Harmony GTU

High performance IoT-ready modular HMI panels

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Harmony

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Advanced operator interface and industrial relays

Harmony operator interface and industrial relays enhance operational efficiency and equipment availability across industrial and building applications. Harmony includes intelligent connected products and edge terminals that visualize, gather and process data, enabling informed operator decisions

Explore our offer

- Harmony Push Buttons and Switches
- Harmony HMI Operator Terminals, IPC and EdgeBox
- Harmony Signaling Devices
- Harmony Electrical Relays
- Harmony Safety

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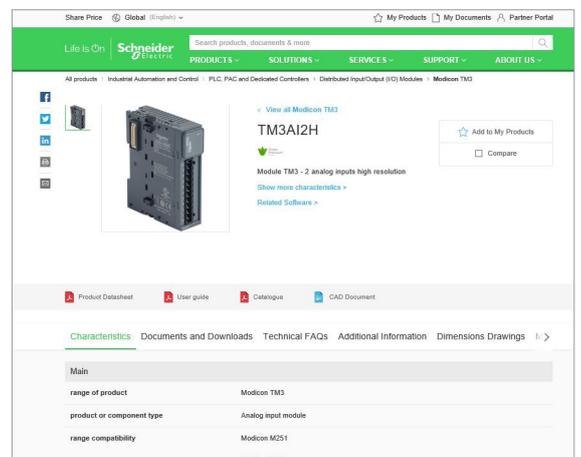# Quick access to product information

Get technical information about your product

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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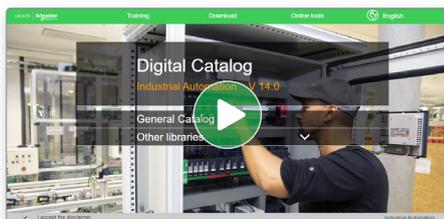
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> Consult digital automation catalogs at Digi-Cat Online
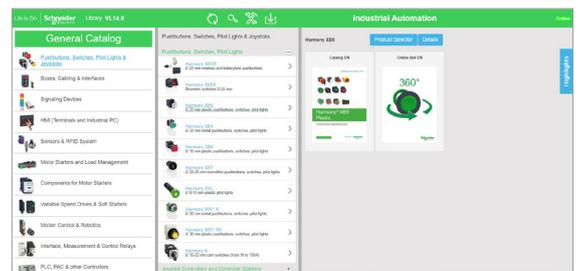
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General contents

Harmony GTU
High performance IoT-ready modular HMI panels

High performance IoT-ready modular HMI panels

Harmony GTU is a high-end HMI range designed in a uniquely modular format that allows you to select and assemble the optimum combination of display unit and processing box as required by your applications.

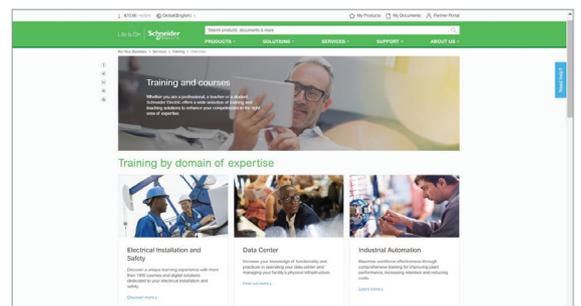Harmony Universal panels combine operator efficiency, simplified installation, and flexibility to suit all industrial architectures. This range comprises display modules (Advanced and Smart) and box modules (Standard, Premium and Open).

Advanced display + Premium box　　　*Smart display + Open box*

Unique HMI flexibility

Modular and scalable

> Choice of screen size, format, image quality, and processing levels enable Harmony GTU to be used in wide range of applications
> Universal panels are available in various combinations by simply assembling display modules and box modules
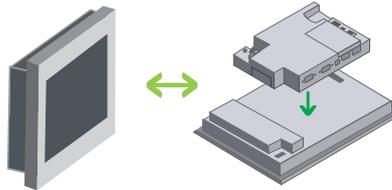
Harmony GTU panel = Display module + Box module

Monitoring and communication capable

> Easily integrated in industrial architectures via embedded dual interfaces (2 serial ports with different signal types, 2 Gigabit Ethernet ports, 2/4 USB host ports) and an optional fieldbus interface
> Innovative wireless connectivity of 12" Smart WLAN display with embedded antenna

Wireless Harmony 12" Smart display

Operate intuitively and comfortably

Smartphone-like interface

> Easy and comfortable handling with intuitive navigation similar to smartphones/ tablets
> Projected-Capacitive or Resistive technology designed multi-touch screen supports zooming in/out, swiping, and scrolling through menus even with protective gloves or a protective display screen cover


Touch Screen Gestures

Certified for use in the most demanding automation systems, including industrial control equipments, hazardous locations, and marine applications.

✚ Harmony GTU → Multiple combinations with easy assembly

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Harmony GTU
High performance IoT-ready modular HMI panels

Operate intuitively and comfortably (continued)
Operator efficiency with good visualization

> High-resolution screen with 16 M colors for a crystal-clear view
> 16/9 Wide display available in 5 sizes (7", 10", 12", 15", 19") for easy sharing of images with external multimedia devices
> LED backlight for maximum screen comfort with excellent brightness, complete dimming (100 levels), and auto-adjustment to environment

Maintain easily

> Parts can be replaced individually thanks to the modular design
> Easy installation with anti-drop retractable embedded fasteners and no accessories
> Robust panel housed in an aluminum material with high temperature resistance (up to 60 ºC/*140 °F*)
> Dual removable storage units in Box modules speed up maintenance of panels
> Easy migration of Harmony GTU panels with Smart display as these displays have cut-outs similar to old range of HMI

Harmony GTU panel box units have SD or CFast card slots for huge external data storage.

Push the box LOCK backward

Insert protruding points on box into holes on the display

Pull the box LOCK forward

Ready for IIoT

> Dual LAN (Local Area Network) separates IT and PLC communication for better performance and data security
> Manage all types of data with Open HMI: Microsoft Office and PDF documents, CAD files, Web pages, and Multimedia (sound and video)
> Database link or data analysis with EcoStruxure Machine SCADA Expert (Line Management configuration tool) Software used on Open Box
> Leverage plant floor-to-enterprise communication with OPC-UA interface on Open Box

Open Box Harmony GTU panels enable EcoStruxure™ Machine SCADA Expert for database link and traceability.

OPC UA

IT network

Gigabit Ethernet for IT

LAN1

LAN2

10/100Base-T for Device

Device network

Modicon M340

Modicon M580

HMI adapted for Plant*Struxure* and Machine*Struxure*

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Harmony GTU
High performance IoT-ready modular HMI panels

Left Page (4)

Applications	Display of text messages, graphic objects, and synoptic views Control and configuration of data		
Type of display module	**Advanced Display**		

Display	Touchscreen, size	7" Wide	10" Wide	12" Wide
	Resolution (pixels)	800 x 480	1,280 x 800	1,280 x 800
	Type	262 K colors, TFT		
Gesture support		Single touch: sliding, scrolling		
Functions	Brightness control	0...100 (Adjusted with touch panel or software)		
	Front USB ports	Optional with XBTZGUSB (Type A port) or HMIZSUSBB (Type mini-B port)		
	Wireless antenna	–		
	Backlight service life	50,000 h		
Dimensions	External W × H × D mm/*in.*	204 × 149 × 67/ *8.03 × 5.86 × 2.64*	269 × 199 × 67/ *10.59 × 7.83 × 2.64*	309 × 231 × 67/ *12.17 × 9.09 × 2.64*
	Cut-out W × H mm/*in.*	190 × 135/*7.48 × 5.31*	255 × 185/*10.03 × 7.28*	295 × 217/*11.61 × 8.54*
Supply voltage		12...24 V ⎓		
Environment		Operating temperature 0...60 °C/*32...140 °F*, Front face protection IP67		
Conformity to standards		EN, IEC, UL 508, CSA, ATEX, Marine		
Compatible box models		Standard, Premium and Open box models		
Display module reference		**HMIDT351**	**HMIDT551**	**HMIDT651**
Pages		17		

Type of box module	**Standard Box**

CPU		RISC, 600 MHz
Operating system		Real Time
Memory	RAM	256 MB
	Backup memory	512 KB (FRAM/MRAM)
	Main storage: OS with HMI application	1 GB internal flash EPROM
	Memory storage extension	SD card (up to 4 GB)
Functions	Real-time clock	Yes, built-in
	Max. variables	8,000 (in Vijeo Designer)
Video interface		No
Sound input interface		–
Sound output interface	Speaker output	–
	LINE output	–
Alarm output/Buzzer output		–
Communication	Ethernet port	x2 RJ45 (independent)
	Serial line	RS-232C (COM1) + RS-485 (COM2)
	Expansion unit	–
	USB	2x USB 2.0 (Type A), 1x USB 2.0 (Type mini-B)
Optional battery		Yes (HMIZGBAT)
Third-party protocols supported		Siemens, Omron, Mitsubishi, Allen-Bradley (Rockwell Automation), ABB
Compatible display units		HMIDT351, HMIDT551, HMIDT651, HMIDT542, HMIDT642, HMIDT732
Box module reference		**HMIG2U** *(3)*
Pages		17

(1) Vijeo Designer and EcoStruxure Operator Terminal Expert Runtime unlimited version pre-installed.
(2) Microsoft Office & PDF readers, Internet browser V11, .Net 4.6.2, Vijeo Citect web client.
(3) Vijeo Designer unlimited version pre-installed.

