaker OUT, Line IN and Mic IN connectors	All models with optional interfaces	HMIYMINAUD21	—

(1) TPM delivered at 2.0 version, requiring user downgrade to 1.2 with the provided tool to run on HMIBMU/HMIBMP with BIOS and Windows 10.

(2) HMIYMINDP1 cannot be used with HMIYMINDVII1 or HMIYMINVGADVID1.

(3) HMIYMINDP1 and HMIYMINUSB1 cannot be used together.

(4) Remove the existing driver when user want to install HMIYMINDP1 or HMIYMINDVII1 or HMIYMINVGADVID1.

(5) Limited to a single Mini PCIe graphic video card per unit.

IPC_61054_CPSCCT17017



HMIYMIN4GUS1

IPC_61054_CPSCCT17011



HMIYMINATPM201

IPC_61054_CPSCCT17020



HMIYYMACWLIOT1

Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIDM Modular Display

Type of Display		Harmony HMIDM Modular Display			
Model		4:3 12" touch screen	4:3 15" touch screen	W12" touch screen	W15" touch screen
					
Screen	Type	LED LCD single-touch resistive screen		LED LCD 5-point multi-touch projected capacitive technology screen	
	Size	4:3 12.1"	4:3 15"	W12.1"	W15.6"
	Resolution	XGA, 1024 × 768 pixels, 16.7 million colors		WHD WXGA, 1280 x 800, 16.7 million colors	WHD FWXGA, 1366 × 768 pixels, 16.7 million colors
	Degree of protection	IP66, Nema 4x indoor front panel, and 7H hardness anti-scratch			
	Brightness	≥ 300 cd/m², step less adjustment			
	View angle	Vertical 115°, horizontal 140°			Vertical 140°, horizontal 150°
	Backlight service life	50,000 hours			
	Operate with water on screen	Yes for all models			
Interface	On the front panel	1x USB 2.0 (Type A) and Reset button		—	
	On the back panel	—		—	
Supply voltage		From Box PC or mounted Display Adapter			
Standards and certifications (mounted on front Panel of Box PC HMIBM or Display Adapter HMIDAD)	Marine	Yes	Yes	Yes	Yes
	IECEX ATEX (2)	No	Yes	No	Yes
	Others	CE, RCM, EAC, cULus Industrial Control (UL 61010, CSA 22.2 No.142), cULus HazLoc (ANSI/ISA 12.12.01 and CSA C22.2 No. 213, Class I, Division 2), FCC (part 15 EMC Class A)			
Power consumption	With Universal Modular Box PC	38.6 W typical, 52.87 W max.	39.9 W typical, 48.04 W max.	37.4 W typical, 53.65 W max.	40.9 W typical, 49.5 W max.
	With Performance Modular Box PC	43.6 W typical, 57.87 W max.	44.9 W typical, 53.04 W max.	42.6 W typical, 58.65 W max.	46.1 W typical, 54.5 W max.
	With Display Adapter	17.87 W max.	13.04 W max.	18.65 W max.	14.5 W max.
Mounting	Panel PC (with Box PC HMIDM)	On front enclosure or VESA 100 × 100 with mounting kit HMIYPVESA●●●●●1 on the rear of Box PC			
	Panel Monitor (with Display Adapter HMIDAD)	On front enclosure or VESA 100 × 100 on the rear of Display Adapter			
Dimensions	Overall dimensions (W × H × D)	319.1×245.1×66.3 mm/ 12.56 x 9.65 x 2.61 in.	390.7 × 290 × 28 mm/ 15.38 × 11.42 × 1.10 in.	329.2×231.3×66.3 mm/ 12.96 x 9.11 x 2.61 in.	419.7 × 269 × 28 mm/ 16.52 × 10.59 × 1.10 in.
	Cut-out (W × H)	301.5 x 227.5 mm/ 11.87 x 8.96 in.	383.5 × 282.5 mm/ 15.10 × 11.12 in.	310 x 221 mm/ 12.20 x 8.70 in.	412.4 × 261.7 mm/ 16.24 × 10.30 in.
Temperature	During operation	Conforming to EN/IEC 60068-2-30: 0...55 °C/32...131 °F (1)			
	During storage	Conforming to IEC 61000-4/ EN 55011: -30...70 °C/-22...158 °F			
References		HMIDM6421	HMIDM7421	HMIDM6521	HMIDM7521
Page		4/27			

(1) Except Box PC with 2x mini PCIe + display: limited to 45 °C/113 °F.
(2) CE ATEX and IECEx HazLoc 3GD Zone 2/22.

Harmony HMIDM Modular Display		Harmony HMIDAD Display Adapter
W19" touch screen	W22" touch screen	
		
LED LCD 5-point multi-touch projected capacitive technology screen		HMIDM Modular Display with HMIDAD Display Adapter, making remote monitors as: ☐ Local display (maximum distance of 5 m/16.4 ft) ☐ Remote display (up to 4 daisy chain displays with same screen definition, and maximum distance of 100 m/328 ft for 1st display to 400 m/1312 ft for 4th display)
W18.5"	W21.5"	
WHD FWXGA, 1366 × 768 pixels, 16.7 million colors	Full HD, 1920 × 1080 pixels, 16.7 million colors	
IP66, Nema 4x indoor front panel, and 7H hardness anti-scratch		
≥ 300 cd/m², stepless adjustment		
Vertical 140°, horizontal 150°	Vertical 150°, horizontal 150°	
50,000 hours		
—		According to Harmony HMIDM Modular Display mounted on front
—		1x USB 2.0 (Type B), 1 Display Port
From Box PC or mounted Display Adapter		24 V $\overline{\sim}$ or 100...240 V $\sim$ with external power adapter
Yes		No
No		Yes
CE, EAC, RCM, cULus (UL IT 60950, CSA IT 60950), FCC (part 15 EMC Class A)		CE, cULus CSA 22-2 No 142, cULus HazLoc Class I Division 2 (ANSI/ISA 12-12-01, CSA 22-2 No 213), ATEX, IECEX, FCC (part 15 EMC Class A), CCC
43.1 W typical, 58.28 W max.	45.2 W typical, 59.85 W max.	According to Harmony HMIDM Modular Display mounted on front
48.1 W typical, 63.28 W max.	50.7 W typical, 64.85 W max.	
23.28 W max.	24.85 W max.	
On front enclosure or VESA 100 × 100 with mounting kit HMIYPVESA●●●●●1 on the rear of Box PC		—
On front enclosure or VESA 100 × 100 on the rear of Display Adapter		On the back of Modular Display HMIDM
488 × 309 × 28 mm/19.22 × 12.17 × 1.10 in.	558.4 × 349.8 × 28 mm/21.98 × 13.77 × 1.10 in.	254 x 207 x 37 mm/10 x 8.15 x 1.46 in.
479.3 × 300.3 mm/18.87 × 11.82 in.	550.3 × 341.8 mm/21.66 × 13.45 in.	According to Harmony HMIDM Modular Display mounted on front
Conforming to EN/IEC 60068-2-30: 0...55 °C/32...131 °F (1)		0...55 °C/32...131 °F
Conforming to IEC 61000-4/ EN 55011: -30...70 °C/-22...158 °F		-30...70 °C/-22...158 °F
HMIDM9521	HMIDMA521	HMIDADP11
4/27		4/31

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIDM Modular Display



Harmony HMIDM 22" Modular Display

Presentation

Harmony HMIDM Modular Displays are monitors designed to be easily integrated with:

- Harmony HMIBM Modular Box PCs (1) to make a Panel PC
- Harmony HMIDAD Display Adapter (2) to make a Panel monitor, to be remotely mounted from the PC with Display Port and USB cable (up to 5 m/16.4 ft) or with RJ45 cable (up to 4 Display and 400 m/1312 ft)

In addition to multiple choices, the modularity feature reduces maintenance as the Display can be independently replaced without changing the complete Panel PC or Panel Monitor.

