

# Human/Machine Interfaces

Magelis™ GTU Universal panels

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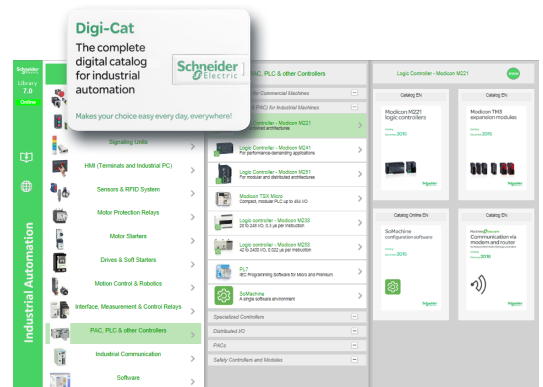
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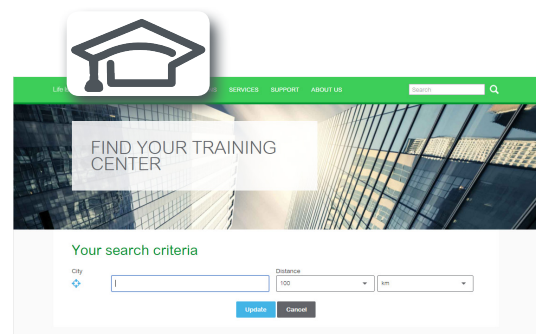
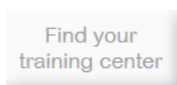


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# Human/Machine Interfaces

## Magelis™ GTU Universal panels

Unique HMI flexibility, Operate intuitively and comfortably

### Magelis GTU Universal panels

Magelis 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.

Magelis 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



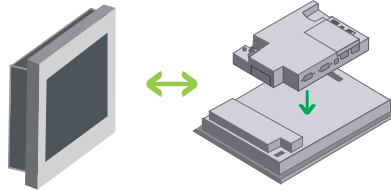
Smart display + Open box

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

### Unique HMI flexibility

#### Modular and scalable

- > Choice of screen size, format, image quality, and processing levels enable Magelis GTU to be used in wide range of applications
- > Universal panels are available in various combinations by simply assembling display modules and box modules



Magelis 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 Magelis 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



Magelis GTU → Multiple combinations with easy assembly

### 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 °C)
- > Dual removable storage units in Box modules speed up maintenance of terminals
- > Easy migration of Magelis GTU panels with Smart display as these displays have cut-outs similar to Magelis XBTGT and Magelis GTW

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



### Ready for IIoT

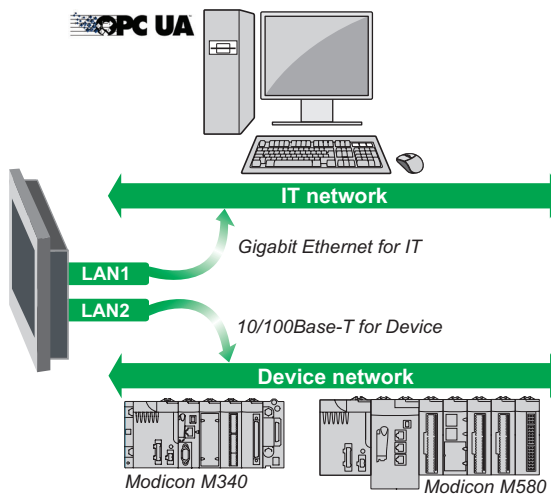
- > Dual LAN (Local Area Network) separates IT and PLC communication for better performance and data security
- > Manage all types of data with Open HMI: Office and PDF documents, CAD files, Web pages, and Multimedia (sound and video)
- > Database link or data analysis with IDS (Intelligent Data Service) and 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 Magelis GTU panels enable direct use of IDS (Vijeo Designer add-on) or





EcoStruxure™ Machine SCADA Expert for database link and traceability.




# Human/Machine Interfaces


## Magelis™ GTU Universal panels

<b>Applications</b>	Display of text messages, graphic objects, and synoptic views Control and configuration of data			
<b>Type of display module</b>	Advanced Display			
				
<b>Display</b>	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		
<b>Gesture support</b>	Single touch: sliding, scrolling			
<b>Functions</b>	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		
<b>Dimensions</b>	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
<b>Supply voltage</b>	12...24 V ---			
<b>Environment</b>	Operating temperature 0-60 °C, Front face protection IP67			
<b>Conformity to standards</b>	EN, IEC, UL 508, CSA, ATEX, Marine			
<b>Compatible box models</b>	Premium and Open box models			
<b>Display module reference</b>	<b>HMIDT351</b>	<b>HMIDT551</b>	<b>HMIDT651</b>	
<b>Pages</b>	13			

<b>Type of box module</b>	Standard Box		
			
<b>CPU</b>	RISC, 600 MHz		
<b>Operating system</b>	Real Time		
<b>Memory</b>	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)	
<b>Functions</b>	Real-time clock	Yes, built-in	
	Max. variables	8,000 (in Vijeo Designer)	
<b>Video interface</b>	No		
<b>Sound input interface</b>	-		
<b>Sound output interface</b>	Speaker output	-	
	LINE output	-	
<b>Alarm output/Buzzer output</b>	-		
<b>Communication</b>	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)	
<b>Optional battery</b>	Yes (HMIZGBAT)		
<b>Third-party protocols supported</b>	Siemens, Omron, Mitsubishi, Allen-Bradley (Rockwell Automation), ABB		
<b>Compatible display units</b>	HMIDT351, HMIDT551, HMIDT651, HMIDT542, HMIDT642, HMIDT732		
<b>Box module reference</b>	<b>HMIG2U</b>		
<b>Pages</b>	13		

(1) HMIG3U Premium Box supports displays HMIDT 752/952 only with EcoStruxure™ Operator Terminal Expert.  
 (2) HMIG5U Open Box will be discontinued in December 2018 and will be replaced by HMIG5U2 Open Box.