Right Page (5)

Applications	Display of text messages, graphic objects, and synoptic views Control and configuration of data				
Type of display module	**Smart Display**				

Display	Touchscreen, size	10.4"	12.1"	15"	15" Wide	19" Wide
	Resolution (pixels)	800 x 600	1,024 x 768	1,024 x 768	1,366 x 768	
	Type	16 M colors, TFT				
Gesture support		Single touch: sliding, scrolling; Multi-touch: zooming, double touch				
Functions	Brightness control	0...100 (Adjusted with embedded sensor, touch panel or software)				
	Front USB ports	1x Embedded USB 2.0 (Type A), 1x USB 2.0 (Type mini-B)				
	Wireless antenna	–	Yes	–		
	Backlight service life	50,000 h				
Dimensions	External W × H × D mm/*in.*	273 × 215 × 67/ *10.74 × 8.46 × 2.64*	315 × 241 × 67/ *12.40 × 9.50 × 2.64*	397 × 296 × 67/ *15.63 × 11.65 × 2.64*	414 × 295 × 69/ *16.30 × 11.61 x 2.72*	483 x 337 x 69/ *19.02 x 13.27 x 2.72*
	Cut-out W × H mm/*in.*	259 × 201/*10.20 × 7.91*	302 × 228/*11.90 × 8.98*	384 × 283/*15.11 × 11.14*	369 x 277/*14.53 x 10.91*	465 x 319/*18.31 x 12.56*
Supply voltage		12...24 V ⎓				
Environment		Operating temperature 0...60 °C/*32...140 °F*, Front face protection IP67			Operating temperature 0...55 °C/*32...131 °F*, IP67	
Conformity to standards		EN, IEC, UL 508, CSA, ATEX, Marine				
Compatible box models		Standard, Premium and Open box models	Open box model	Standard, Premium and Open box models	Premium and Open box models	
Display module reference		**HMIDT542**	**HMIDT642** | **HMIDT643**	**HMIDT732**	**HMIDT752**	**HMIDT952**
Pages		17				

Type of box module	**Premium Box**	**Open Box**

CPU		RISC, 600 MHz	x86, 1.33 GHz
Operating system		Real Time	Windows 7 Embedded	Windows 10 IoT Enterprise 32-bit
Memory	RAM	256 MB	2 GB	4 GB
	Backup memory	512 KB (FRAM/MRAM)		
	Main storage: OS with HMI application	1 GB SD card	32 GB CFast card	
	Memory storage extension	SD card (up to 4 GB)	SD card (up to 4 GB) and CFast card (up to 32 GB)	
Functions	Real-time clock	Yes, built-in		
	Max. variables	8,000 (in Vijeo Designer)	12,000 (in Vijeo Designer)	
Video interface		No	1x DVI-D OUT	
Sound input interface		–	MIC or LINE input (software switch)	
Sound output interface	Speaker output	300 mW (rated load: 8 Ω, frequency: 1 KHz)		
	LINE output	Rated load: 10 KΩ or more		
Alarm output/Buzzer output		Yes (24 V ⎓/50 mA or less)		
Communication	Ethernet port	x2 RJ45 (independent)		
	Serial line	RS-485 (Isolated) (COM1) + RS-232C/RS-422/RS-485 (COM2)		
	Expansion unit	1x fieldbus unit	1x fieldbus unit	
	USB	2x USB 2.0 (Type A), 1x USB 2.0 (Type mini-B)	3x USB 2.0 (Type A), 1x USB 2.0 (Type mini-B)	
Optional battery		Yes (HMIZGBAT)		
Third-party protocols supported		Siemens, Omron, Mitsubishi, Allen-Bradley (Rockwell Automation), ABB		
Compatible display units		HMIDT351, HMIDT551, HMIDT651, HMIDT542, HMIDT642, HMIDT732, HMIDT752, HMIDT952	HMIDT351, HMIDT551, HMIDT651, HMIDT542, HMIDT642, HMIDT643, HMIDT732, HMIDT752, HMIDT952	
Box module reference		**HMIG3U** *(1)*	**HMIG5U2** *(2) (3)*, **HMIG5UL8A and HMIG5UL8B** *(4)*	**HMIG5U21** *(5)*, **HMIG5U22** *(1)*
Pages		17		

(4) EcoStruxure Machine SCADA Expert Runtime license to be ordered separately.
(5) No HMI software pre-installed.

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Harmony GTU
High performance IoT-ready modular HMI panels

Harmony HMIGTU color display modules

+

Harmony HMIGTU Box modules

Presentation

The Harmony GTU series are high-end HMIs built on an innovative concept of modularity. This offers you a choice of options to find the most suitable Universal panels for your application. Harmony GTU panels comprise a front panel display and a processing box module.

The display modules are available in two versions:
- Advanced Display: compact wide screens in 3 sizes
  □ 7" W
  □ 10" W
  □ 12" W
- Smart Display: large multi-touch screens in 5 sizes
  □ 10.4"
  □ 12.1" (with or without wireless Ethernet)
  □ 15"
  □ 15" W
  □ 19" W

The box modules are available in three versions:
- Standard Box with Real Time operating system
- Premium Box with Real Time operating system
- Open Box with Windows 7 Embedded operating system or Windows 10 IoT Enterprise 32-bit operating system

Operation

Harmony GTU Universal panels feature powerful information and communication technologies with maximum operator efficiency in terms of viewing which, depending on the model, include:

- Clear display with standard or wide-format, single or multi-touch technology
- High level of communication with all embedded dual interfaces: 2 serial ports, up to 4 USB host ports, and 2 Gigabit Ethernet ports (Multi-link, Webserver and FTP, E-mail, Remote services)
- Embedded wireless Ethernet function *(1)* in Access point mode or Station mode
- Removable storage units for operating system easy save/restore, HMI application, and user data (SD memory cards, CFast cards, and USB memory stick management)
- Management of many peripherals: printers, barcode readers, external monitor display, external keyboard/mouse, and Schneider Electric smart USB accessories (tower light, illuminated switch, keyboard, biometric switch, USB keyboard)
- View and record video for USB and IP cameras on Open Box
- Duplicate the image on a large monitor display up to WUXGA resolution (1920x1200) with DVI output, ideal for the Andon application to show production in manufacturing plants
- Multi-operation with up to 3 additional external Harmony GTU displays on Ethernet network in either duplicate or extended modes.

Environment

The high-end Harmony GTU Universal panels have been designed in accordance with numerous standards, certifications, and requirements:

- Standards: IEC/EN 61131-2, IEC 61000-6-2, and IEC 61000-6-4
- Certifications:
  □ RCM (Australia), EAC (Eurasia), KC (Korea)
  □ cULus Industrial Control Equipment (UL508 and CSA 22.2 No.142)
  □ cULus Hazardous Locations (ANSI/ISA 12.12.01 and CSA 22.2 No. 213)
  □ Atex zone 2/22
  □ Marine certifications : BV, CCS, DNV, GL, LR, RINA, ABS
- Operating temperature: up to 60 °C/*140 °F*
- Degree of protection on front face IP 66/67 (according to IEC 60529)
- Extended power supply voltage 12…24 V ⎓
- Brightness sensor on Smart Display for automatic brightness adjustment to environment

(1) Supported by HMIDT643 only.

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Harmony GTU
High performance IoT-ready modular HMI panels

Presentation (continued)
Maintenance
Harmony GTU panels supports the following features for ease of maintenance:
■ Easy installation with anti-drop retractable embedded fasteners
■ Front USB ports to access all data without opening the cabinet
■ Scaler function to manage unique application files with any display size and resolution
■ Isolation on RJ45-RS-485 port for more reliable communication in complex grounding applications
■ Robust panel with complete aluminum housing
■ Dual removable storage units in Harmony GTU boxes for storing application and data, thus enabling zero downtime while changing panels
■ Easy migration of Harmony GTU panels with Smart display as they have cut-outs similar to old range of HMI

EcoStruxure Operator Terminal Expert

Vijeo Designer

Configuration
Like all other Harmony panels, Harmony GTU Universal panels can be configured using Vijeo Designer software in a Windows environment. This software has an advanced user interface with many configurable windows enabling projects to be developed quickly and easily.

Harmony GTU is also configurable with EcoStruxure Operator Terminal Expert software. This software with the user interface brings greater ease to project development and online updates. EcoStruxure Operator Terminal Expert allows you to create an innovative HMI project that can be operated on Harmony GTU like a smartphone.

For more information on Vijeo Designer and EcoStruxure Operator Terminal Expert, please refer to our website www.se.com/HMI Configuration Software.

Communication
The following illustrations show the equipments that Universal panels can communicate via Ethernet and Modbus protocols, and also via USB, wireless and fieldbus interfaces.

Via Ethernet protocol
Harmony GTU with two Ethernet ports can share data with other Harmony HMIs, browse the PLC's Webserver and SCADA server, and also communicate with PLCs using:
■ Modbus TCP protocol
■ Third-party Ethernet protocol
OPC-UA protocol is also available on Harmony GTU for IIoT connectivity.
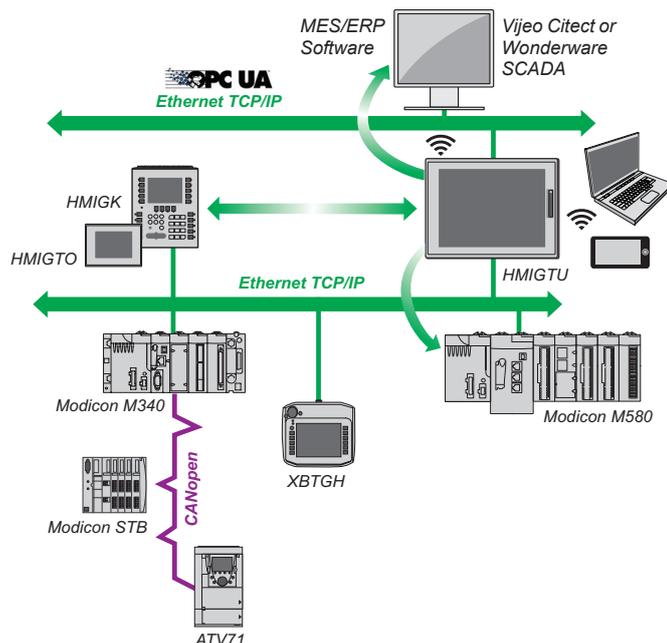
Harmony GTU
High performance IoT-ready modular HMI panels

Communication (continued)

Via Modbus protocol

Harmony GTU communicates with PLCs via one or two integrated serial links, using the following communication protocols:

- Schneider Electric (Uni-TE, Modbus)
- Third-party: Mitsubishi Electric, Omron, Allen-Bradley, and Siemens

Modicon M2●8

Modicon M2●1

Modbus

Harmony GTU

Via wireless connectivity with Smart WLAN display and Vijeo Designer (1)

The 12" Smart WLAN display when configured with Open Box meets setup and maintenance requirements in the following modes:

- Access point mode: The Smart WLAN HMI application display can be accessed wirelessly with a smartphone and Vijeo Designer Air software or with a PC that has an Internet browser and Web Gate function. All HMI applications connected to one of the Harmony GTU Open Box (Bridge function) Ethernet networks can also be accessed wirelessly.
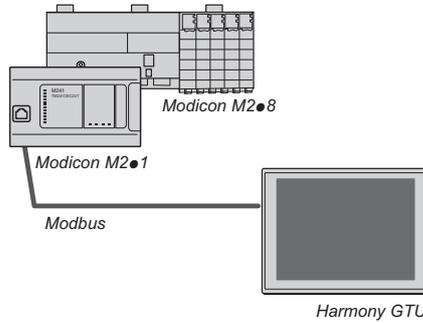- Station mode: PLCs and other Harmony HMIs can be communicated wirelessly via an existing access point with Smart WLAN display in the Ethernet architecture to be used in flexible production lines for data sharing.