HMIDM Modular Displays are available in:

- 4:3 12" and 15" single-touch resistive screens for easy substitution of legacy Panel PCs, operation with heavy gloves, and front USB connection port
- 16:9 W12", W15", W19" and W22" multi-touch capacitive screens for smartphone or tablet-like navigation on EcoStruxure Operator Terminal Expert software and for displaying SCADA screens in wide format

Harmony HMIDM 4:3 12"/15" and 16:9 12"/15" screens are certified for cULus Industrial Control and Hazardous Locations. The Harmony HMIDM displays are also Marine DNV and IECEx ATEX (IECEx ATEX only for 4:3/16:9 15" models) certified. When mounted with Harmony HMIBM Modular Box PCs or HMIDAD Display Adapter with similar certifications, these displays can be used for advanced automation applications.

Overview of the offer

Harmony HMIDM Modular Display

The Harmony HMIDM Modular Display offer comprises 6 references, each equipped with:

- **HMIDM6421**
 - Resolution: XGA, 1024 × 768 pixels, 16.7 million colors
 - Size and type: 4:3 12.1", single-touch resistive screen
 - View angle: Vertical 115°, horizontal 140°
- **HMIDM7421**
 - Resolution: XGA, 1024 × 768 pixels, 16.7 million colors
 - Size and type: 4:3 15", single-touch resistive screen
 - View angle: Vertical 115°, horizontal 140°
- **HMIDM6521**
 - Resolution: WHD WXGA, 1280 X 800 pixels, 16.7 million colors
 - Size and type: W12.1", multi-touch projected capacitive technology screen
 - View angle: Vertical 115°, horizontal 140°
- **HMIDM7521**
 - Resolution: WHD FWXGA, 1366 × 768 pixels, 16.7 million colors
 - Size and type: W15.6", multi-touch projected capacitive technology screen
 - View angle: Vertical 140°, horizontal 150°
- **HMIDM9521**
 - Resolution: WHD FWXGA, 1366 × 768 pixels, 16.7 million colors
 - Size and type: W18.5", multi-touch projected capacitive technology screen
 - View angle: Vertical 140°, horizontal 150°
- **HMIDMA521**
 - Resolution: Full HD, 1920 × 1080 pixels, 16.7 million colors
 - Size and type: W21.5", multi-touch projected capacitive technology screen
 - View angle: Vertical 150°, horizontal 150°

(1) For more information, please refer to pages [4/12](#) to [4/15](#).

(2) For more information, please refer to pages [4/28](#).

Presentation (continued)

Architecture

Harmony HMIDM Displays are compatible and easily mountable with all HMIBM Modular Box PCs and HMIDAD Display Adapter.



References

Harmony HMIDM Modular Displays



HMIDM9521

Description	Screen	Interface	Reference	Weight kg/lb
4:3 12" TFT LED LCD display	12", XGA (1024 × 768 pixels)	Single-touch resistive	HMIDM6421	2.30/ 5.07
4:3 15" TFT LED LCD display	15", XGA (1024 × 768 pixels)		HMIDM7421	4.20/ 9.20
16:9 12" TFT LED LCD display	12", WHD/FWXGA (1280 × 800 pixels)	Multi-touch capacitive	HMIDM6521	2.25/ 4.96
16:9 15" TFT LED LCD display	15.6", WHD/FWXGA (1366 × 768 pixels)		HMIDM7521	4.30/ 9.50
16:9 19" TFT LED LCD display	18.5", WHD/FWXGA (1366 × 768 pixels)		HMIDM9521	5.20/ 11.50
16:9 22" TFT LED LCD display	21.5", Full HD/FWXGA (1920 × 1080 pixels)		HMIDMA521	6.60/ 14.50

Separate components

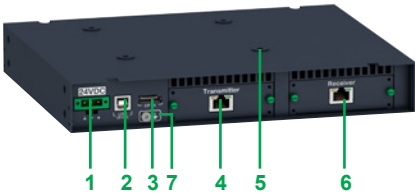


HMIYP752PS11

Description	Details	Compatible with HMIDM Display	Reference	Weight kg/lb
Removable protective sheet	Set of 5 protective sheets for 4:3 12"	HMIDM6421	MPCYK20SPSKIT	—
	Set of 5 protective sheets for 4:3 15"	HMIDM7421	MPCYK50SPSKIT	—
	Set of 5 protective sheets for HMIDM W12"	HMIDM6521	HMIYP652PS11	—
	Set of 5 protective sheets for W15"	HMIDM7521	HMIYP752PS11	—
	Set of 5 protective sheets for W19"	HMIDM9521	HMIYP952PS11	—
	Set of 5 protective sheets for W22"	HMIDMA521	HMIYPA52PS11	—



Harmony HMIDAD Display Adapter



Presentation

The Harmony HMIDAD Display Adapter can be used to remotely connect a Harmony Modular Display to a Harmony iPC or a third-party PC.

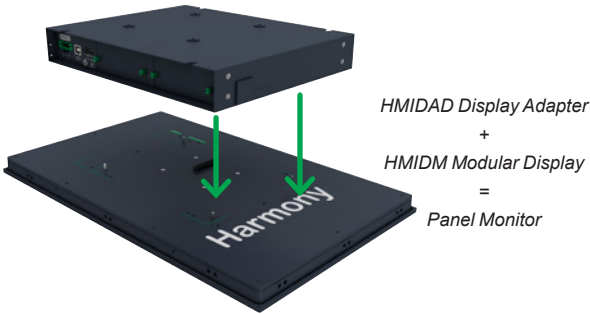
Description

Rear view

- 1 DC power supply connection
- 2 USB port type B (USB 2.0 for touch screen OUT) (1)
- 3 Display port (IN) (1)
- 4 Transmitter module (HMIYDATR11) with RJ45 port (2)
- 5 Mounting holes for the VESA
- 6 Receiver module (HMIYDARE11) with RJ45 port (2)
- 7 USB locker

Architecture

The Display Adapter is mounted on the rear side of the display as shown below:

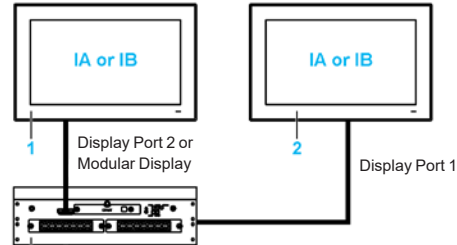


(1) Not operational with Receiver module mounted.
(2) Optional modules.

Configuration

Local display

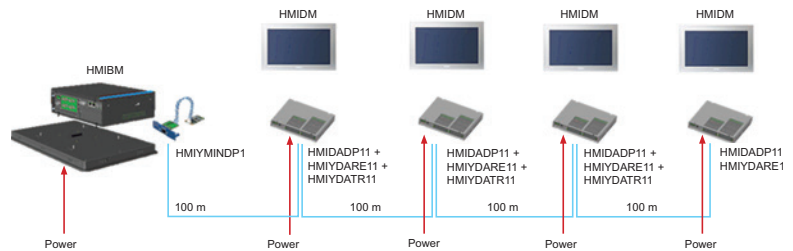
The PC is connected to Display Adapter by 1x USB cable for touch screen and 1x Display Port cable for video with a maximum distance of 5 m/16.4 ft.



Remote display

The Harmony iPC with mini PCIe interface can support up to 4 displays with the same screen definition (maximum distance of 100 m/328 ft between each display) when connected to Display adapters that are equipped with transmitter and receiver modules in a daisy chain configuration.

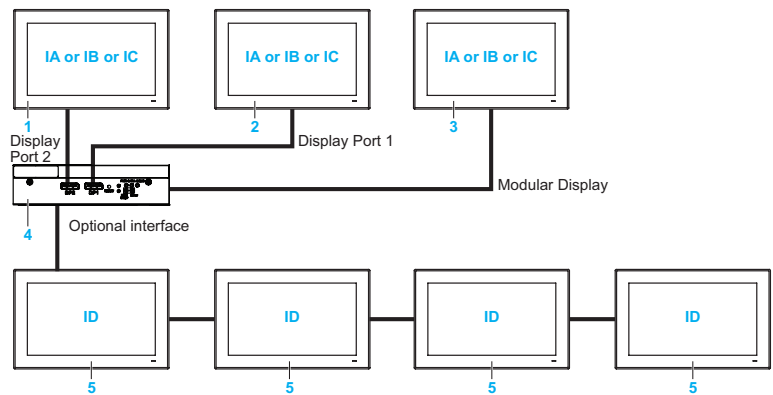
In this configuration, each remote display includes an HMIDM Modular Display + a HMIDADP11 Display Adapter + a HMIYDARE11 Receiver module + a HMIYDATR11 Transmitter module (not required for the last display in the chain).