<b>Applications</b>	Display of text messages, graphic objects, and synoptic views Control and configuration of data				
<b>Type of display module</b>	Smart Display				
					
<b>Display</b>	10.4"	12.1"	15"	15" Wide	19" Wide
	800 x 600	1,024 x 768	1,024 x 768	1,366 x 768	
	16 M colors, TFT				
<b>Gesture support</b>	Single touch: sliding, scrolling; Multi-touch: zooming, double touch				
<b>Functions</b>	0...100 (Adjusted with embedded sensor, touch panel or software)				
	1x Embedded USB 2.0 (Type A), 1x USB 2.0 (Type mini-B)				
	-	Yes	-	-	-
	50,000 h				
<b>Dimensions</b>	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 × 2.72	483 × 337 × 69/ 19.02 × 13.27 × 2.72
	259 × 201/10.20 × 7.91	302 × 228/11.90 × 8.98	384 × 283/15.11 × 11.14	369 × 277/14.53 × 10.91	465 × 319/18.31 × 12.56
<b>Supply voltage</b>	12...24 V ---				
<b>Environment</b>	Operating temperature 0-60 °C, Front face protection IP67			Operating temperature 0-55 °C, IP67	
<b>Conformity to standards</b>	EN, IEC, UL 508, CSA, ATEX, Marine				
<b>Compatible box models</b>	Premium and Open box models	Open box model	Premium and Open box models		
<b>Display module reference</b>	<b>HMIDT542</b>	<b>HMIDT642</b>	<b>HMIDT643</b>	<b>HMIDT732</b>	<b>HMIDT752</b>   <b>HMIDT952</b>
<b>Pages</b>	13				

<b>Type of box module</b>	Premium Box	Open Box
		
<b>CPU</b>	RISC, 600 MHz	x86, 1.33 GHz
<b>Operating system</b>	Real Time	Windows 7 Embedded
<b>Memory</b>	256 MB	2 GB
	512 KB (FRAM/MRAM)	
	1 GB SD card	32 GB CFast card
	SD card (up to 4 GB)	SD card (up to 4 GB) and CFast card (up to 32 GB)
<b>Functions</b>	Yes, built-in	
	8,000 (in Vijeo Designer)	12,000 (in Vijeo Designer)
<b>Video interface</b>	No	1x DVI-D OUT
<b>Sound input interface</b>	-	MIC or LINE input (software switch)
<b>Sound output interface</b>	300 mW (rated load: 8 Ω, frequency: 1 KHz)	
	Rated load: 10 KΩ or more	
	Yes (24 V ---/50 mA or less)	
<b>Communication</b>	x2 RJ45 (independent)	
	RS-485 (Isolated) (COM1) + RS-232C/RS-422/RS-485 (COM2)	
	1x fieldbus unit	1x fieldbus unit
	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)
<b>Optional battery</b>	Yes (HMIZGBAT)	
<b>Third-party protocols supported</b>	Siemens, Omron, Mitsubishi, Allen-Bradley (Rockwell Automation), ABB	
<b>Compatible display units</b>	HMIDT351, HMIDT551, HMIDT651, HMIDT542, HMIDT642, HMIDT732, HMIDT752, HMIDT952	HMIDT351, HMIDT551, HMIDT651, HMIDT542, HMIDT642, HMIDT643, HMIDT732, HMIDT752, HMIDT952
<b>Box module reference</b>	<b>HMIG3U (1)</b>	<b>HMIG5U2 (2) (3) (4), HMIG5UL8A and HMIG5UL8B (5)</b>
<b>Pages</b>	13	

(3) Office & PDF readers, Internet browser V11, .Net 4.6.2, Vijeo Citect web client.  
 (4) Vijeo Designer and EcoStruxure Operator Terminal Expert Runtime unlimited version pre-installed.  
 (5) EcoStruxure Machine SCADA Expert Runtime license to be ordered separately.



Magelis HMIGTU color display modules



Magelis HMIGTU Box modules

### Presentation

The Magelis 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. Magelis 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 and large storage

### Operation

Magelis 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 Magelis GTU displays on Ethernet network in either duplicate or extended modes.

### Environment

The high-end Magelis 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
- Degree of protection on front face IP 66/67 (according to IEC 60529)
- Extended power supply voltage 12...24 V  $\overline{\text{DC}}$
- Brightness sensor on Smart Display for automatic brightness adjustment to environment

(1) Supported by HMIDT643 only.



EcoStruxure  
Operator Terminal  
Expert



Vijeo Designer

### Presentation (continued)

#### Maintenance

Magelis 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 Magelis GTU boxes for storing application and data, thus enabling zero downtime while changing terminals
- Easy migration of Magelis GTU panels with Smart display as they have cut-outs similar to Magelis XBTGT and Magelis GTW

#### Configuration

Like all other Magelis panels, Magelis GTU Universal panels can be configured using Vijeo Designer software in a Windows environment (1). This software has an advanced user interface with many configurable windows enabling projects to be developed quickly and easily.