Vijeo Design'Air/Air Plus

Vijeo Designer BT

Harmony GTU WLAN

Powered by Vijeo Designer

Bridge (Open Box only)

Web Gate

HMI   *Modicon M580*

EcoStruxure MachineExpert
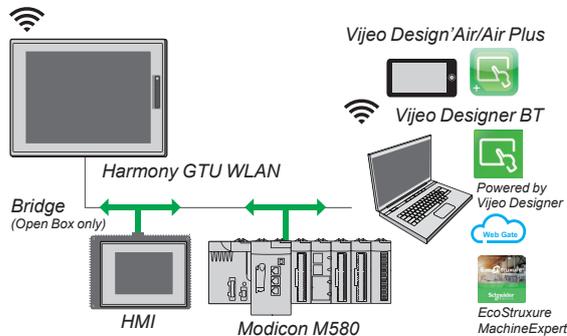
Smart WLAN display in Access point mode

Via fieldbus modules with EcoStruxure Operator Terminal Expert

By attaching the fieldbus module to the Box unit, you can join a PROFIBUS DP network or MPI network to communicate with PROFIBUS DP master or MPI equipment. You can also join a CANopen network to communicate with a CANopen master.
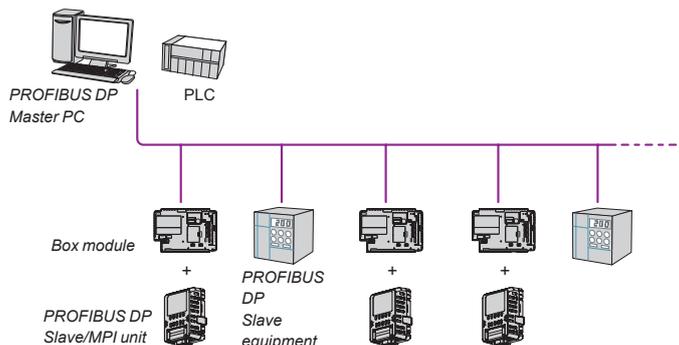
PROFIBUS DP Master PC

PLC

Box module

PROFIBUS DP Slave/MPI unit

PROFIBUS DP Slave equipment

(1) Depending on the environment, location (distance and angle), and application used and displayed on the Harmony GTU screen.

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Harmony GTU
High performance IoT-ready modular HMI panels

Communication (continued)

Via USB for HMI accessories with Vijeo Designer

The Harmony USB accessories are designed to expand the selection range of user applications by offering value-added/differentiated HMI solutions. These innovative USB accessories can easily be installed and operated with HMI panels.

The Harmony USB accessories supported by Harmony GTU include:
■ Harmony XVGU USB tower light (only on Standard and Premium Boxes)
■ Harmony HMIZ illuminated USB switch
■ Harmony HMIZ USB keyboard (only on Standard and Premium Boxes)

For more information on HMI USB accessories, please refer to our website www.se.com/USB accessories for Harmony panels.

Functions

Software functions

Harmony GTU panels with Vijeo Designer offer the following functions:

■ Display of animated synoptic views with 8 types of animation (pressing the touch panel, color changes, filling, movement, rotation, size, visibility, and value display)
■ Control, modification of numeric and alphanumeric values
■ Display of current date and time
■ Real-time and trending curves with log
■ Alarm display, alarm log, and management of alarm groups
■ Multi-window and recipe management
■ Operator-initiated page calls
■ Multilingual application management (10 languages at the same time)
■ Data processing via Java script
■ Storage of the application and logs on external application memory card in SD format, USB stick, or CFast card
■ Management of serial printers and barcode readers
■ Sound Message management

In addition, the Harmony GTU display units offer a multi-touch screen feature with EcoStruxure Operator Terminal Expert or EcoStruxure Machine SCADA Expert software. These features, such as drag, click, and dual-press gestures are similar to those of smartphones.

The flexibility of Windows 7 Embedded or Windows 10 IoT Enterprise on Harmony GTU Open Box allows:
■ Running a Vijeo Designer application or EcoStruxure Operator Terminal Expert software application
■ Dual-screen support and cloning function on external monitor with DVI port connected to Open Box
■ Multi-operation with up to 3 external Harmony GTU displays connected on Ethernet to the Open Box host in either duplicate or extended modes with touch exclusive control function that is configurable on each display
■ Web video support with view and record functions on Open Box
■ Navigate HTML pages and send e-mails
■ Simultaneous functions such as:
□ Use of Internet Explorer, Windows Media Player, Office Viewer, and Adobe Reader (pdf, doc, xls documents)
■ Advanced Line management functions, running EcoStruxure Machine SCADA Expert software application to:
□ Automatically generate reports compliant with CFR21
□ Track your data and understand your performance with the embedded EcoStruxure Machine SCADA Expert historian and OEE templates
□ Benefit from the power of the IoT with IT and OT driver library and data management capabilities (Native OPC interface including OPC UA, etc.)

The following programs enable you to connect remotely to HMI panels and access processes at any time from anywhere:
■ Vijeo Design'Air enables you to connect remotely to the Harmony GTU terminal and have a remote view of the terminal on your tablet and smartphone (mirror function).
■ Vijeo Design'Air Plus enables you to create a tablet/smartphone project for a specific display size of the tablet/smartphone. During runtime, an operator can access the Harmony GTU user application to display data and control automation processes on the tablet/smartphone.

(1) Depending on the environment, location (distance and angle), and application used and displayed on the Harmony GTU screen.

EcoStruxure Operator Terminal Expert

Vijeo Designer

EcoStruxure Machine SCADA Expert

Vijeo Design'Air

Vijeo Design'Air Plus

EcoStruxure Secure Connect Advisor remote maintenance

EcoStruxure Machine SCADA Expert

Functions

Companion Products

With EcoStruxure Secure Connect Advisor, all Harmony GTUs serve as a service enabler and access point for remote maintenance to your machine. EcoStruxure Secure Connect Advisor provides a more secure way to access existing Schneider Electric tools (for example: Vijeo Designer, Unity, EcoStruxure Machine Expert) to program or monitor machines remotely. The maintenance personnel can also access Schneider Electric software and update it remotely and securely via the HMI, PLC, and other connected devices as if they were on site. Troubleshooting and repair can also be performed remotely upon request.

For more information, please refer to "EcoStruxure Secure Connect Advisor catalog" available on our website www.se.com.

Industrial automation solutions

The Harmony GTU integrated *(1)* in MachineStruxure™*(2)* automation solutions offer will help machine manufacturers (OEMs) to quickly design optimized machines (in terms of cost and energy efficiency).

MachineStruxure solutions are based on high-performance control platforms and EcoStruxure Machine Expert single software package. EcoStruxure Machine Expert allows the development, commissioning, and programming of machines. With Vijeo Designer software, this software allows programming of panels in the Harmony range.

Harmony GTUs have been designed for PlantStruxure™ *(2)* architecture, MachineStruxure *(2)* architecture, and for Transparent Ready equipment (combination of Web and Ethernet TCP/IP technologies). Therefore, all panels with an Ethernet port have a built-in FTP server for data file transfer and a Web Gate function for remote access to the panel application from a PC with an Internet browser.

Harmony GTU Hardware and Software compatibility table

GTU Hardware		HMI software (Minimum version required)		
Display	Box	Vijeo Designer	EcoStruxure Operator Terminal Expert	EcoStruxure Machine SCADA Expert
HMIDT●51/●42/●32	HMIG2U	V6.2 SP8	No	No
	HMIG3U	V6.2 SP1	V3.1	No
	HMIG5U2	V6.2 SP5.1	No	No
	HMI G5UL8A/G5UL8B	No	No	V8.0 SP2/ V8.1 SP2
	HMIG5U22	V6.2SP11	V3.2	No
HMIDT●52	HMIG2U	No	No	No
	HMIG3U	V6.2 SP9	V3.1	No
	HMIG5U2	V6.2 SP7	No	No
	HMI G5UL8A/G5UL8B	No	No	V8.0 SP2/ V8.1 SP2
	HMIG5U22	V6.2 SP11	V3.2	No
HMIDT643	HMI G2U/G3U	No	No	No
	HMIG5U2	V6.2 SP5.1	No	No
	HMI G5UL8A/G5UL8B	No	No	No
	HMIG5U22	V6.2SP11	No	No
HMIDT●●●	HMI G3U/G5U2 + Fieldbus modules	No	V3.1 *(3)*	No
	HMIG5U22 + Fieldbus modules	No	*V3.2*	No
	HMIG5U21	No	No	No

(1) Harmony GTU is integrated into MachineStruxure with Vijeo Designer version V6.2 SP3 or later.
(2) For more information on the MachineStruxure and PlantStruxure concept, please refer to our website www.se.com.
(3) Not supported by HMIG5U2.

Panel operating modes

The following illustrations show the equipment that can be connected to Universal panels depending on their two operating modes.