For long distance remote displays:

- ☐ Limited to one HMIYMINDP1 mini PCIe per HMIBM Box iPC.
- ☐ To set up mini PCIe to Display Adapter Interface (HMIYMINDP1), a display or a third-party panel on host PC is required to install the driver. Once remote display set-ups are ready, the display on host PC can be removed if not used.
- ☐ The remote display cable does not support normal LAN HUB or switch as signal type is different.
- ☐ CAT6 cable is recommended. CAT5e cable may be used for shorter distances, according to environment conditions and with the maximum screen resolution of 1920 x 1080 pixels.
- ☐ The display touch panels can be disabled. When activated, the touch panel on the remote displays can be used only one at a time (waiting time 100 ms).
- ☐ The Display Adapter with display does not support brightness control. The brightness is fixed at 100%.
- ☐ With remote display (100 m/328 ft) cable, the touch-beep sound cannot be heard from the touch panel side as the buzzer is on the Box iPC side.
- ☐ When the host PC is off, or when one of the displays in the daisy chain is off or disconnected, the next displays in the chain get a NO SIGNAL message on their screens.

Example of displays connected to Harmony HMIBMO



- IA, IB, IC, ID Images (with Windows setting)
1, 2, 3 Local displays and Display Adapters
4 Harmony HMIBMO Optimized Modular Box with HMIYMINDP1x mini PCIe transmitter interface with RJ45 port
5 Harmony HMIDM Modular Display + HMIDADP11 Display Adapters + HMIYDARE11 Receiver module + HMIYDATR11 Transmitter module (not required for the last display in the chain), making a daisy chain of up to 4 remote displays with the same screen definition (set by the receiver module or in the Windows settings)



HMIDADP11



HMIYCABDP51



HMIYCABUSB51



HMIYMINDP1



HMIYDARE11



HMIYDATR11

Harmony HMIDAD Display Adapter

Description	Characteristics	Supply voltage	Compatible with	Reference	Weight kg/lb
Display Adapter	USB port (OUT) + Display Port (IN) for cable up to 5 m/16.4 ft	24 V $\overline{\text{---}}$ (1)	Harmony iPC and third-party PCs	HMIDADP11	1.8/ 3.96

Accessories

Description	Characteristics	Compatible with	Reference	Weight kg/lb
DVI to DP cable	3 m/9.84 ft	From PC with DVI port to HMIDAD Display Adapter	HMIYCABDPDVI31	—
DP to DP cable	Display Port to Display Port, 5 m/16.4 ft cable for digital video signal	From HMIBM Modular Box PC to HMIDAD Display Adapter	HMIYCABDP51	—
USB cable	USB to USB, 5 m/16.4 ft cable for touch screen signal	From HMIDAD Display Adapter to HMIBM Modular Box PC	HMIYCABUSB51	—
Transmitter interface for Harmony HMIBM Box PC	Mini PCIe to Display Adapter interface with 1x RJ45 port for category 5 or 6 cable (without Hub or Switch)	For HMIBM Box PC with optional interface to connect to first HMIYDARE11 receiver in the chain mounted in HMIDADP11 Display Adapter (2)	HMIYMINDP1	—
Receiver for Display Adapter	Receiver module with 1x RJ45 port for category 5 or 6 cable (without Hub or Switch)	For HMIDADP11 Display Adapter to connect to next HMIYDATR11 transmitter in the chain	HMIYDARE11	—
Transmitter for Display Adapter	Transmitter module with 1x RJ45 port for category 5 or 6 cable (without Hub or Switch).	For HMIDADP11 Display Adapter to connect to next HMIYDARE11 receiver in the chain (not required for the last display in the chain)	HMIYDATR11	—
AC power supply	External AC power adapter, 60 W	For HMIDADP11 Display Adapter	HMIYPSOMAC1	—
Modular AC power supply	Modular AC power adapter, 100 W for hazardous locations	For HMIDADP11 Display Adapter	HMIYMMAC1	—

(1) For AC power supply, additional power supply module HMIYPSOMAC1 or HMIYMMAC1 is required. For AC in hazardous locations, AC power supply module HMIYMMAC1 product version PV02 is required.

(2) HMIYMINDP1 cannot be used with HMIYMINDVII1/HMIYMINVGADVID1. HMIYMINDP1 and HMIYMINUSB1 cannot be used together in HMIBMP/HMIBMU. Remove the existing driver to install HMIYMINDP1/HMIYMINDVII1/HMIYMINVGADVID1 in Modular Box PC HMIBM.

Configured-To-Order Harmony HMIBM Modular Box PC and HMIDM Modular Display

"Configured-To-Order" industrial PCs offer a vast number of configuration combinations for Harmony iPCs with certifications. The Schneider Electric Customer Care Center can help you configure the right Harmony iPC based on your automation application and provide a quotation. A web configurator <https://www.hmisource.com/wwipcc> is also available to help you easily build the configuration by yourself (password = Harmony). Our Customer Care Center or the Web configurator will provide the complete parts list for the configured Harmony Modular Box PC/Display and a configuration code that will be the part number of the Harmony iPC.

Ordering procedure for a configured Harmony HMIBM Modular Box PC and HMIDM Modular Display

If you have built your Harmony iPC configuration with the Web Configurator:

- 1 Please forward the e-mail received from the Web Configurator to our Customer Care Center. This e-mail contains a PDF file with your configuration description and part number code.
- 2 If required, specify the reference root part number GCR_HMIPCCP2.

If you cannot access the Harmony iPC Web Configurator:

- 3 Please contact our Customer Care Center and state the reference root part number GCR_HMIPCCP2.
- 4 Configure your Harmony Panel PC (see table below) and get your quote with the support of our Customer Care Center.
- 5 Confirm your order.

Configured-To-Order options for Harmony HMIBM Modular Box PC and HMIDM Modular Display

Option	Description
Box PC or Display Adapter	Harmony HMIBM Box PC (Basic, Optimized, Universal, Performance) Harmony HMIBSC Core Box Harmony HMIDAD Display Adapter
Modular Displays (pre-mounted)	None Harmony HMIDM Modular Display 4:3 12"/4:3 15"- XGA Harmony HMIDM Modular Display W12"/W15"- FWXGA Harmony HMIDM Modular Display W22" - FHD
CPU	None (Display Adapter) Universal, Intel® Celeron® 2980U fanless Universal, Intel Celeron 2980U with fan for expansion card above 3 W Performance, Intel Core™ i7-4650U fanless Performance, Intel Core i7-4650U with fan for expansion card above 3 W
Power supply	DC AC
Windows operating system	None WES7 Premium SP1 64-bit Multi-language Windows 8.1 Industry 64-bit Multi-language Windows 10 IoT Enterprise (64-bit Multi-language) Linux Yocto
Main storage device for operating system	None CFast 32 GB M.2 64 GB/128 GB/250 GB HDD 500 GB/1 TB SSD 128 GB/256 GB
Optional interfaces (pre-mounted)	None NVRAM 2 RS-422/485 isolated or 4 RS-422/485 2 RS-232 isolated or 4 RS-232 16 DI/8 DO Video (DVI and VGA ports) Audio Cellular 3G/4G Transmitter to Display adapter Analog inputs Wireless LAN + 2 antennas 2 CANopen CAN bus Profibus DP Master with NVRAM Cyber security TPM module 1 Ethernet RJ45
PCI slot configuration	None (Display Adapter) 2 full-size mini PCIe 2 full-size mini PCIe + 1 PCIe (x1) + 1 PCI 2 full-size mini PCIe + 1 PCIe (x4) + 1 PCI 2 full-size mini PCIe + 2 PCI 2 full-size mini PCIe + 1 PCIe (x1) + 1 PCIe
Software bundle	None EcoStruxure Operator Terminal Expert Run Time unlimited license EcoStruxure Machine SCADA Expert 1500 tags Run Time license EcoStruxure Machine SCADA Expert 4000 tags Run Time license EcoStruxure Machine SCADA Expert 64000 tags Run Time license