Magelis 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 Magelis GTU like a smartphone (2).

For more information on Vijeo Designer and EcoStruxure Operator Terminal Expert, please refer to our website [www.schneider-electric.com/HMI Configuration Software](http://www.schneider-electric.com/HMI Configuration Software).

### Communication

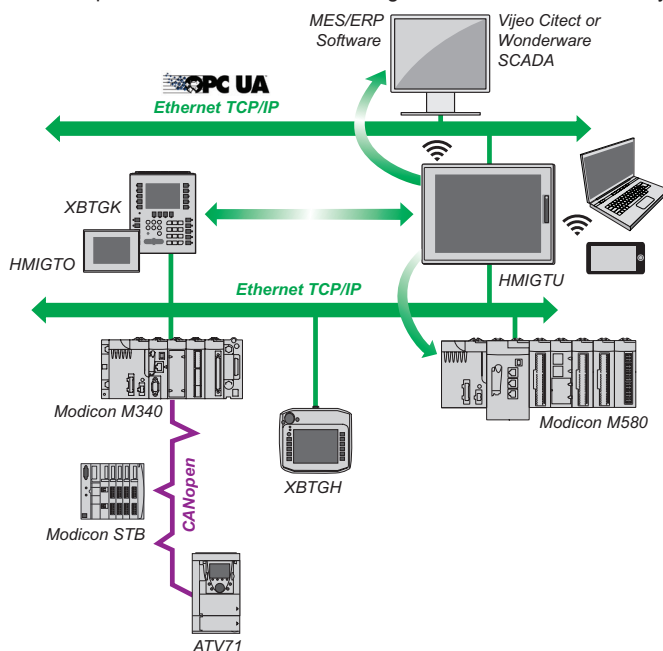
The following illustrations show the equipments that Universal panels can communicate via Ethernet and Modbus protocols, and also via USB, wireless and fieldbus interfaces.

#### Via Ethernet protocol

Magelis GTU with two Ethernet ports can share data with other Magelis 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 Magelis GTU for IIoT connectivity.



(1) Magelis GTU is compatible with Vijeo Designer V6.2 SP1 or later.

(2) Magelis GTU is compatible with EcoStruxure Operator Terminal Expert V2.3 or later.

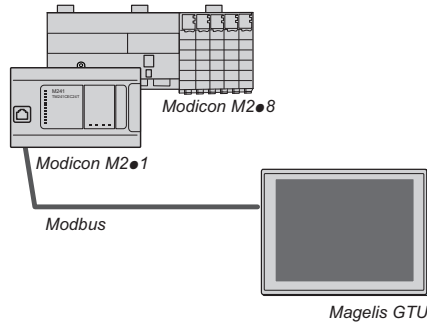


### Communication (continued)

#### Via Modbus protocol

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

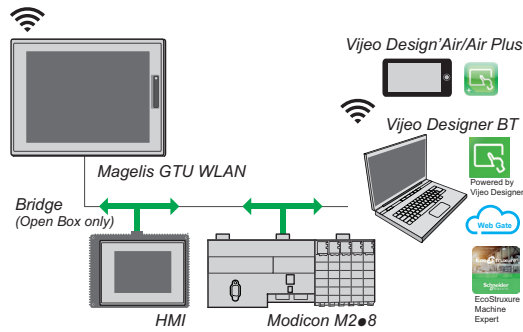
- Schneider Electric (Uni-TE, Modbus)
- Third-party: Mitsubishi Electric, Omron, Allen-Bradley, and Siemens



#### Via wireless connectivity with Smart WLAN display (1)

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

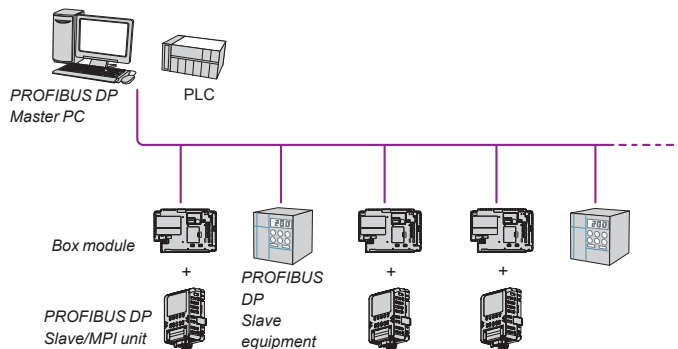
- Access point mode: The Smart WLAN HMI application display can be accessed wirelessly with a smartphone and Vijeo Designer Air software or with a PC that has an Internet browser and Web Gate function. All HMI applications connected to one of the Magelis GTU Open Box (Bridge function) Ethernet networks can also be accessed wirelessly.
- Station mode: PLCs and other Magelis 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.



Smart WLAN display in Access point mode

#### Via fieldbus modules

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.



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



EcoStruxure Operator Terminal Expert



Vijeo Designer



IDS



EcoStruxure Machine SCADA Expert

### Communication (continued)

#### Via USB for HMI accessories

The Magelis 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 terminals.