Edit mode

Ethernet network

USB

Memory stick

PC running Vijeo Designer or EcoStruxure Operator Terminal Expert software

HMIGTU

Connection cable BMXXCAUSBH018
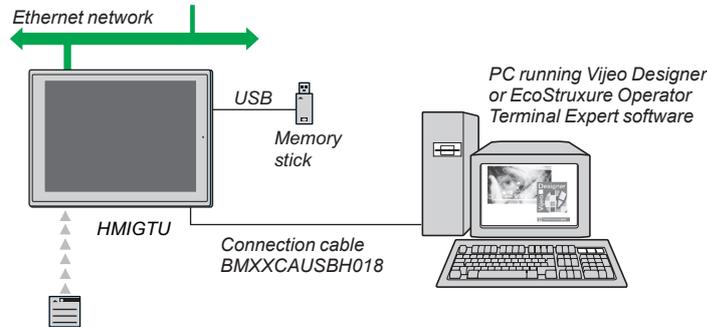
SD memory card for Premium Box and CFast card for Open Box

Operating mode

USB port expander

Memory stick

Modicon M340

Barcode reader (2)

Ethernet network 1

XBTZ915

Serial printer

Mouse

Ethernet network 2

Keyboard

HMIGTU

COM2

XBTZ9008

Modicon M241/M251

Parallel printer (3)

USB
SD memory or CFast card

Webcam (1)

DVI

XBTZ9980

COM1

Modicon M340

External display unit (1)

Microphone (1)
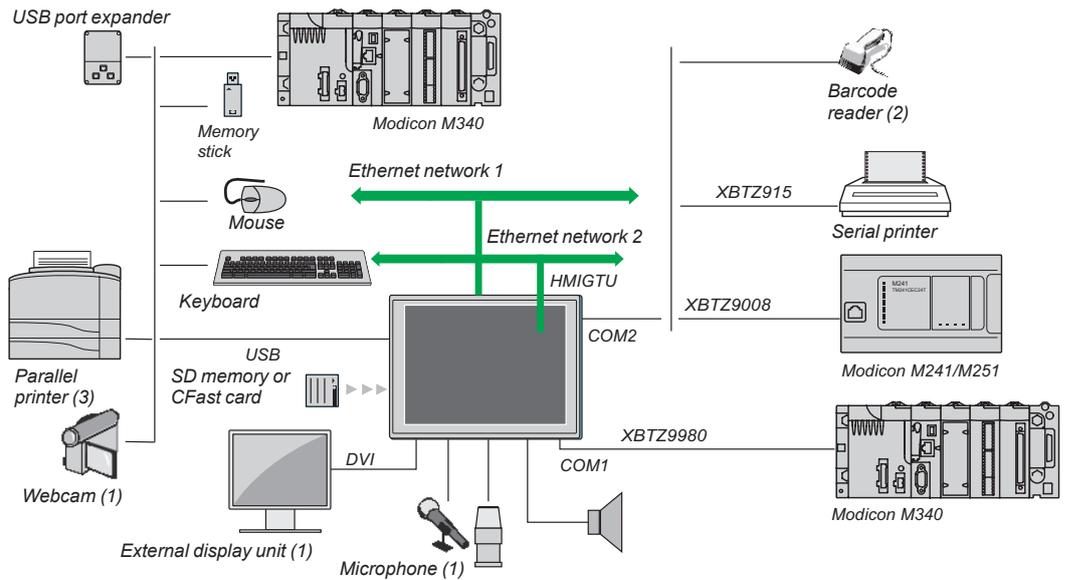
Conformal coating for improved environmental resistance

The Conformal coating service offers varnishing of electronic cards to prolong the service life of the panels and enable them to be used in corrosive environments. The varnishing increases resistance to condensation, dusty atmospheres and chemical corrosion (sulfurous and halogenous atmospheres). This coating service is applicable to all display and box modules of Harmony GTU. For more information on this service offer, please contact our Customer Care Centre.

(1) With Open Box unit.
(2) Validated with DataLogic Gryphon barcode reader.
(3) Validated with Hewlett Packard printer via USB/PIO converter.

Description:	References:	Connections:	Substitution:
page 12	page 15	page 24	page 23

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Harmony GTU
High performance IoT-ready modular HMI panels
Advanced and Smart Display modules

Advanced Display front view

Smart Display front view

Smart XL display front view

Advanced and Smart display rear view

Description

Harmony Advanced Display modules

Front view

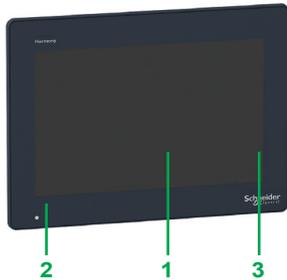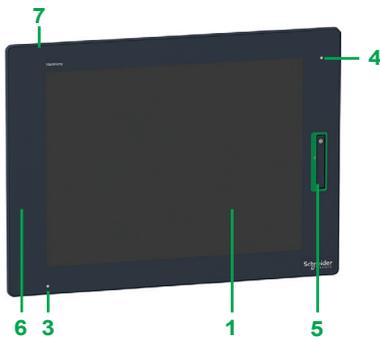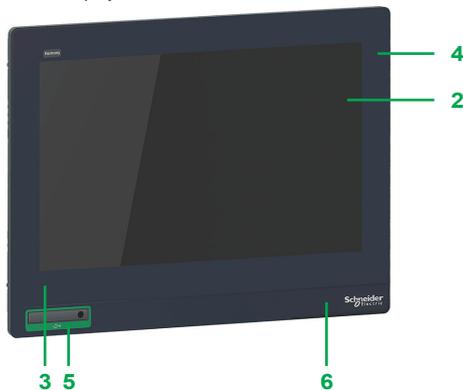**1** Single-touch resistive screen for displaying synoptic views (262 K colors LCD TFT LED with brightness adjustable to 100 levels) in sizes 7", 10", and 12" wide

2 Multi-color status indicator (green, orange, and red) showing the panel's operating mode

3 Aluminum alloy front panel providing IP 66/67 protection when mounted on panel or enclosure door

Harmony Smart Display modules

Front view

1 Multi-touch resistive screen for displaying synoptic views (16 M colors, LCD TFT LED with brightness adjustable to 100 levels) in sizes 10.4", 12.1", and 15" standard format

2 Multi-touch Projected-Capacitive screen with glass top cover for displaying synoptic view (16 M colors, LCD TFT LED with brightness adjustable up to 100 levels) in sizes 15" and 19" Wide format

3 Multi-color indicator (green, orange, and red) showing the panel's operating mode

4 Brightness sensor to automatically adjust the level of brightness to the environment

5 Front USB ports 2.0 Host & Device with screw protective cover

6 Aluminum alloy front panel providing IP 66/67 protection when mounted on panel or enclosure door

7 For HMIDT643 GTU display *(1)*, a wireless antenna is embedded in the front bezel with:
- 2.4 GHz bandwidth
- Maximum speed: 72.2 Mbps(in IEEE 802.11n mode), 54 Mbps(in IEEE 802.11g mode), 11 Mbps(in IEEE 802.11b mode)
- Standard IEE802.11 b/g/n
- Distance 30 m max. according to the environment
- Access point or station modes
- Communication mode for infrastructure only
- WEP/WPA/WPA2 security
- Radio frequency certifications for Europe, USA, Canada, China, Taiwan, South Korea, Japan

Advanced and Smart Display rear view

1 Removable screw terminal block for 12...24 V ⎓ power supply

2 Box interface

3 4x retractable embedded screw fasteners

4 Anti-Drop lock

(1) Depending on the environment, location (distance and angle), and application used and displayed on the Harmony GTU screen.

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Harmony GTU
High performance IoT-ready modular HMI panels
Display modules with Multi-display adapter
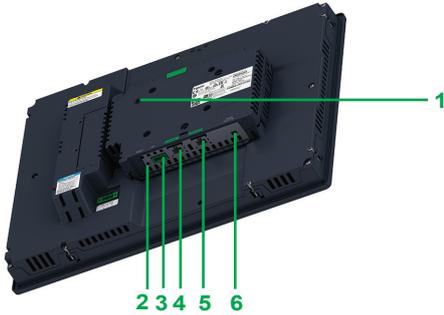
Rear view of the mounted Multi-display adapter HMIZMDARX

VESA mounted Multi-display adapter

Description

Harmony GTU Display with Multi-display adapter

Rear view

1 Screw hole for VESA accessory
2 Reset switch (Factory Reset)
3 Direct IOs interface
4 Ethernet 1
5 Ethernet 2 (Embedded Hub)
6 ON/OFF switch for DHCP Server

Operating mode
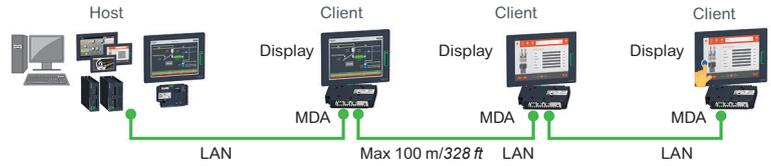
The multi-display adapter is mounted on the rear of Harmony GTU Display to extend up to 3 remote displays for one host station. The host station *(1)* can be a Harmony GTU Open, a Harmony *i*PC, or a general PC.

■ Standard Ethernet cable (up to 100 m/*328 ft*) can be used between adapters for transmission of images and touch signals. The display adapters can be wired in either Line or Star connection modes.
■ Configuration software is provided with the adapter (MDA configuration tool) to install on the host station for complete architecture configuration.
□ Allows selection of Duplicate or Extended modes for each display's visualization.
□ Touch operation exclusive control can be managed either by "first touch priority" mode using a configurable temporisation or "Excluded" mode using the direct inputs/outputs with external push buttons and lights.
■ VESA mounting accessory is available for the Multi-display adapter.

(1) Operating System supported: Microsoft Windows 7 32-bit/64-bit, Windows 8 32-bit/64-bit, Windows Embedded Standard 7 32-bit/64-bit, Windows Embedded 8.1 Industry Pro 32-bit/64-bit, Windows 10 32-bit/64-bit, and Windows 10 IoT Enterprise for Harmony products only.