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIBM Modular Box PC and
HMIDM Modular Display
Equivalent product table

Legacy Harmony iPC		Replaced by Harmony iPC		Compatibility	
Description	References	Description	References	Cut-out for flush mounting	Screen definition
Harmony Panel PC - 12" Universal		Harmony HMIBM Optimized Modular Box PC + Harmony HMIDM Modular Display			
Harmony Universal 12" Panel PC, HDD, 100...240 V ~	HMIPUH6A0701	Harmony Optimized Box PC, M.2, Windows 10 IoT Enterprise (64-bit Multi-language), 24 V ~ + AC power supply module + Harmony 4:3 12" Display, single-touch	HMIBMOMA5DDF10L + HMIYPSOMAC1 + HMIDM6421		
Harmony Universal 12" Panel PC, HDD, 24 V ~	HMIPUH6D0701	Harmony Optimized Box PC, M.2, Windows 10 IoT Enterprise (64-bit Multi-language), 24 V ~ + Harmony 4:3 12" Display, single-touch	HMIBMOMA5DDF10L + HMIDM6421		
Harmony Universal 12" Panel PC, SSD, 100...240 V ~	HMIPUF6A0701	Harmony Optimized Box PC, M.2, Windows 10 IoT Enterprise (64-bit Multi-language), 24 V ~ + AC power supply module + Harmony 4:3 12" Display, single-touch	HMIBMOMA5DDF10L + HMIYPSOMAC1 + HMIDM6421		
Harmony Universal 12" Panel PC, SSD, 24 V ~	HMIPUF6D0701	Harmony Optimized Box PC, M.2, Windows 10 IoT Enterprise (64-bit Multi-language), 24 V ~ + Harmony 4:3 12" Display, single-touch	HMIBMOMA5DDF10L + HMIDM6421		
Harmony Universal 12" Panel PC, CFast, 100...240 V ~	HMIPUC6A0E01	Harmony Optimized Box PC, M.2, Windows 10 IoT Enterprise (64-bit Multi-language), 24 V ~ + AC power supply module + Harmony 4:3 12" Display, single-touch	HMIBMOMA5DD1101 + HMIYPSOMAC1 + HMIDM6421		
Harmony Universal 12" Panel PC, CFast, 24 V ~	HMIPUC6D0E01	Harmony Performance Box PC, Base unit, 24 V ~ + Harmony 4:3 12" Display, single-touch	HMIBMP0I74D2001 + HMIDM6421		
Harmony Universal 12" Panel PC, Base unit	HMIPU06D0001	Harmony Optimized Box PC, Base unit 4 GB + Box PC Optimized DC Base unit 4 GB	HMIBMO0A5DD1001 + HMIDM6421		
Harmony Panel PC - 12" Performance		Harmony HMIBM Performance Modular Box PC + Harmony HMIDM Modular Display			
Harmony Performance 12" Panel PC, HDD, 2 slots, 100...240 V ~	HMIPPH6A2701	Harmony Performance Box PC, HDD, 4 slots, Windows 10 IoT Enterprise (64-bit Multi-language), 24 V ~ + AC power supply module + Harmony 4:3 12" Display, single-touch	HMIBMPHI74D4801 + HMIYMMAC1 + HMIDM6421		
Harmony Performance 12" Panel PC, SSD, 2 slots, 100...240 V ~	HMIPPF6A2701	Harmony Performance Box PC, HDD, 4 slots, Windows 10 IoT Enterprise (64-bit Multi-language), 24 V ~ + AC power supply module + Harmony 4:3 12" Display, single-touch	HMIBMPSI74D4801 + HMIYMMAC1 + HMIDM6421		
Harmony Performance 12" Panel PC, Base unit	HMIPP06D0001	Harmony Performance Box PC, Base unit 2 slots, 24 V ~ + Harmony 4:3 12" Display, single-touch	HMIBMP0I74D2001 + HMIDM6421		
		Cut-out or screen definition	Identical Different		
Legacy Harmony iPC		Replaced by Harmony iPC			
Description	References	Description	References		
Harmony S-Box PC Universal HMIBS		Harmony HMIBM Modular Box PC			
Harmony Optimized S-Box PC, 1 slot, 24 V ~	HMIBSO0ND1001	Harmony Modular Box PC, eMMC SSD, 1 slot, 24 V ~ (2)	HMIBMIEA5DD1001		
Harmony Optimized S-Box PC, CFast card, 1 slot, 24 V ~	HMIBSOCND1E01	Harmony Modular Box PC, eMMC SSD, 1 slot, 24 V ~ (2)	HMIBMIMA5DD1101		
Harmony Universal S-Box PC, CFast card, 1 slot, 24 V ~	HMIBSUCND1W01	Harmony Modular Box PC, M.2 SSD, 1 slot, 24 V ~ (2)	HMIBMOMA5DD1101		
Harmony Universal S-Box PC, SSD, 1 slot, 24 V ~	HMIBSUSND1W01	Harmony Modular Box PC, M.2 SSD, 1 slot, 24 V ~ (2)	HMIBMOMA5DD1101		
Harmony Universal S-Box PC, No OS, 1 slot, 24 V ~	HMIBSU0ND1001	Harmony Modular Box PC, No OS, 1 slot, 24 V ~ (2)	HMIBMO0A5DD1001		
Configured part numbers for Harmony iPC					
Configured Harmony iPC	HMIPCC●1●●●	Configured iPC	HMIPCC●2●●●		

(1) No stainless steel bezel.

(2) AC with power adapter HMIYPSOMAC1.

Harmony HMIR Rack PC - Optimized and Performance

Selection guide page 5/2

■ **Presentation**

- Overview of the offer
 - Harmony HMIRXO Optimized 2U page 5/4
 - Harmony HMIRSP Performance 4U page 5/5
- Storage drive trays and redundant Raid HDD page 5/5
- Remote system monitoring for Harmony HMIR Rack PCs page 5/5
- Harmony iDisplay monitor for Harmony HMIR Rack PCs..... page 5/6
- Software bundles for Harmony HMIR Rack PCs..... page 5/6
- Actassi 19" rack enclosure for Harmony HMIR mounting..... page 5/6

■ **Description**

- Harmony HMIRXO Optimized 2U page 5/7
- Harmony HMIRSP Performance 4U page 5/7

■ **References**

- Harmony HMIRXO Optimized 2U page 5/8
- Harmony HMIRSP Performance 4U page 5/8
- Separate components
 - Storage disks, expansion RAM, peripheral equipment page 5/9
 - Maintenance kit page 5/9
 - Power supply page 5/9
 - Software page 5/9

Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIR Rack PC
HMIRXO Optimized and HMIRSP Performance

Type of Harmony iPC (1)		Harmony HMIRXO Optimized Rack PC 2U	
Industrial environments		Control rooms and labs	
			
CPU	3 rd generation Processor		
	Micro ATX/ATX Motherboard		
	PCI Express® slot/PCI		
	Storage	Slots	
		Drives	
	RAM (max. 32 GB) (2)		
Operating system			
Supply voltage			
Cooling method			
Interface	Ethernet		
	Serial ports		
	USB ports		
	Audio		
	Video	Interface	
		Resolution	
	DVD-RW drive		
	Watchdog timer		
	Reset button, buzzer, Case-open switch		
	Mounting		
Overall dimensions (W x H x D)			
Degree of protection			
Temperature	During operation		
	During storage		
Humidity	During operation		
	During storage		
Vibration resistance During operation			
Shock resistance During operation			
Standards and certifications			
Compatible screens			
Software	Vijeo Designer (3) and EcoStruxure Operator Terminal Expert Run Time Demo		
	Bundle (validated and supported) (5)		
References			
Page			