The Magelis USB accessories supported by Magelis GTU include:

- Harmony XVGU USB tower light (only on Standard and Premium Boxes)
- Harmony XB5S biometric USB switch
- Magelis HMIZ illuminated USB switch
- Magelis HMIZ USB keyboard (only on Standard and Premium Boxes)

For more information on HMI USB accessories, please refer to our website [www.schneider-electric.com/USB](http://www.schneider-electric.com/USB) accessories for Magelis terminals.

### Functions

#### Software functions

Magelis GTU panels 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 Magelis 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 on Magelis GTU Open Box allows:

- Running a Vijeo Designer 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 Magelis 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)
  - Processing Vijeo Designer data with "Intelligent Data Service" option locally or remotely for Database link and Reporting function
- 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.)

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



Vijeo Design'Air



Vijeo Design'Air Plus



EcoStruxure Secure Connect Advisor remote maintenance



EcoStruxure Machine Expert

### Functions

#### Software functions (continued)

The following programs enable you to connect remotely to HMI terminals and access processes at any time from anywhere:

- Vijeo Design'Air enables you to connect remotely to the Magelis 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 Magelis GTU user application to display data and control automation processes on the tablet/smartphone.

#### Companion Products

With EcoStruxure Secure Connect Advisor, all Magelis 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.schneider-electric.com](http://www.schneider-electric.com).

#### Industrial automation solutions

The Magelis 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 terminals in the Magelis range.

Magelis 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.

#### Magelis 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
HMIDT●51/●42/●32	HMI G3U/G5U	V6.2 SP1	V2.3	No
HMIDT●51/●42/●32	HMIG5U2	V6.2 SP5.1	No	No
	HMI G5UL8A/G5UL8B	No	No	V8.0/V8.1 SP2
HMIDT●52	HMIG2U	No	No	No
HMIDT●52	HMIG3U	No	V3.0	No
HMIDT●52	HMIG5U	No	No	No
HMIDT●52	HMIG5U2	V6.2 SP7	V3.0	No
	HMI G5UL8A/G5UL8B	No	No	V8.0/V8.1 SP2
HMIDT643	HMI G2U/G3U	No	No	No
	HMIG5U2	V6.2 SP5.1	No	No
	HMI G5UL8A/G5UL8B	No	No	No
HMIDT●●●	HMI G3U/G5U2 + Fieldbus modules	No	V3.0	No

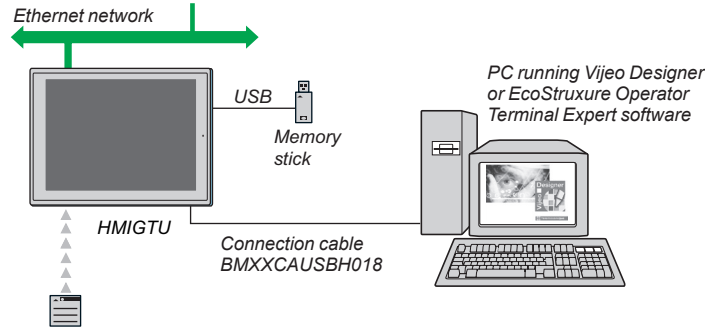
(1) Magelis GTU is integrated into MachineStruxure with Vijeo Designer version V6.2 SP3 or later.

(2) For more information on the MachineStruxure and PlantStruxure concept, please refer to our website [www.schneider-electric.com](http://www.schneider-electric.com).

### Panel operating modes

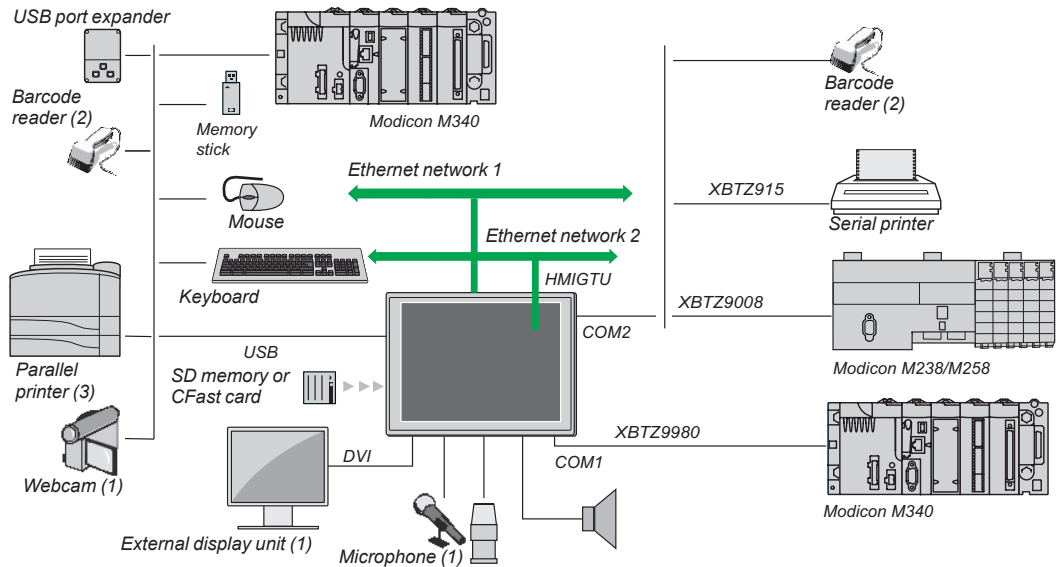
The following illustrations show the equipment that can be connected to Universal panels depending on their two operating modes.