Harmony GTU
High performance IoT-ready modular HMI panels
Standard Box module
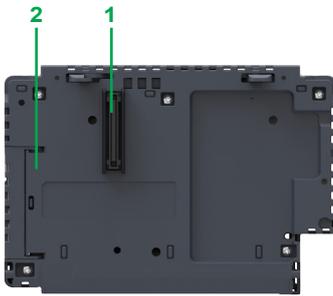
Standard Box Rear view
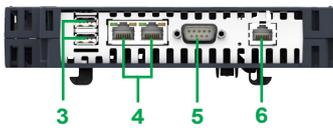
Standard Box Underside view
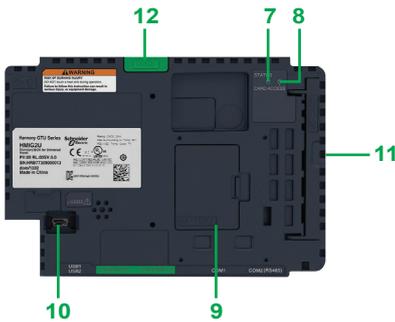
Standard Box Front view

Description
Harmony Standard Box module
Rear view
1 Display interface
2 Internal Flash Memory (1 GB) with
- Realtime operating system
- Vijeo Designer Runtime

Underside view
3 2 Type A USB host connectors for connecting peripherals, transferring applications, and Modicon M340 terminal port communication
4 RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX with an activity LED
5 9-way male SUB-D connector for RS-232C serial link to PLCs (COM1)
6 RJ45 connector for RS-485 serial link (COM2)

Front view
7 Status LED indicating the operating mode of the terminal
8 LED indicating access to the SD memory card
9 Expansion unit cover for optional battery
10 Type mini-B USB connector for application transfer
11 Storage unit Cover for SD slot memory card dedicated to user data
12 LOCK button for attaching the box module to the display module

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Harmony GTU
High performance IoT-ready modular HMI panels
Premium Box module

Premium Box rear view

Premium Box front view

Premium Box underside view
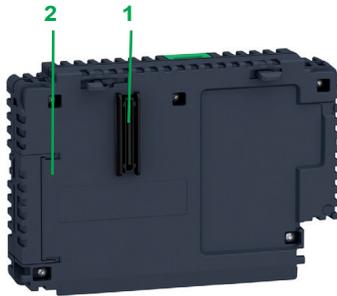
Description

Harmony Premium Box module

Rear view

1 Display interface
2 Storage unit Cover 1 with an SD card (1 GB) and pre-installed:
  - Real Time operating system
  - Vijeo Designer Runtime or EcoStruxure Operator Terminal Expert Runtime
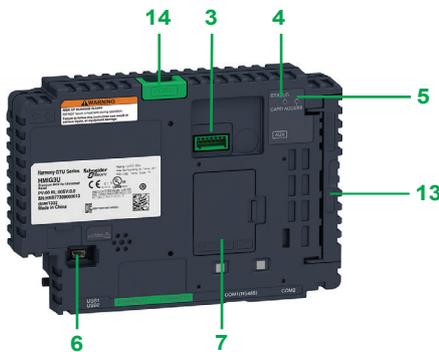
Front and underside views

3 Auxiliary interface for alarm, buzzer, and speaker outputs
4 Status LED indicating the operating mode of the terminal
5 LED indicating access to the SD memory card
6 Type mini-B USB connector for application transfer
7 Expansion unit cover for optional battery or optional FieldBus card
8 2 Type A USB host connectors for connecting peripherals, transferring applications, and Modicon M340 terminal port communication
9 RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX/1000BASE-T with an activity LED
10 COM1 LED indicating data transmission
11 RJ45 connector for RS-485 serial link with isolation (COM1)
12 9-way male SUB-D connector for RS-232C or RS-422/RS-485 serial link to PLCs (COM2)
13 Storage unit Cover 2 for SD slot memory card dedicated to user data
14 LOCK button for attaching the box module to the display module

Harmony GTU
High performance IoT-ready modular HMI panels
Open Box module
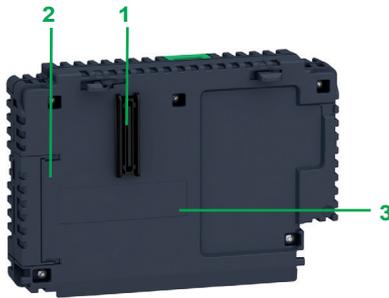
Open Box rear view
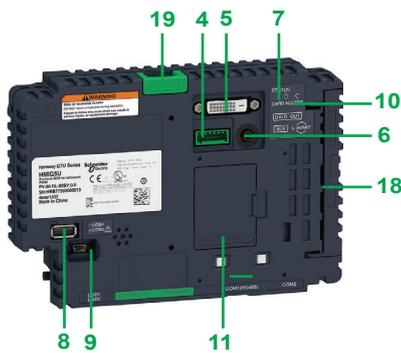
Open Box front view
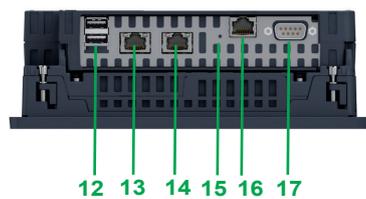
Open Box underside view

Description
Harmony Open Box module
Rear view
1 Display interface
2 Storage unit Cover 1 that has a CFast card (32 GB) for:
■ **HMIG5U2/HMIG5UL8A/HMIG5UL8B** pre-installed with Windows® Embedded 7 supplied in 9 languages (English, French, German, Italian, Portuguese, Spanish, Swedish, Chinese, Russian) including:
- Internet Explorer V11.0 Web browser
- Notepad
- Windows Media Player
- PDF Reader, Microsoft Word/Excel Viewer
- Framework.Net 4
- VNC Client/Server (Virtual Network Computing) for remote connection
- Vijeo Citect Web Client

■ **HMIG5U21/HMIG5U22** pre-installed with Windows 10 IoT Enterprise 32-bit LTSC 2019 supplied in 8 languages (English, French, German, Italian, Portuguese, Spanish, Chinese Simplified and Traditional) including:
- Internet Explorer V11.0 Web browser
- Edge Web browser
- Windows Media Player
- Framework.Net 4

3 Each Open Box reference is dedicated to a different HMI Runtime as explained below:
- **HMIG5U2**: Runtime Vijeo Designer and registered with Open Box
- **HMIG5UL8A**: Runtime EcoStruxure Machine SCADA Expert Trial V8.0 SP2 installed in Box, need to order **HMIVXLRT●● KLV●●** license for registration *(1)*
- **HMIG5UL8B**: Runtime EcoStruxure Machine SCADA Expert Trial V8.1 SP2 installed in Box, need to order **HMIVXLRT●● KLV●●** license for registration *(1)*
- **HMIG5U21**: No HMI Runtime
- **HMIG5U22**: Runtime Vijeo Designer and EcoStruxure Operator Terminal Expert registered

Front and underside views
4 Auxiliary interface for alarm, buzzer, and speaker outputs
5 DVI-D interface to connect Harmony *i*Display or LCD monitor display
6 Mini-jack connector for microphone input
7 Status LED indicating the operating mode of the terminal
8 Type A USB connector for application transfer
9 Type mini-B USB connector for application transfer
10 LED indicating access to SD or CFast cards
11 Expansion unit cover for optional battery or optional fieldbus card
12 2 Type A USB host connectors for connecting peripherals, transferring applications, and Modicon M340 terminal port communication
13 RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX/1000BASE-T with an activity LED
14 RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX/1000BASE-T with an activity LED
15 COM1 LED indicating data transmission
16 RJ45 connector for RS-485 serial link with isolation (COM1)
17 9-way male SUB-D connector for RS-232C or RS-422/RS-485 serial link to PLCs (COM2)
18 Storage Cover 2 for SD slot and CFast slot card dedicated to user data
19 LOCK button for attaching the box module to the display module

(1) To complete the reference, replace the first pair of dots with Number of Tags and second pair of dots with version.

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Harmony GTU
High performance IoT-ready modular HMI panels
Display and Box modules

HMIDT351

HMIDT651

HMIDT642

HMIDT752

Harmony GTU Universal Display modules

Data entry method	Size	Resolution (pixels)	Colors	Touch type	Options	Reference	Weight kg/*lb*
Advanced Display							
Via touch screen	7", format 16/9	800 × 480	262 K	Single resistive	No	**HMIDT351**	1.200/ *2.600*
	10", format 16/9	1280 × 800	262 K	Single resistive	No	**HMIDT551**	2.500/ *5.500*
	12", format 16/9	1280 × 800	262 K	Single resistive	No	**HMIDT651**	3.000/ *6.600*
Smart Display							
Via touch screen	10.4", format 4/3 Standard	800 × 600	16 M	Multi resistive	Front USB (Type A + Type mini-B), Brightness sensor, Scaler	**HMIDT542**	2.700/ *5.900*
	12.1", format 4/3 Standard	1024 × 768	16 M	Multi resistive	Front USB (Type A + Type mini-B), Brightness sensor, Scaler	**HMIDT642**	3.000/ *6.600*
					Front USB (Type A + Type mini-B) Brightness sensor, Scaler, Wireless antenna	**HMIDT643**	3.000/ *6.600*
	15", format 4/3 Standard	1024 × 768	16 M	Multi resistive	Front USB (Type A + Type mini-B) Brightness sensor, Scaler	**HMIDT732**	4.500/ *9.900*
	15", format 16/9	1366 x 768	16 M	Multi-touch Projected-capacitive technology	Front USB (Type A + Type mini-B) Brightness sensor, Scaler	**HMIDT752**	5.000/ *11.023*
	19", format 16/9	1366 x 768	16 M	Multi-touch Projected-capacitive technology	Front USB (Type A + Type mini-B) Brightness sensor, Scaler	**HMIDT952**	6.800/ *14.991*

HMIG3U

HMIG5U2

HMIG5U21

Harmony GTU Universal Box modules

Operating system	RAM memory	Storage units	USB ports	Communication	Multimedia interface	Reference	Weight kg/*lb*
Standard Box							
Real Time	256 MB	1x Internal Flash and 1x SD card	2x Hosts (Type A), 1x Device (Type mini-B)	2x Serial, 2x Fast Ethernet	No	**HMIG2U**	0.900/ *1.980*
Premium Box							
Real Time	256 MB	2x SD cards	2x Hosts (Type A), 1x Device (Type mini-B)	2x Serial, 2x Gigabit Ethernet	Sound output	**HMIG3U**	0.900/ *1.980*
Open Box							
Windows® 7 Embedded	2 GB	2x CFast cards 1x SD card	3x Hosts (Type A), 1x Device (Type mini-B)	2x Serial, 2x Gigabit Ethernet	Sound output, Microphone input, External display output (DVI)	**HMIG5U2** *(2)* **HMIG5UL8A** *(2)* **HMIG5UL8B** *(2)*	0.900/ *1.980*
Windows 10 IoT Enterprise 32bit	4 GB	2x Cfast cards 1x SD card	3x Hosts (Type A), 1x Device (Type mini-B)	2x Serial, 2x Gigabit Ethernet	Sound output, Microphone input, External Display output (DVI)	**HMIG5U21** *(1)* **HMIG5U22** *(2)*	

***Note**: See table of compatibility on* *for Box modules and Display modules with the related HMI software used.*

(1) Open Box with no Runtime HMI.
(2) Each Open Box reference is dedicated to run a HMI Runtime application.