Intel Core G540 (2.5 GHz), dual-core	
Micro ATX	
2x PCI Express (x8) + 1 PCI	
1 internal slot (SATA3) + 2 hot-swap trays (SATA2)	
–	
2 GB DDR3 in 1 slot	
–	
100...240 V ~ (300 W single power supply)	
3 fans, user-exchangeable with fan speed control to reduce noise	
2x Ethernet 10/100/1,000 Mbps	
2x RS-232 (+ 3 RS-232 + 1 RS-485 optional with additional HMIYRINSL21)	
2x USB 2.0, 4x USB 3.0	
2x (Mic, line-out)	
1x VGA + 1x DVI	
VGA: Up to 2048 × 1536 at 60 Hz, DVI: Up to 1920 × 1200 at 60 Hz	
1x DVD-RW drive	
System reset output, programmable 1...255 s/min	
Yes	
2U in 19" HMIR enclosure (1)	
482 × 88.4 × 481.4 mm/18.98 × 3.48 × 18.95 in.	
IP40	
Conforming to IEC 60068-2-2: 0...40 °C/32...104 °F	
Conforming to IEC 60068-2-2: –20...60 °C/–4...140 °F	
Conforming to IEC 60068-2-78: 10...85% at 40 °C/104 °F, non-condensing	
Conforming to IEC 60068-2-78: 10...95% at 40 °C/104 °F, non-condensing	
Conforming to IEC 60068-2-6: 1 g from 5...500 Hz (except for HDD drive)	
Conforming to IEC 60068-2-6: 1 g from 5...500 Hz (except for HDD drive)	
CE, cULus (UL 60950-1, CSA 22.2 No.60950-1-07), CCC, RMC	
Complete range of Harmony iDisplay screens (see page 6/5)	
☐ Vijeo Designer Run Time Demo (21-day trial version) to be installed from Software DVD. Unlimited license to be ordered separately (3)	
☐ EcoStruxure Operator Terminal Expert Run Time demo to be installed and activated by unlimited license HMIRTCZLSPAZZ (Digital) or HMIRTCZLSPMZZ (Paper).	
–	
HMIRXOHC3001	
5/8	

(1) Rack 2U or 4U is a unit used to measure the height of an equipment that will be mounted in an 19" rack enclosure. 1 unit = 44.45 mm/1.75 in. high.
(2) 4 user-accessible RAM slots available.
(3) Requires Vijeo Designer V6.2 SP2 or later versions to build and download HMI application.

Harmony HMIRSP Performance PC 4U	
Control rooms and labs	
	
Intel Xeon™ E3-1225 processor (3.1 GHz), quad-core	
ATX	
Up to 7 slots: 4 PCI Express (x16) + 3 PCI (including 1 PCI slot used for default removable audio connections)	
1x internal slot (SATA3) + 4 hot-swap trays (SATA2)	
2x HDD	
RAID ≥ 500 GB 24/7 in front trays with OS	
8 GB ECC in 2 slots	
Windows Server 2012 R2 (5 clients)	
100...240 V ~ (500 W redundant power supply)	
2 fans, user-exchangeable with fan speed control to reduce noise	
2x Ethernet 10/100/1,000 Mbps	
2x RS-232 (+ 4 optional with additional HMIYRINSL41)	
4x USB 2.0, 2x USB 3.0	
2x (Mic, line-out), default in 1 PCI slot	
1x VGA + 1x DVI	
VGA: Up to 2048 × 1536 at 60 Hz, DVI: Up to 1920 × 1200 at 60 Hz	
1x DVD-RW drive	
System reset output, programmable 1...255 s/min	
Yes	
4U in 19" HMIR enclosure (1)	
482 × 172.7 × 601.4 mm/18.98 × 6.8 × 23.68 in.	
IP40	
Conforming to IEC 60068-2-2: 0...40 °C/32...104 °F	
Conforming to IEC 60068-2-2: –40...70 °C/–40...158 °F	
Conforming to IEC 60068-2-78: 10...95% at 40 °C/104 °F, non-condensing	
Conforming to IEC 60068-2-78: 10...95% at 60 °C/140 °F, non-condensing	
Conforming to IEC 60068-2-6: 1 g from 5...500 Hz (except for HDD drive)	
Conforming to IEC 60068-2-27: 10 g/11 ms, half sine wave (except for HDD drive)	
CE, cULus (UL 60950-1, CSA 22.2 No. 60950-1-07), CCC, RMC	
Complete range of Harmony iDisplay screens (see page 6/5)	
□ Vijeo Designer Run Time Demo (21-day trial version) to be installed from Software DVD. Unlimited license to be ordered separately (3). □ EcoStruxure Operator Terminal Expert Run Time demo to be installed and activated by unlimited license HMIRTCZLSPAZZ (Digital) or HMIRTCZLSPMZZ (Paper).	
EcoStruxure Hybrid DCS leaflet with Windows Server 2012 R2 only	
HMIRSPSXR6T01	
5/8	

(4) With 5-year manufacturers warranty and 1.5 million hours MTBF.
(5) Additional software license to be ordered separately.



Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIR Rack PC

HMIRXO Optimized and HMIRSP Performance



Optimized Harmony Rack PC

Presentation

Harmony HMIR Rack PCs are industrial PCs that can be easily installed in a 19" rack enclosure of an automation control room. The HMIRs have:

- Embedded fan speed control for reduced noise
- Hot-swappable drive trays
- Optional redundant RAID hard drive
- Remote system monitor for remote access
- Harmony iDisplay for display screen

The Rack PCs are tested, validated, and supported by Schneider Electric Plant StruXure software: Vijeo Designer and EcoStruxure Operator Terminal Expert HMI Software and EcoStruxure Hybrid DCS Engineering. These PCs offer 4 years of service and minimum 4 years of commercial availability. They can also be extended and substituted to new compliant models.

The Harmony HMIR comprises the following UL60950-certified PCs for various requirements of a plant solution:

- Optimized Rack PC 2U (1): for operator stations and some dedicated applications in clean areas of industrial plants or labs
- Performance Rack PC 4U (1): for Engineering and SCADA servers with redundant power supply and server operating system according to model

Overview of the offer

Harmony HMIRXO Optimized 2U (1)

The Optimized HMIRXO Rack PC has an Intel Core G540 dual-core CPU (2.5 GHz) on a Micro ATX motherboard, with:

- 2 GB DDR3 RAM (default mounted), user-expandable up to 32 GB in 4 slots
- 3.5" storage slots: 1 internal SATA3 slot and 2 external SATA2 trays
- Expansions: 3 slots for 2 PCI Express® (x8), 1 PCI
- Connection ports: 6 USB 2.0 ports, 2 RS-232 (+ 4 optional), 2 Gigabit Ethernet, 1 VGA, and 1 DVI for video
- 1 optical DVD-RW drive

(1) Rack 2U or 4U is a unit used to measure the height of an equipment that will be mounted in a 19" rack enclosure. 1 unit = 44.45 mm/1.75 in. high.



Performance Harmony Rack PC

Presentation (continued)

Harmony HMIRSP Performance 4U (1)

The Performance HMIRSP Rack PC has an Intel Xeon E3-1225 quad-core CPU (3.1 GHz) on an ATX motherboard, with:

- RAM, user-expandable up to 32 GB in 4 slots
- 3.5" storage slots: 1 internal SATA3 and 4 free external SATA2 trays
- Expansions: 4 PCI Express (x16), 3 PCI with 1 PCI slot used for removable audio connections
- Connection ports: 4 USB 2.0, 2 USB 3.0, 1 RS-232 (+ 4 optional), 2 Gigabit Ethernet, 1 VGA, and 1 DVI port for video
- 1 optical DVD-RW drive
- 8 GB ECC RAM (default mounted)
- 2x 500 GB Enterprise 24/7 HDD in redundant RAID configuration installed in 2 tray slots
- Windows Server 2012 R2 operating system including 5 clients
- Redundant 100...240 V a power supply 500 W

Storage drive trays and redundant Raid HDD

Harmony HMIRs have hot-swappable front trays for storage devices. These trays can be used for a redundant Raid HDD configuration. The Rack PC chipset supports Intel Rapid Storage Technology with internal RAID feature so that when 2 HDDs are available in trays, the RAID can be configured in 2 steps:

- 1 Assign RAID via the configuration menus in the BIOS.
- 2 Adjust the RAID configuration options in the Intel Rapid Storage software provided.