#### Edit mode



SD memory card for Premium Box  
and CFast card for Open Box

#### Operating mode



### Conformal coating for improved environmental resistance

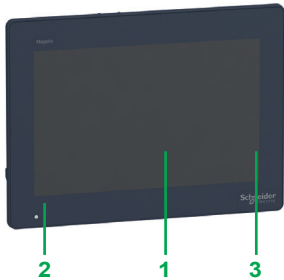
The Conformal coating service offers varnishing of electronic cards to prolong the service life of the terminals and enable them to be used in corrosive environments. The varnishing increases resistance to condensation, dusty atmospheres and chemical corrosion (sulfurous and halogenous atmospheres). This coating service is applicable to all display and box modules of Magelis 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.

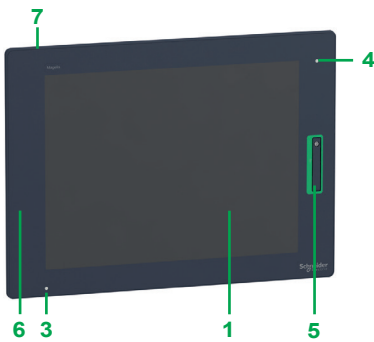
# Human/Machine Interfaces

## Magelis GTU Universal panels

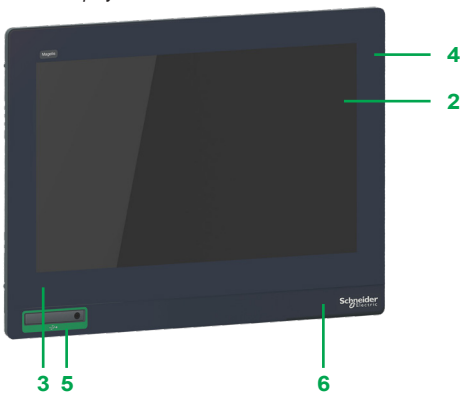
### Advanced and Smart Display modules



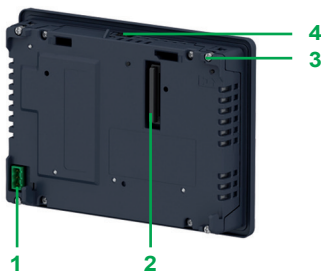
Advanced Display front view



Smart Display front view



Smart XL display front view



Advanced and Smart display rear view

#### Description

##### Magelis HMIDT 351/551/651 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

##### Magelis HMIDT 542/642/643/732/752/952 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 IEEE802.11 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

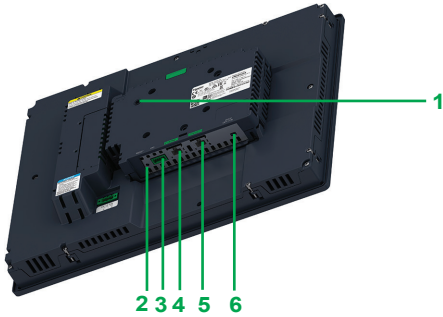
- 1 Removable screw terminal block for 12...24 V  $\bar{\text{DC}}$  power supply
- 2 Box interface
- 3 4x retractable embedded screw fasteners
- 4 Anti-Drop lock

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

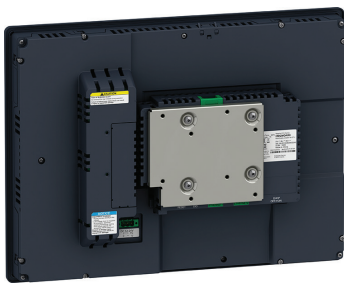
# Human/Machine Interfaces

## Magelis GTU Universal panels

### Display modules with Multi-display adapter



Rear view of the mounted Multi-display adapter HMIZMDARX



VESA mounted Multi-display adapter

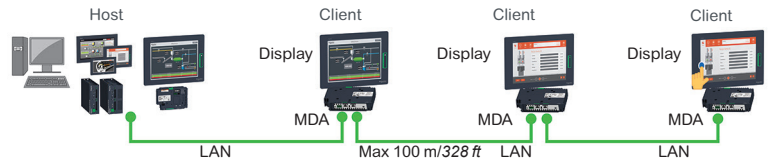
#### Description

##### Magelis GTU Display with Multi-display adapter HMIZMDARX

###### 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 Magelis GTU Display to extend up to 3 remote displays for one host station. The host station (1) can be a Magelis GTU Open, a Magelis iPC, or a general PC.

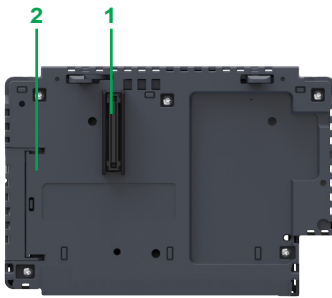
- A standard Ethernet cable (up to 100 m/328 ft) can be used between adapters for transmission of images and touch signals. The display adapters can be wired in either Line or Star connection modes.
- A Configuration software is provided with the adapter (MDA configuration tool) to install on the host 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
- A 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 and Windows Embedded 8.1 Industry Pro 64-bit for Magelis products only.