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GTU_61981_CPMGU18001

HMIZMDARX

105950-35M

XBTZGCO●

GTU_61981_CPMGU18003

HMIZMDRVS

105872-35M

XBTZGUSB

Accessories

Description	Host type compatible	Display compatible	Reference	Weight kg/*lb*
Harmony GTU Universal Smart System Adapter	HMIG5U2 Harmony *i*PC General PC	HMIDT●●●	**HMIZMDARX**	–

Separate parts

Description	Characteristics	Compatible with panels	Reference	Weight kg/*lb*
SD memory card system	1 GB, blank	HMIG3U	**HMIZSD1GS**	–
CFast card system	32 GB, blank	HMIG5U2/HMIG5U22	**HMIZCFA32S**	–
CFast card	32 GB, blank	HMIG5U2/HMIG5U22	**HMIZCFA32**	–
SD card	4 GB, blank	HMIG3U/HMIG5U2/ HMIG5U22	**HMIZSD4G**	–
Protective sheets against dirt and moisture (5 peel-off sheets)	–	HMIDT351	**HMIZG63**	–
		HMIDT551	**HMIZD65W**	–
		HMIDT651	**HMIZD66W**	–
		HMIDT542	**HMIZG65**	–
		HMIDT642/HMIDT643	**HMIZG66**	–
		HMIDT732	**MPCYK50SPSKIT**	–
Protective sheet against ultraviolet light (1 peel-off sheet)	–	HMIDT351	**HMIZUV3W**	–
		HMIDT551	**HMIZUV5W**	–
		HMIDT651	**HMIZUV6W**	–
		HMIDT542	**HMIZUV5**	–
		HMIDT642/HMIDT643	**HMIZUV6**	–
		HMIDT732	**HMIZUV7**	–
Anti-glare protective sheets (5 peel-off sheets)	Help prevent reflections with dirt resistance	HMIDT752	**HMIZDAG7W**	–
		HMIDT952	**HMIZDAG9W**	–
Plastic covers for harsh environments (IP 67 protection)	–	HMIDT542	**HMIZDCOV5**	–
		HMIDT642/HMIDT643	**HMIZDCOV6**	–
		HMIDT732	**HMIZDCOV7**	–
VESA mount adapter	–	HMIZMDARX	**HMIZMDRVS**	–
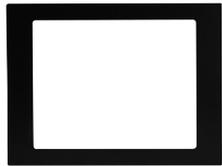
Description	Characteristics	Length m/*ft*	Reference	Weight kg/*lb*
Mechanical adapters for substitution of Harmony range panels	From XBTGT5230 to HMIDT542	–	**XBTZGCO4**	–
	From XBTGT4●●● to HMIDT351	–	**HMIZGCO1**	
Remote USB port for HMI panels	Enables the USB Type A port to be located remotely on the rear of the XBT or HMIGTU terminal, on a panel, or an enclosure door (Ø 21 mm fixing device)	1/*3.28*	**XBTZGUSB**	–
Remote USB port for HMI panel	Enables the USB mini-B port to be located remotely on the rear of the HMIGTU panel, on a panel, or an enclosure door (Ø 21 mm fixing device)	1/*3.28*	**HMIZSUSBB**	–
DVI-D cable	For connecting an external Harmony *i*Display to the HMIG5U2/HMIG5U22 Open Box	10/*32.81*	**HMIYCABDVI1011**	–
Battery	HMIGTU	–	**HMIZGBAT**	–
Auxiliary connector **Sold in sets of 5 units**	HMIGTU	–	**HMIZGAUX**	–
Stylus **Sold in lots of 5**	–	–	**XBTZGPEN**	

Harmony GTU
High performance IoT-ready modular HMI panels
Replacement parts

HMIZMDIO

Spare parts

Description	For use with panels	Reference	Weight kg/*lb*
Seals	HMIDT351	**HMIZD53W**	–
	HMIDT551	**HMIZD55W**	–
	HMIDT651	**HMIZD56W**	–
	HMIDT542	**HMIZD55**	–
	HMIDT642/HMIDT643	**HMIZD56**	–
	HMIDT732	**HMIZD57**	–
	HMIDT752	**HMIZD57W**	–
	HMIDT952	**HMIZD59W**	–
USB fastenings **Sold in lots of 5**	HMIGTU (USB Type A)	**HMIZGCLP1**	–
	HMIGTU (USB Type mini-B)	**HMIZSCLP3**	–
Power supply connector **Sold in lots of 5**	HMIGTU (direct connection)	**HMIZGPWS**	0.030/ *0.066*
	HMIGTU (right-angle connection)	**HMIZGPWS2**	0.030/ *0.066*
Direct IO connector	HMIZMDARX	**HMIZMDIO**	–

Cables for application transfer - Terminal to PC

Type of terminal (terminal end connector)	Connector (PC end)	Type	Length m/*ft*	Reference *(1)*	Weight kg/*lb*
HMIGTU	USB	USB Type mini-B	1.80/ *5.91*	**BMXXCAUSBH018**	–
		USB Type A		**XBTZG935**	-

Printer connection cables

Type of printer *(2)*	Connector (printer end)	Type	Length m/*ft*	Reference	Weight kg/*lb*
HMIGTU	25-way female SUB-D	RS-232C (COM2)	2.5/ *8.20*	**XBTZ915**	0.200/ *0.441*
Serial printer for HMIGTU	9-way female SUB-D	USB Type A/RS-232C	1.80/ *5.91*	**HMIZURS**	–

Adapters and isolation boxes for HMIGTU panels
These 3 adapters are used with the connection cables according to the application concerned.

XBTZGI485

Description	Type of connector (automation product end)	Physical link (HMIGTU terminal end)	Length m/*ft*	Reference	Weight kg/*lb*
Adapter for HMIGTU	25-way SUB-D connector	RJ45 connector	0.2/ *0.66*	**XBTZG939**	–
Adapter for HMIGTU (COM2 port)	25-way SUB-D connector	9-way SUB-D connector, RS-232C	0.2/ *0.66*	**XBTZG919**	–

Description	For use with	Link to isolate	Reference	Weight kg/*lb*
Serial link isolation units for HMIGTU	- Isolated link on 9-way SUB-D connector *(3)* - Box power supply via terminal USB port Incorporates a USB port expander	RS-232C/RS-485 (COM1)	**XBTZGI232**	–
		RS-485 (COM2)	**XBTZGI485**	–

(1) Cable included (depending on model) with Vijeo Designer software packages (refer to HMI Configuration Software catalog).
(2) Parallel printer (see page 11).
(3) Male connector with XBTZGI232.

Harmony GTU
High performance IoT-ready modular HMI panels
Connection accessories

TSXPCX1031

Cables for connecting Harmony panels to other Schneider Electric products

Automation product type	Type of connector (automation product end)	Protocol	Type of terminal	Link	On port	Length m/*ft*	Reference	Weight kg/*lb*
Nano, Modicon TSX Micro, Modicon Premium	Terminal port, 8-way female mini-DIN	Uni-TE (V1/V2), Modbus	HMIGTU	RS-485	COM1	2.5/*8.20*	**XBTZ9780**	0.180/ *0.397*
						10/*32.80*	**XBTZ9782**	–
			HMIGTU	RS-232	COM2	2.5/*8.20*	**TSXPCX1031**	–
Modicon M340 Modicon M241 Modicon M258 Modicon M2●1	RJ45	Modbus	HMIGTU	RS-485	COM1	2.5/*8.20*	**XBTZ9980**	0.230/ *0.507*
						10/*32.80*	**XBTZ9982**	–
					COM2	2.5/*8.20*	**XBTZ9008**	–
Modicon M340	USB Type mini-B	Terminal port	HMIGTU	USB	USB type A	1.8/*5.91*	**BMXXCAUSBH018**	0.230/ *0.507*
						4.5/ *14.76*	**BMXXCAUSBH045**	–
Modicon Quantum	9-way male SUB-D	Modbus	HMIGTU	RS-232C	COM2	2.5/*8.20*	**XBTZ9710** + *(1)*	0.210/ *0.463*
						3.7/ *12.14*	**990NAA26320**	0.290/ *0.639*
Modicon STB	HE13 (NIM, network interface module)	Modbus	HMIGTU	RS-232C	COM2	2/*6.56*	**STBXCA4002**	0.210/ *0.463*
						2.5/*8.20*	**XBTZ988** + *(1)*	0.220/ *0.485*
Modicon Momentum M1	RJ45 (port 1 on Momentum M1)	Modbus	HMIGTU	RS-232C	COM2	2.5/*8.20*	**XBTZ9711** + *(1)*	0.210/ *0.463*
TeSys U, T starters ATV 312/61/71 variable speed drives ATS 48 starters Lexium 05 Preventa XPSMC	RJ45	Modbus	HMIGTU	RS-485	COM1	3/*9.84*	**VW3A8306R30**	0.060/ *0.132*
						1/*3.28*	**VW3A8306R10**	–
						2.5/*8.20*	**XBTZ9980**	–
						10/*32.80*	**XBTZ9982**	–
					COM2	2.5/*8.20*	**XBTZ9008**	–

(1) XBTZG919 adapter should be used with cables with "+ (1)" after the reference.