Remote monitoring system for Harmony HMIR Rack PCs

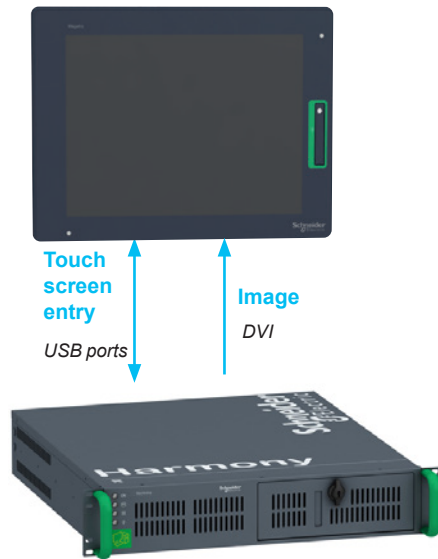
Harmony HMIRs can be monitored remotely by installing the Remote Monitoring application provided on any PC. Several Harmony Rack PCs can be monitored for:

- Managing system recovery (backup and restore) and On/Off (e.g., overnight for energy saving)
- Monitoring system parameters such as network connection, system/CPU temperatures, fan speeds, and system voltages
- Configuring alerts via a popup, message, sound, or buzzer with event log entry and system shutdown
- Displaying e-mail alerts and function logs

(1) Rack 2U or 4U is a unit used to measure the height of an equipment that will be mounted in a 19" rack enclosure. 1 unit = 44.45 mm/1.75 in. high.

(2) Dedicated model for running PlantStruxure Process Expert as an engineering workstation. For more information, see [page 5/6](#).

(3) Dedicated model for Windows Server operating system.



Connection between Harmony Optimized Rack PC and Harmony iDisplay

Presentation (continued)

Harmony iDisplay monitor for Harmony HMIR Rack PCs

Harmony Rack PCs can use a Harmony iDisplay monitor as a display screen by connecting via USB, VGA, or DVI ports. This monitor can be mounted in the cut-out that is created in the front of an enclosure door.

The HMIDID Harmony iDisplay models are 12" or 15" multi-touch screens, with 16 million colors and IP67f front panel protection. Depending on the model, they are certified for UL508, UL Hazardous Locations and Marine. For more information on Harmony iDisplay screens, see [page 6/5](#).

Software bundles for Harmony HMIR Rack PCs

Vijeo Designer/EcoStruxure Operator Terminal Expert and Harmony Rack PC bundles (1)

Harmony Rack PCs are supported by Schneider Electric HMI software for automation.

Vijeo Designer Run Time or EcoStruxure Operator Terminal Expert Run Time can be installed from the Vijeo Designer or EcoStruxure Operator Terminal Expert DVD included with Harmony HMIRs. Vijeo Designer Run Time can be upgraded to the unlimited version with an additional **VJDSNRTMPC** license (2). EcoStruxure Operator Terminal Expert can also be upgraded to the unlimited version with an additional **HMIRTWZLSPAZZ** (Digital) or **HMIRTWZLSPMZZ** (Paper) license.

PlantStruxure and Harmony HMIR bundles

The PlantStruxure and Harmony HMIR (used as an engineering workstation) bundle comprises:

- **HMIRSPSXR6T01** with 8 GB RAM (default mounted) (3) and Windows Server 2012 R2
- Leaflet with instructions for downloading EcoStruxure Hybrid DCS from the website
- EcoStruxure Hybrid DCS licenses for software activation have to be ordered separately. For more information, please contact our Customer Care Center.
- Additional part numbers with pre-installed EcoStruxure Hybrid DCS software are available in the [EcoStruxure Hybrid DCS/documents](#)

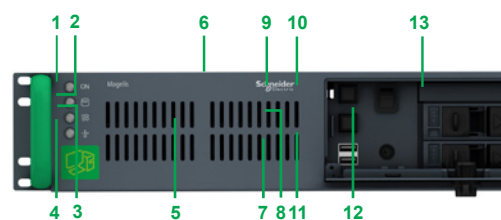
Actassi 19" rack enclosure for Harmony HMIR mounting

Harmony Rack PCs can be mounted on Actassi 19" Rack enclosures. Depending on the Rack PC model weight, additional mounting accessories such as fixed slides/long slides may be required. For more information on Actassi 19" enclosures and mounting accessories, please refer to our website www.schneider-electric.com.

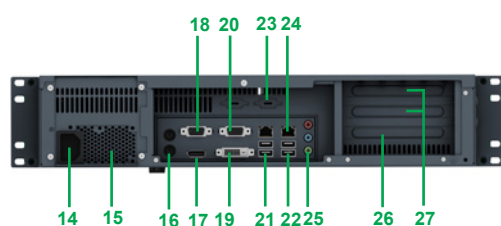
(1) As Harmony Rack PC does not have SRAM, it is recommended to save data on a storage drive (USB stick or SSD) to avoid data loss.

(2) Vijeo Designer Run Time is not supported on the Windows Server operating system.

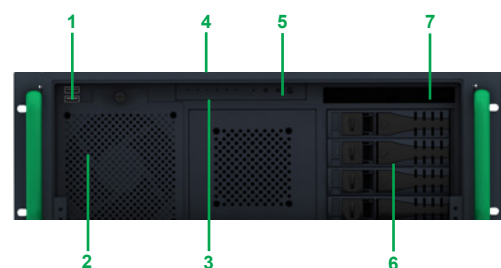
(3) 16 GB RAM is recommended to run EcoStruxure Hybrid DCS. User can upgrade with 2x 4 GB RAM ECC HMIYPRAME040R1.



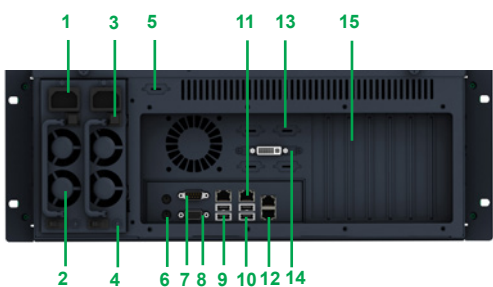
Front view of Optimized Harmony Rack PC



Rear view of Optimized Harmony Rack PC



Front view of Performance Harmony Rack PC



Rear view of Performance Harmony Rack PC
(redundant power supply)

Description

Harmony HMIRXO Optimized 2U

Front view

- 1 Power LED
- 2 HDD LED
- 3 Temperature LED
- 4 Fan LED
- 5 2 fans
- 6 SATA3 3.5" internal drive
- 7 2 USB 2.0 ports (USB1 and USB2)
- 8 System reset button
- 9 Alarm reset button
- 10 Power supply switch
- 11 KB/MS connector
- 12 2x 3.5" hot-swap hard disk trays (RAID configuration required for hot-swapping the operating system)
- 13 Slim optical drive bay

Rear view

- 14 Power connector
- 15 Power supply unit
- 16 KB/MS connector
- 17 Display port connector
- 18 Serial port connector
- 19 DVI connector
- 20 VGA connector
- 21 2 USB 3.0 ports
- 22 2 USB 3.0 ports
- 23 2 spare Sub-D9 slots
- 24 2 LAN ports
- 25 Audio port
- 26 PCI expansion slot
- 27 2 PCI Express expansion slots (x8/x16)

Harmony HMIRSP Performance 4U

Front view

- 1 2 USB 2.0 ports
- 2 Front-accessible fan
- 3 6 LEDs
- 4 SATA3 3.5" internal drive
- 5 4 switches/buttons
- 6 4x 3.5" hot-swappable hard disk trays (RAID configuration required for hot-swapping the operating system)
- 7 Slim optical drive bay

Rear view with redundant power supply

- 1 2 power supply connectors (1)
- 2 2 power supply units (2)
- 3 Button
- 4 LED
- 5 Spare Sub-D9 slot
- 6 KB/MS connector
- 7 Serial port connector
- 8 VGA connector
- 9 2 USB 2.0 ports
- 10 2 USB 3.0 ports
- 11 2 LAN ports
- 12 2 spare LAN ports
- 13 4 spare Sub-D9 slots for additional RS-232 with **HMIYRINSL41** accessory kit
- 14 DVI connector
- 15 Expansion slots (max. 7): 2 PCI Express (x4) and 2 PCI Express (x8/x16) and 3 PCI. By default, audio ports are mounted on 1 slot

(1) Only one power supply connector for Rack PCs with single power supply.