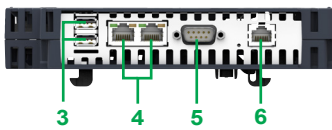
# Human/Machine Interfaces

## Magelis GTU Universal panels

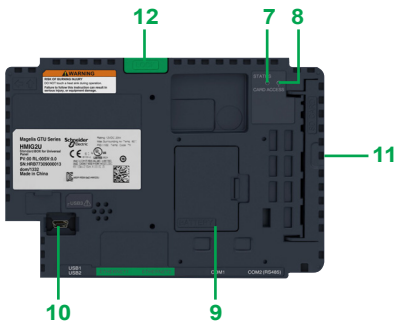
### Standard Box module



Standard Box Rear view



Standard Box Underside view



Standard Box Front view

#### Description

##### Magelis HMIG2U Standard Box module

##### Rear view

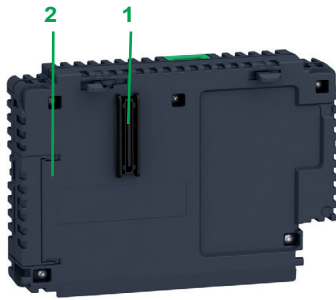
- 1 Display interface
- 2 Internal Flash Memory (1 GB) with
  - Real Time operating system
  - Vijeo Designer Run Time or EcoStruxure Operator Terminal Expert Run Time

##### 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



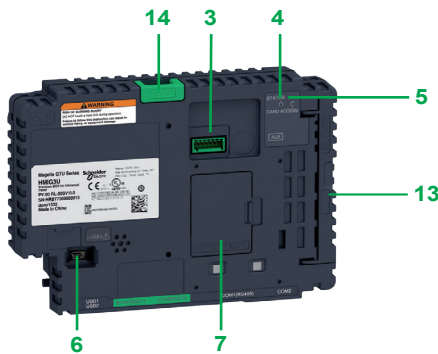
Premium Box rear view

#### Description

##### Magelis HMIG3U Premium Box module

###### Rear view

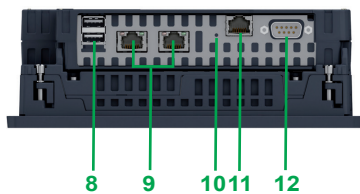
- 1 Display interface
- 2 Storage unit Cover 1 with an SD card (1 GB) and pre-installed:
  - Real Time operating system
  - Vijeo Designer Run Time or EcoStruxure Operator Terminal Expert Run Time



Premium Box front view

###### 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



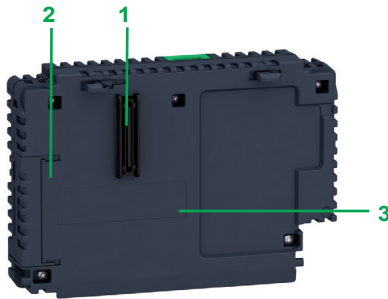
Premium Box underside view



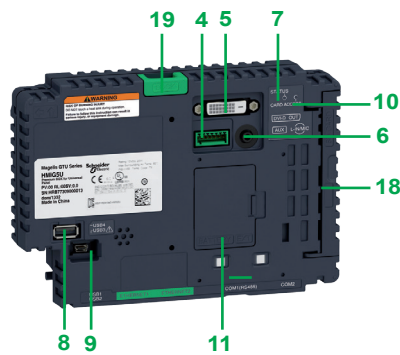
# Human/Machine Interfaces

## Magelis GTU Universal panels

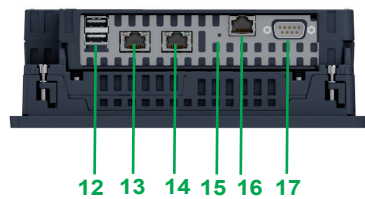
### Open Box module



Open Box rear view



Open Box front view



Open Box underside view

### Description

#### Magelis HMIG5U2/HMIG5UL8A/HMIG5UL8B Open Box

##### Rear view

- 1 Display interface
- 2 Storage unit Cover 1 that has a CFast card (32 GB) with pre-installed Windows® Embedded 7 supplied in 9 languages (English, French, German, Italian, Portuguese, Spanish, Swedish, Chinese, Russian) and also:
  - Internet Explorer Version 11.0 as Web browser
  - Notepad
  - Windows Media Player 12
  - PDF Reader, Microsoft Word/Excel Viewer
  - Framework.Net 4.6.2
  - VNC Client/Server (Virtual Network Computing) for remote connection
  - Vijeo Citect Web Client
- 3 Each Open Box reference is dedicated to a different HMI Runtime as explained below:
  - **HMIG5U2:** Run time Vijeo Designer and EcoStruxure Operator Terminal Expert delivered and registered with Open Box
  - **HMIG5UL8A:** Run Time EcoStruxure Machine SCADA Expert Trial version 8.0 SP2 installed in Box, need to order **HMIVXLRT●● KLV●●** license for registration (1)
  - **HMIG5UL8B:** RunTime EcoStruxure Machine SCADA Expert Trial version 8.1 SP2 installed in Box (2), need to order **HMIVXLRT●● KLV●●** license for registration (1)

##### Front and underside views

- 4 Auxiliary interface for alarm, buzzer, and speaker outputs
- 5 DVI-D interface to connect Magelis iDisplay 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.

(2) HMIG5UL8B available in Q1 2019.