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Harmony GTU
High performance IoT-ready modular HMI panels
Connection accessories

XBTZG9772

XBTZG9731

Cables and adapters for connecting Harmony panels to third-party PLCs

Mitsubishi, Melsec PLCs

Description Driver used	Type of terminal	Type of connector (fitted to cable, excluding adapter)	Physical link (COM2)	Length m/*ft*	Reference	Weight kg/*lb*
Connection cable, **Q Link** *(SIO)*	HMIGTU	9-way SUB-D 9-way SUB-D	RS-232C	5/*16.40*	**XBTZG9772**	–
Connection cable, **Q CPU** *(SIO)*	HMIGTU	9-way SUB-D mini-DIN	RS-232C	5/*16.40*	**XBTZG9774**	–
Connection cable, **A Link** *(SIO)*	HMIGTU	9-way SUB-D 25-way SUB-D	RS-232C	5/*16.40*	**XBTZG9731**	–
Connection cable, **FX** *(CPU)*	HMIGTU	9-way SUB-D mini-DIN	RS-232/ RS-422	5/*16.40*	**XBTZG919** + **XBTZ980**	–

Omron, Sysmac PLCs

Description Driver used	Type of terminal	Type of connector (fitted to cable, excluding adapter)	Physical link (COM2)	Length m/*ft*	Reference	Weight kg/*lb*
Connection cables, **Link** *(SIO)*	HMIGTU	9-way SUB-D 9-way SUB-D	RS-232C	5/*16.40*	**XBTZG9740**	–
		9-way SUB-D 25-way SUB-D	RS-232C	5/*16.40*	**XBTZG9731**	–
Connection cables, **FINS** *(SIO)*	HMIGTU	9-way SUB-D/ 9-way SUB-D	RS-232C	5/*16.40*	**XBTZG9740**	–

Rockwell Automation, Allen-Bradley PLCs

Description Driver used	Type of terminal	Type of connector (fitted to cable, excluding adapter)	Physical link (COM2)	Length m/*ft*	Reference	Weight kg/*lb*
Connection cables, **DF1 Full Duplex**	HMIGTU	9-way SUB-D/ 25-way SUB-D	RS-232C	5/*16.40*	**XBTZG9731**	–
Connection cables, **DH485**	HMIGTU	9-way SUB-D	RS-485	5/*16.40*	**XBTZ9732** + *(1)*	–

Siemens, Simatic PLCs

Description Driver used	Type of terminal	Type of connector (fitted to cable, excluding adapter)	Physical link	Length m/*ft*	Reference	Weight kg/*lb*
Connection cable, **PPI, S7 200**	HMIGTU *(3)*	RJ45/9-way SUB-D	RS-485 (COM1)	2.5/ *8.20*	**XBTZG9721**	–
Connection cables, **MPI port, S7 300/400**	HMIGTU	9-way SUB-D/ 9-way SUB-D	RS-232C (COM2)	3/ *9.84*	**XBTZG9292**	–
	HMIGTU *(3)*	RJ45/flying leads at other end	RS-485 *(2)* (COM1)	3/ *9.84*	**VW3A8306D30**	0.150/ *0.331*
		RJ45/9-way SUB-D	RS-485 *(2)* (COM1)	2.5/ *8.20*	**XBTZG9721**	–

(1) XBTZG939 adapter should be used with cables with "+ (1)" after the reference (see page 19).
(2) Non-isolated RS-485 serial link, 12 Mbps.
(3) Available only with Premium Box HMIG3U.

Harmony GTU
High performance IoT-ready modular HMI panels
Connection accessories

PF600266

TSXSCA62

822607C_1

TSXPACC01

822620C_1

TSXSCA64

DA577123

VW3A8306TF10

Connection of Harmony panels via serial links and Ethernet network

Type of bus/ network	Tap-off units	Connector (tap-off unit end)	Panel type	Length m/*ft*	Reference	Weight kg/*lb*
Uni-Telway serial link	Subscriber socket **TSXSCA62**	15-way female SUB-D	HMIGTU	3/*9.84*	**VW3A8306**	0.150/ *0.331*
	Connection box **TSXPACC01**	8-way female mini-DIN	HMIGTU	2.5/*8.20*	**XBTZ9780**	0.180/ *0.396*
Modbus serial link	Subscriber socket **TSXSCA64**	15-way female SUB-D	HMIGTU	3/*9.84*	**VW3A8306**	0.150/ *0.331*
	T-junction box	With integrated cable, RJ45 fitted	HMIGTU	1/*6.56*	**VW3A8306TF10**	–
Ethernet TCP/IP network	Hubs 499 NEH/NOH Switches 499 NES, 499 NMS, 499 NSS and 499 NOS	RJ45	HMIGTU	2/*6.56*	**490NTW00002**	–
				5/*16.40*	**490NTW00005**	–
				12/*39.37*	**490NTW00012**	–
				40/*131.23*	**490NTW00040**	–
				80/*262.47*	**490NTW00080**	–

Connection of Harmony panels to fieldbuses

Type of bus/network	Connection components	Type of terminal	Reference	Weight kg/*lb*
FIPWAY, FIPIO	USB gateway	HMIG3U	**TSXCUSBFIP**	–
Modbus Plus	USB gateway	HMIG3U	**XBTZGUMP**	–
		HMIG5U2	**TSXCUSBMBP**	
CANopen (Slave)	Copla Harmony module	HMIG3U, HMIG5U2, HMIG5U22	**HMIZGCAN**	–
Profibus DP (Slave)	Copla Harmony module	HMIG3U, HMIG5U2, HMIG5U22	**HMIZGPDP**	–

Schneider Electric

Substitution

Harmony GTU
High performance IoT-ready modular HMI panels
Equivalent product table

Equivalent product table between XBTGT panels and HMIGTU panels

Old range XBTGT	New range HMIGTU	Comments
XBTGT2120/2220/2330/2430	**HMIDT351 + HMIG3U**	Different cut-out, no adapter
XBTGT4230/4330	**HMIDT351 + HMIG3U**	Different cut-out, HMIZGC01 adapter
XBTGT4340	**HMIDT351 + HMIG3U**	Different cut-out, HMIZGC01 adapter, no video support
XBTGT5230	**HMIDT542 + HMIG3U**	Different cut-out, XBTZGCO4 adapter
XBTGT5330/5430	**HMIDT542 + HMIG3U**	–
XBTGT5340	**HMIDT542 + HMIG3U**	No video support
XBTGT6330	**HMIDT642 + HMIG3U**	–
XBTGT6340	**HMIDT642 + HMIG3U**	No video support
XBTGT7340	**HMIDT732 + HMIG3U**	No video support

Notes: *When upgrading from the Harmony XBT range to the Harmony GTU range, the following points should be taken into account:*
- connection to the Profibus DP and Device Net fieldbuses will be possible in the next software release
- serial ports COM1 and COM2 are identical but inverted
- no CF card but SD card provided as optional storage unit
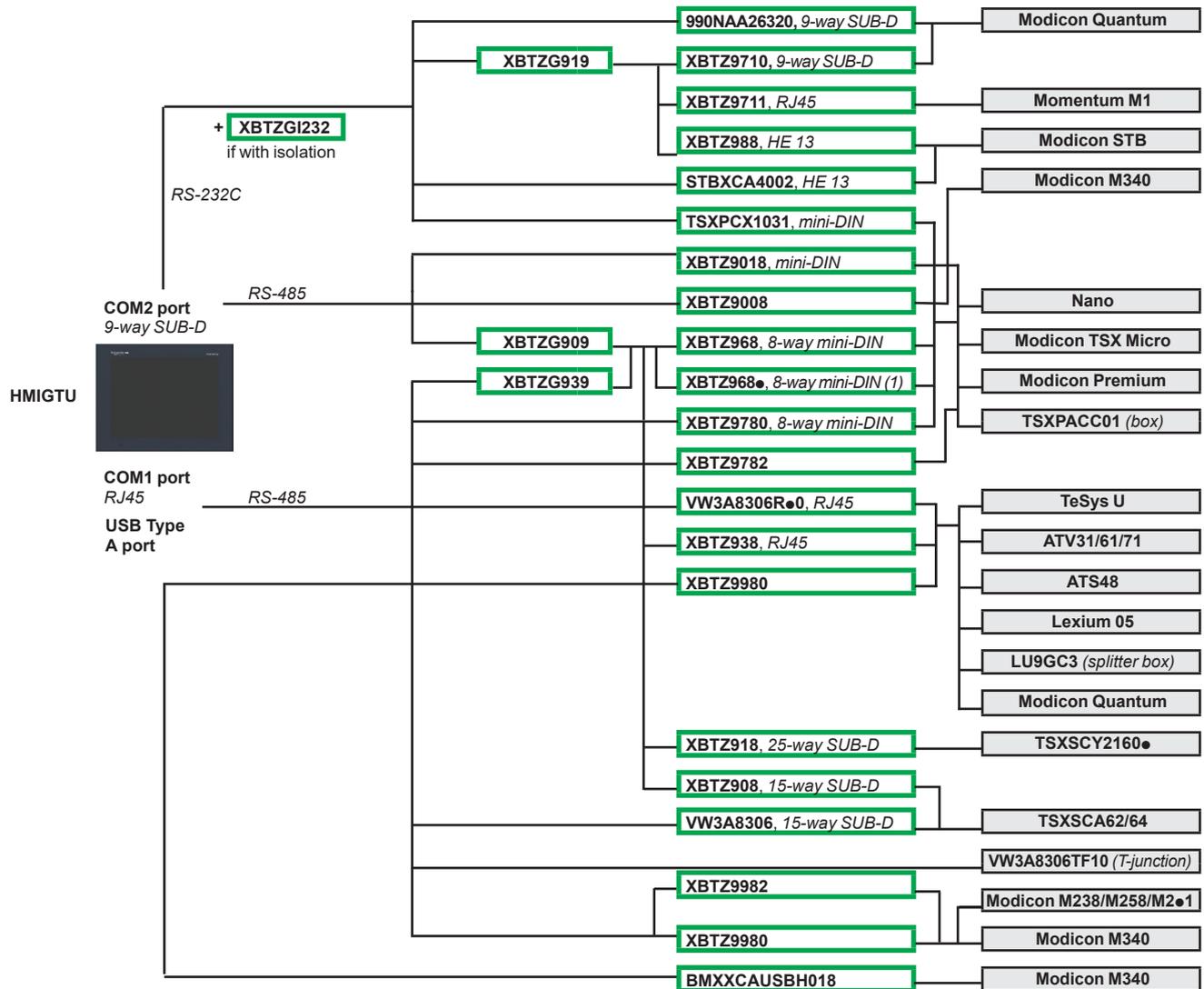*- no CANopen Master connection on Harmony GTU*