(2) Only one power supply unit for Rack PCs with single power supply.

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIR Rack PC
HMIRXO Optimized and HMIRSP Performance

PF140100A



HMIRXOHCA3001

Harmony HMIRXO Optimized 2U						
Intel Core G540 (2.5 GHz) processor for HMIRXO/G850 (2.9 GHz) processor for HMIRSO/DDR3 RAM/AC power supply						
PCIe/PCI expansion slots	Operating system	Software	Storage drives and slots	DDR3 RAM	Reference	Weight kg/lb
2 PCI Express (x8) + 1 PCI	–	–	–	2 GB	HMIRXOHCA3001	12.20/26.90

PF140106A



HMIRSPFXA6701

Harmony HMIRSP Performance 4U						
Intel Xeon™ E3-1225 processor (3.2 GHz)/DDR3 or ECC RAM/AC power supply						
PCIe/PCI expansion slots	Operating system	Software	Storage slots and drives	RAM	Reference	Weight kg/lb
4 PCI Express (x16) + 3 PCI (2)	Windows Server 2012 R2 standard including 5 clients	EcoStruxure Hybrid DCS leaflet	2 HDD ≥ 500 GB Enterprise 24/7 in 2 hot-swap trays + 2 free trays for hot-swapping + 1 free internal SATA slot	8 GB ECC	HMIRSPSXR6T01 (1)	24.20/53.35

(1) Redundant AC power supply, 500 W.
(2) By default, audio ports are mounted on 1 PCI slot.

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIR Rack PC
Separate components

Separate components					
Description	Details	Compatible with Harmony HMIR Rack PC		Reference	Weight kg/lb
		HMIRXO Optimized	HMIRSP Performance		
Storage disks, expansion RAM, peripheral equipment					
HDD with mounting screws	500 GB (Enterprise 24/7), blank	Yes		HMIYHDD500R1	—
	1 TB (Enterprise 24/7), blank	Yes		HMIYHDD01TR2	—
SSD with mounting screws	128 GB MLC (5-year warranty and 2 million hours MTBF)	Yes		HMIYSSDS080S1	—
	256 GB MLC (5-year warranty and 2 million hours MTBF)	Yes		HMIYSSDS240S1	—
Power cable China	China type power cable	Yes		HMIYRCABPWRCN1	—
4 Serial Lines kit for Rack 2U	Optional kit with 4 cables for motherboard connection, 2 PCI brackets, and 2 communication ports	Yes	—	HMIYRINSL21	—
4 Serial Lines kit for Rack 4U	Optional kit with 1 PCB for motherboard connection, screws, and 2 × 2 m cables and 2 communication ports for spare housing	—	Yes	HMIYRINSL41	—
Expansion RAM 4 GB for HMIR	4 GB DDR3	Yes		HMIYPRAM3040R1	—
Expansion RAM 8 GB for HMIR	8 GB DDR3	Yes		HMIYPRAM3080R1	—
Maintenance kit					
Maintenance kit for Rack PC 2U	USB cable, fans, holders, filters, motherboard screws, HDD screws, SATA cables, and door keys	Yes	—	HMIYRMKT2O1	—
Maintenance kit for Rack PC 2U		—	—	HMIYRMKT2U1	—
Maintenance kit for Rack PC 4U		—	Yes	HMIYRMKT4P1	—
Power supply					
300 W power supply for Rack PC 2U	Spare single 110-240 V ~ power supply	Yes	—	HMIYRMAC21	—
Software					
Vijeo Designer Run Time license for 1 workstation	Converts the 21-day trial version of Vijeo Designer Run Time Demo to an unlimited license	Yes		VJDSNRTMPC	—
Intelligent Data Service license extension for Vijeo Designer RT for 1 workstation	Used to track the process variables and all operator actions, and offers visibility of the key process values	Yes (requires storage capacity ≥ 4 GB)		VJDSNTRCKV60M	—
EcoStruxure Operator Terminal Expert Run Time license for 1 workstation	Converts the 21-day trial version of EcoStruxure Operator Terminal Expert Run Time Demo to an unlimited license	Yes		HMIRTWCZLSPAZZ (Digital)	—
				HMIRTWCZLSPMZZ (Paper)	—

Harmony HMIDID iDisplay screens

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■ Separate parts..... page 6/5

■ Substitution page 6/5

Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIDID iDisplay screens
12" and 15" flat screens

Type of display		Harmony HMIDID iDisplay flat screen	
Model		12" touch screen	
			
Screen	Type	TFT HD LCD color multi-touch resistive screen (2)	
	Size	12.1"	
	Resolution	XGA, 1024 x 768 pixels, 16 million colors	
	Degree of protection	IP66f, IP67f, and UL50E NEMA 4X/13 for the front panel when installed properly in an enclosure	
	Brightness	≥ 400 cd/m² adjustable, 100 level dimming with brightness sensor	
	Backlight	50,000 hours	
Interface	On the front panel	1x USB 2.0 (Type A)	
	Other	☐ 1x DVI-D video (DVI-D 24 pin socket) ☐ 1x USB 2.0 (Type B) from touch screen to PC ☐ Supplied with 5 m/16.4 ft DVI-D and USB cables	
Standards and certifications		CE Europe, RCM Australia, UL 508 and CSA C22.2 No142, Industrial Control Equipment, ANSI/ISA 12.12.01 and CSA C22.2 No213 Class I, Division 2 Hazardous Locations, IECEx/ATEX for use in zones 2/22, EAC (Russia, Belarus, Kazakhstan), KC (Korea Certification)	
Marine certifications		BV, CCS , DNV, GL, LR, RINA , ABS	
Supply voltage		12...24 V ~	
Power consumption		17 W max.	
Mounting		Panel on front enclosure or VESA 100 x 100 on the rear of iDisplay	
Dimensions	Overall dimensions (W x H x D)	315 × 241 × 67 mm/12.40 × 9.50 × 2.64 in.	
	Cut-out (W x H)	301.5 × 227.5 mm/11.87 × 8.96 in.	
Temperature	During operation	0...60 °C/32...140 °F, according to EN 61131-2 and UL	
	During storage	-20...60 °C/-4...140 °F	
Shock resistance		IEC/EN 61131-2 compliant: ■ 147 m/s² ■ X, Y, Z directions tested 3 times	
Vibration resistance		Conforming to JIS B 3501 and IEC 61131-2 standards: ■ 5...9 Hz, 3.5 mm fixed amplitude ■ 9...150 Hz: constant acceleration of 1 g (9.8 m/s²) ■ X, Y, Z directions tested 10 times (100 minutes)	
References		HMIDID64DTD1	
Page		6/5	

(1) For more information, please refer to Harmony Display Adapter on [page 4/28](#).
(2) Touch function on the display is not available with Windows Server operating system.