**Note:** HMIG5U Open Box will be discontinued in December 2018 and will be replaced by HMIG5U2 Open Box. The operating system and user data will have to be reconfigured during replacement.

# Human/Machine Interfaces

## Magelis GTU Universal panels

### Displays and Box modules



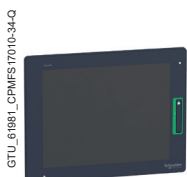
HMIDT351



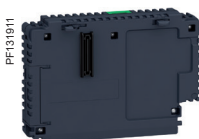
HMIDT651



HMIDT642



HMIDT752



HMIG3U



HMIG5U2

#### Magelis GTU Universal Display modules

Data entry method	Size	Resolution (pixels)	Colors	Touch type	Options	Reference	Weight kg/lb
<b>Advanced Display</b>							
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
<b>Smart Display</b>							
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
					Front USB (Type A + Type mini-B), Brightness sensor, Scaler	HMIDT642	3.000/6.600
	12.1", format 4/3 Standard	1024 × 768	16 M	Multi resistive	Front USB (Type A + Type mini-B), Brightness sensor, Scaler	HMIDT643 (1)	3.000/6.600
					Front USB (Type A + Type mini-B), Brightness sensor, Scaler, Wireless antenna		
	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
					Front USB (Type A + Type mini-B), Brightness sensor, Scaler	HMIDT752 (2)	5.000/11.023
19", format 16/9	1366 × 768	16 M	Multi-touch Projected-capacitive technology	Front USB (Type A + Type mini-B), Brightness sensor, Scaler	HMIDT952 (2)	6.800/14.991	

#### Magelis GTU Universal Box modules

Operating system	RAM memory	Storage units	USB ports	Communication	Multimedia interface	Reference	Weight kg/lb
<b>Standard Box</b>							
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
<b>Premium Box</b>							
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
<b>Open Box</b>							
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 (3) HMIG5UL8A (3) HMIG5UL8B (3)	0.900/1.980

**Note:** All display modules except HMIDT643 are compatible with all box modules.

(1) HMIDT643 is only compatible with HMIG5U/HMIG5U2 box modules and requires Vijeo Designer V6.2 SP3 or later. For HMIDT643 specific characteristics, see page 12.

(2) HMTDT●52 is only compatible with Box HMIG3U/HMIG5U2 requiring EcoStruxure Operator Terminal Expert V3.1, or with Box HMIG5U2 requiring Vijeo Designer V6.2 SP7, or with Box HMIG5UL8A requiring EcoStruxure Machine SCADA Expert V8.1 SP2.

(3) Each Open Box reference is dedicated to run a HMI Runtime application.

GTU\_61981\_CPNGU18001B



HMIZMDARX

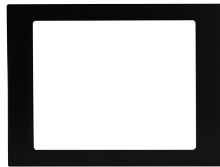
### Accessories

Description	Host type compatible	Display compatible	Reference	Weight kg/lb
<b>Magelis GTU Universal Smart System Adapter</b>	HMIG5U2 Magelis iPC General PC	HMIDT●●●	HMIZMDARX	–

### Separate parts

Description	Characteristics	Compatible with terminals	Reference	Weight kg/lb
<b>SD memory card system</b>	1 GB, blank	HMIG3U	HMIZSD1GS	–
<b>CFast card system</b>	16 GB, blank	HMIG5U (1)	HMIZCFA16S	–
	32 GB, blank	HMIG5U2	HMIZCFA32S	–
<b>CFast card</b>	32 GB, blank	HMIG5U/HMIG5U2	HMIZCFA32	–
<b>SD card</b>	4 GB, blank	HMIG3U/HMIG5U/HMIG5U2	HMIZSD4G	–
		HMIDT351	HMIZG63	–
		HMIDT551	HMIZD65W	–
		HMIDT651	HMIZD66W	–
		HMIDT542	HMIZG65	–
		HMIDT642/HMIDT643	HMIZG66	–
		HMIDT732	MPCYK50SPSKIT	–
<b>Protective sheets against dirt and moisture</b> (5 peel-off sheets)	–	HMIDT351	HMIZUV3W	–
		HMIDT551	HMIZUV5W	–
		HMIDT651	HMIZUV6W	–
		HMIDT542	HMIZUV5	–
		HMIDT642/HMIDT643	HMIZUV6	–
		HMIDT732	HMIZUV7	–
		<b>Protective sheet against ultraviolet light</b> (1 peel-off sheet)	–	HMIDT752
HMIDT952	HMIZDAG9W			–
HMIDT542	HMIZDCOV5			–
<b>Anti-glare protective sheets</b> (5 peel-off sheets)	Help prevent reflections with dirt resistance	HMIDT642/HMIDT643	HMIZDCOV6	–
		HMIDT732	HMIZDCOV7	–
		HMIZMDARX	HMIZMDRVS	–
<b>Plastic covers for harsh environments</b> (IP 67 protection)	–	–	–	–
<b>VESA mount adapter</b>	–	–	–	–