Equivalent product table between HMIGTW panels and HMIGTU panels

Old range XBTGTW/HMIGTW	New range HMIGTU	Comments
HMIGTW5354	**HMIDT542 + HMIG5U2/ HMIG5U22**	Different cut-out, no adapter
HMIGTW7354	**HMIDT732 + HMIG5U2/ HMIG5U22**	3 USB hosts, no jack output but auxiliary output for speakers
XBTGTW652	**HMIDT642 + HMIG5U2/ HMIG5U22**	–

Notes: *When upgrading from the Harmony XBTGTW/HMIGTW range to the Harmony GTU range, the following points should be taken into account:*
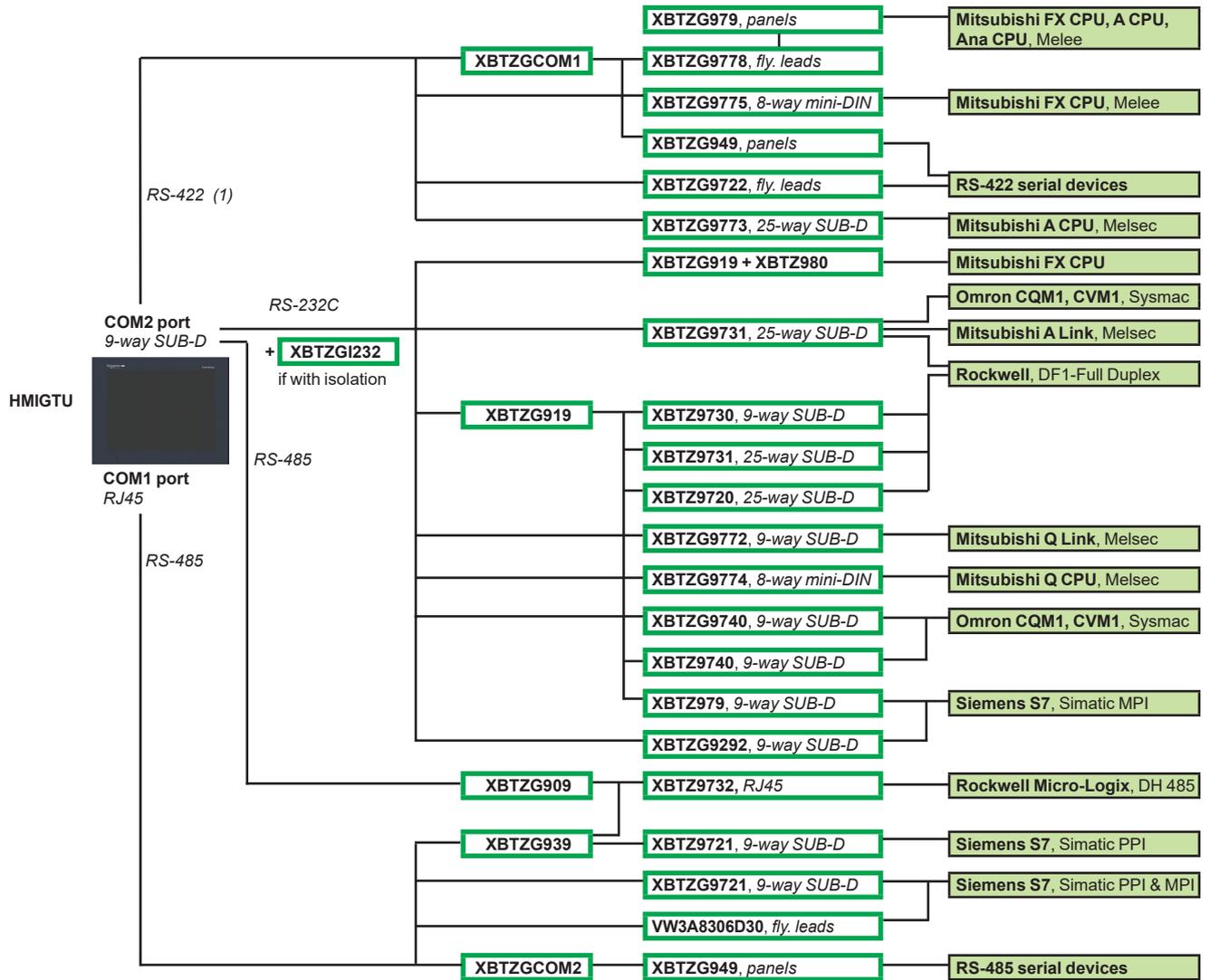*- no CF card but CFast card provided as optional storage unit*
- no Windows XP Embedded but Windows 7 Embedded or Windows 10 IoT Enterprise 32-bit are provided for operating system
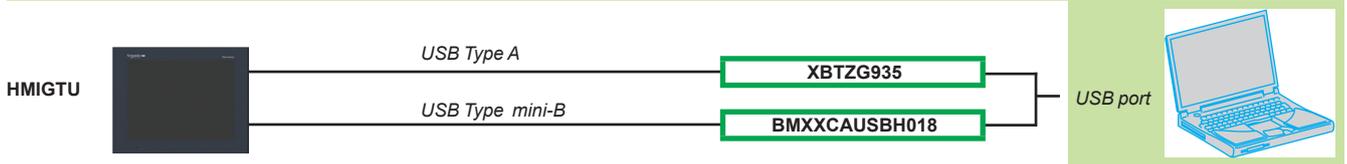
HMIGTU panels and Schneider Electric products

		990NAA26320, *9-way SUB-D*	**Modicon Quantum**
	XBTZG919	**XBTZ9710**, *9-way SUB-D*	
+ XBTZGI232		**XBTZ9711**, *RJ45*	**Momentum M1**
if with isolation		**XBTZ988**, *HE 13*	**Modicon STB**
RS-232C		**STBXCA4002**, *HE 13*	**Modicon M340**
		TSXPCX1031, *mini-DIN*	
		XBTZ9018, *mini-DIN*	
COM2 port *9-way SUB-D*	*RS-485*	**XBTZ9008**	**Nano**
	XBTZG909	**XBTZ968**, *8-way mini-DIN*	**Modicon TSX Micro**
	XBTZG939	**XBTZ968●**, *8-way mini-DIN (1)*	**Modicon Premium**
HMIGTU		**XBTZ9780**, *8-way mini-DIN*	**TSXPACC01** *(box)*
		XBTZ9782	
COM1 port *RJ45*	*RS-485*	**VW3A8306R●0**, *RJ45*	**TeSys U**
USB Type A port		**XBTZ938**, *RJ45*	**ATV31/61/71**
		XBTZ9980	**ATS48**
			Lexium 05
			LU9GC3 *(splitter box)*
			Modicon Quantum
		XBTZ918, *25-way SUB-D*	**TSXSCY2160●**
		XBTZ908, *15-way SUB-D*	
		VW3A8306, *15-way SUB-D*	**TSXSCA62/64**
			VW3A8306TF10 *(T-junction)*
		XBTZ9982	**Modicon M238/M258/M2●1**
		XBTZ9980	**Modicon M340**
		BMXXCAUSBH018	**Modicon M340**

(1) ● *defines the length:*
- 0 m/0 ft, 2.5 m/8.20 ft (elbowed connector)
- 1 m/3.28 ft, 5 m/16.40 ft
- 6 m/19.68 ft, 16 m/52.49 ft
- 7 m/22.96 ft, 20 m/65.61 ft
- 8 m/26.24 ft, 25 m/82.02 ft

HMIGTU panels and third-party PLCs

XBTZGCOM1	XBTZG979, *panels*	**Mitsubishi FX CPU, A CPU, Ana CPU**, Melee
	XBTZG9778, *fly. leads*	
	XBTZG9775, *8-way mini-DIN*	**Mitsubishi FX CPU**, Melee
	XBTZG949, *panels*	
	XBTZG9722, *fly. leads*	**RS-422 serial devices**
	XBTZG9773, *25-way SUB-D*	**Mitsubishi A CPU**, Melsec
	XBTZG919 + XBTZ980	**Mitsubishi FX CPU**
	XBTZG9731, *25-way SUB-D*	**Omron CQM1, CVM1**, Sysmac
		Mitsubishi A Link, Melsec
		Rockwell, DF1-Full Duplex
XBTZG919	XBTZ9730, *9-way SUB-D*	
	XBTZ9731, *25-way SUB-D*	
	XBTZ9720, *25-way SUB-D*	
	XBTZG9772, *9-way SUB-D*	**Mitsubishi Q Link**, Melsec
	XBTZG9774, *8-way mini-DIN*	**Mitsubishi Q CPU**, Melsec
	XBTZG9740, *9-way SUB-D*	**Omron CQM1, CVM1**, Sysmac
	XBTZ9740, *9-way SUB-D*	
	XBTZ979, *9-way SUB-D*	**Siemens S7**, Simatic MPI
	XBTZG9292, *9-way SUB-D*	
XBTZG909	XBTZ9732, *RJ45*	**Rockwell Micro-Logix**, DH 485
XBTZG939	XBTZ9721, *9-way SUB-D*	**Siemens S7**, Simatic PPI
	XBTZG9721, *9-way SUB-D*	**Siemens S7**, Simatic PPI & MPI
	VW3A8306D30, *fly. leads*	
XBTZGCOM2	XBTZG949, *panels*	**RS-485 serial devices**

COM2 port 9-way SUB-D, RS-422 (1), RS-232C, + XBTZGI232 *if with isolation*, RS-485, COM1 port RJ45, RS-485, HMIGTU

Application transfer from HMIGTU panels to PC

HMIGTU — USB Type A — XBTZG935 — USB port
USB Type mini-B — BMXXCAUSBH018

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Harmony GTU
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Product reference index

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