Harmony HMIDID iDisplay flat screen		Alternate Display option with Harmony HMIDAD Display adapter(1)	
15" touch screen			
			
TFT HD LCD color multi-touch resistive screen (2)	15"	HMIDM Modular Display with HMIDAD Display Adapter, making remote monitors as: ☐ Local display (maximum distance of 5 m/16.4 ft) ☐ Remote display (up to 4 daisy chain displays with same screen definition, and maximum distance of 100 m/328 ft for 1st Display to 400 m/1312 ft for 4th Display)	
	XGA, 1024 x 768 pixels, 16 million colors		
	IP66f, IP67f, and UL50E NEMA 4X/13 for the front panel when installed properly in an enclosure		
	≥ 400 cd/m² adjustable, 100 level dimming with brightness sensor		
	50,000 hours		
	1x USB 2.0 (Type A)	According to Harmony HMIDM Modular Display mounted on front (1)	
	☐ 1x DVI-D video (DVI-D 24 pin socket) ☐ 1x USB 2.0 (Type B) from touch screen to PC ☐ Supplied with 5 m/16.4 ft DVI-D and USB cables	☐ 1x Display Port video ☐ 1x USB 2.0 (Type B) from touch screen to PC	
	CE Europe, RCM Australia, UL 508 and CSA C22.2 No142, Industrial Control Equipment, ANSI/ISA 12.12.01 and CSA C22.2 No213 Class I, Division 2 Hazardous Locations, IECEx/ATEX for use in zones 2/22, EAC (Russia, Belarus, Kazakhstan), KC (Korea Certification)	CE, cULus, cULus CSA 22-2 No 142, cULus HazLoc Class I Division 2 ANSI/ISA 12-12-01, cULus HazLoc Class I Division 2 CSA 22-2 No 213, ATEX and IECEx Hazardous Locations 3GD Zone 2/22, FCC (part 15 EMC Class A), CCC	
BV, CCS , DNV, GL, LR, RINA , ABS		–	
12...24 V ~		24 V ~ or 100...240 V ~ with external power adapter	
21 W max.		According to Harmony HMIDM Modular Display mounted on the front (1)	
Panel on front enclosure or VESA 100 X 100 on the rear of iDisplay		Panel on front enclosure or VESA 100 X 100 on the rear of the Display Adapter	
397 × 296 × 67 mm/15.63 × 11.65 × 2.64 in.		According to Harmony HMIDM Modular Display mounted on front (1)	
383.5 × 282.5 mm/15.10 × 11.12 in.			
	0...60 °C/32...140 °F, according to EN 61131-2 and UL	0...55 °C/32...131 °F	
	-20...60 °C/-4...140 °F	-30...70 °C/-22...158 °F	
IEC/EN 61131-2 compliant: ■ 147 m/s² ■ X, Y, Z directions tested 3 times		–	
Conforming to JIS B 3501 and IEC 61131-2 standards: ■ 5...9 Hz, 3.5 mm fixed amplitude ■ 9...150 Hz: constant acceleration of 1 g (9.8 m/s²) ■ X, Y, Z directions tested 10 times (100 minutes)		Random vibration 5...500 Hz: 2 G	
HMIDID73DTD1		HMIDADP11	
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Harmony iPC Industrial PC, Edge Box, and Display Harmony HMIDID iDisplay screens 12" and 15" flat screens



HMIDID73DTD1

Presentation

Harmony HMIDID iDisplay are monitors with industrial flat screens designed for use with PCs. The 4:3 auto-scaler format screens of iDisplay adapt to screen definition. Harmony HMIDID enhances user experience and efficiency by multi-touch support like a smartphone. In addition to panel mounting, Harmony iDisplay also offers VESA 100x100 mounting on the rear side of the product.

Two screen sizes are available: 12" and 15" to suit various requirements.

Harmony HMIDID screens are certified for PLC product standards and designed for use in severe industrial environments (up to 60 °C, with LED backlight (50,000-hr life) and waterproof front IP67f). They support excellent screen sizes or dimension ratios for easy installation on any machine or in any equipment.

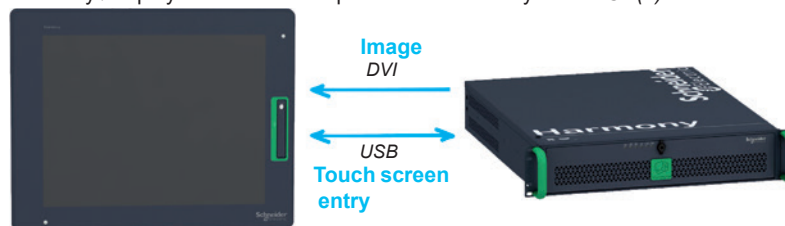
These screens are easily connected to the PC via:

- Standard DVI digital video with auto-scaler
- USB with touch screen drivers (supports up to Windows® 8.1, not available with Windows Server)

Harmony iDisplay screens have the same cut-out dimensions as Harmony HMI Panels, thus making it easy to upgrade installations.

Architecture

Harmony iDisplay screens are compatible with Harmony Rack PCs (1).

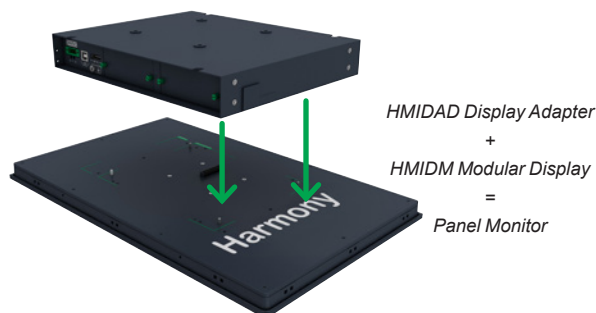


Harmony iDisplay

Harmony Rack PC

Alternate Display option with Harmony HMIDAD Display Adapter

As an alternative option for Harmony HMIDID iDisplay screens, the Harmony HMIDAD Display Adapter can be used to remotely connect a Harmony Modular Display to a Harmony iPC or a third party PC, in the following configurations:



■ Local display of up to 1 display (maximum distance of 5 m/16.4 ft). The Harmony iPC or a third party PC, is connected to HMIDADP11 Display Adapter by 1x USB cable for touch screen and 1x Display Port cable for video.

■ Remote display of up to 4 displays with the same screen definition (maximum distance of 100 m/328 ft. between each device). Harmony iPC with mini PCIe interface is connected to Display adapters through RJ45 cables. In this configuration, each remote display includes an HMIDM Modular Display + an HMIDADP11 Display Adapter + an HMIYDARE11 Receiver module + an HMIYDATR11 Transmitter module (not required for the last display in the chain).

For more information on Harmony HMIDAD Display Adapter, please refer pages 4/28 to 4/31.

(1) For more information, please refer pages 5/4 to 5/9.

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIDID iDisplay screens

12" and 15" flat screens



HMIDID64DTD1

References

Description	Screen	Interface	Supply voltage	Reference	Weight kg/lb
Flat screen for flush mounting, IP66f, IP67f front panel (2)	12", XGA resistive (1024 x 768 pixels)	Multi-touch	12...24 V $\equiv$	HMIDID64DTD1 (1)	3.9/8.6
	15", XGA resistive (1024 x 768 pixels)	Multi-touch	12...24 V $\equiv$	HMIDID73DTD1 (1)	5.2/11.5

Separate parts

Description	Sold in lots of	Reference	Weight kg/lb
Extra-long cable (10 m/32.81 ft) for connection with Harmony Box PC and Harmony Panel PC industrial PCs	—	HMIYCABDVI1011	—
USB clamp Type B (1 port) for Harmony iDisplay	5	HMIYDUSBCA111	—
iDisplay Adaptation plate from 19" to 15"	—	HMIYAD1915D1	—

Substitution

Legacy Harmony iDisplays

Description	Reference
Harmony iDisplay 15"	
15", XGA	HMIDID7DT0

Replaced by Harmony displays

Description	Reference
Harmony iDisplay 15" Multi-touch	
15" XGA resistive	HMIDID73DTD1

Harmony iDisplay 19"

19"	MPCYT90NAN00N
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Harmony displays

15" iDisplay monitor multi-Touch + Adaptation plate	HMIDID73DTD1 + HMIYAD1915D1
19" W Modular display + Display Adapter with display port and DC	HMIDM9521 + HMIDADP11

(1) Supplied with 5 m/16.4 ft DVI cable.

(2) Harmony iDisplay offers VESA 100x100 mounting on the rear of the product.

Product reference index

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Harmony Industrial PC, Edge Box and Display

Product reference index

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