108950-35M



XBTZGCO●

GTU\_61981\_CPNGU18003



HMIZMDRVS

108772-35M

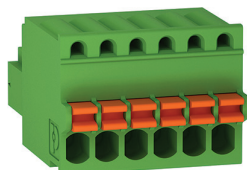


XBTZGUSB

Description	Characteristics	Length m/ft	Reference	Weight kg/lb
<b>Mechanical adapters for substitution of Magelis range terminals</b>	From XBTGT5230 to HMIDT542	–	XBTZGCO4	–
	From XBTGT4●●● to HMIDT351	–	HMIZGCO1	–
<b>Remote USB port for HMI terminals</b>	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	–
<b>Remote USB port for HMI panel</b>	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	–
<b>DVI-D cable</b>	For connecting an external Magelis iDisplay to the HMIG5U Open Box	10/32.81	HMIYCABDVI1011	–
<b>Battery</b>	HMIGTU	–	HMIZGBAT	–
<b>Auxiliary connector</b> <b>Sold in sets of 5 units</b>	HMIGTU	–	HMIZGAUX	–
<b>Stylus</b> <b>Sold in lots of 5</b>	–	–	XBTZGPEN	–

(1) HMIG5U Open Box will be discontinued in October 2018 and will be replaced by HMIG5U2 Open Box. The operating system and user data will have to be reconfigured during replacement.

GTU\_61981\_CPMGJ16002



HMIZMDIO

Spare parts				
Description	For use with terminals	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. For example, the XBTZ968 cable is used with the XBTZG909 adapter to connect a Twido controller (via its terminal port) to an XBTGT2●●0 terminal (via its COM1 port).

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	-
Adapters 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)	XBTZG1232	-	
		RS-485 (COM2)	XBTZG1485	-	

(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 XBTZG1232.

105874-35M



XBTZG1485

PF600286



TSXPCX1031

Cables for connecting Magelis terminals 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
Twido, 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	<b>XBTZ9780</b>	0.180/0.397
						10/32.80	<b>XBTZ9782</b>	–
			HMIGTU	RS-232	COM2	2.5/8.20	<b>TSXPCX1031</b>	–
Modicon M340 Modicon M238 Modicon M258 Modicon M2•1	RJ45	Modbus	HMIGTU	RS-485	COM1	2.5/8.20	<b>XBTZ9980</b>	0.230/0.507
						10/32.80	<b>XBTZ9982</b>	–
						COM2	2.5/8.20	<b>XBTZ9008</b>
Modicon M340	USB Type mini-B	Terminal port	HMIGTU	USB	USB type A	1.8/5.91	<b>BMXXCAUSBH018</b>	0.230/0.507
						4.5/14.76	<b>BMXXCAUSBH045</b>	–
Modicon Quantum	9-way male SUB-D	Modbus	HMIGTU	RS-232C	COM2	2.5/8.20	<b>XBTZ9710 + (1)</b>	0.210/0.463
						3.7/12.14	<b>990NAA26320</b>	0.290/0.639
Modicon STB	HE13 (NIM, network interface module)	Modbus	HMIGTU	RS-232C	COM2	2/6.56	<b>STBXCA4002</b>	0.210/0.463
						2.5/8.20	<b>XBTZ988 + (1)</b>	0.220/0.485
Modicon Momentum M1	RJ45 (port 1 on Momentum M1)	Modbus	HMIGTU	RS-232C	COM2	2.5/8.20	<b>XBTZ9711 + (1)</b>	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	<b>VW3A8306R30</b>	0.060/0.132
						1/3.28	<b>VW3A8306R10</b>	–
						2.5/8.20	<b>XBTZ9980</b>	–
						10/32.80	<b>XBTZ9982</b>	–
					COM2	2.5/8.20	<b>XBTZ9008</b>	–

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

#### Cables and adapters for connecting Magelis terminals 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, <b>Q Link (SIO)</b>	HMIGTU	9-way SUB-D 9-way SUB-D	RS-232C	5/16.40	<b>XBTZG9772</b>	–
Connection cable, <b>Q CPU (SIO)</b>	HMIGTU	9-way SUB-D mini-DIN	RS-232C	5/16.40	<b>XBTZG9774</b>	–
Connection cable, <b>A Link (SIO)</b>	HMIGTU	9-way SUB-D 25-way SUB-D	RS-232C	5/16.40	<b>XBTZG9731</b>	–
Connection cable, <b>FX (CPU)</b>	HMIGTU	9-way SUB-D mini-DIN	RS-232/ RS-422	5/16.40	<b>XBTZG919 + XBTZ980</b>	–



XBTZG9772



XBTZG9731

##### 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, <b>Link (SIO)</b>	HMIGTU	9-way SUB-D 9-way SUB-D	RS-232C	5/16.40	<b>XBTZG9740</b>	–
		9-way SUB-D 25-way SUB-D	RS-232C	5/16.40	<b>XBTZG9731</b>	–
Connection cables, <b>FINS (SIO)</b>	HMIGTU	9-way SUB-D/ 9-way SUB-D	RS-232C	5/16.40	<b>XBTZG9740</b>	–

##### 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, <b>DF1 Full Duplex</b>	HMIGTU	9-way SUB-D/ 25-way SUB-D	RS-232C	5/16.40	<b>XBTZG9731</b>	–
Connection cables, <b>DH485</b>	HMIGTU	9-way SUB-D	RS-485	5/16.40	<b>XBTZ9732 + (1)</b>	–

##### 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, <b>PPI, S7 200</b>	HMIGTU (3)	RJ45/9-way SUB-D	RS-485 (COM1)	2.5/ 8.20	<b>XBTZG9721</b>	–
Connection cables, <b>MPI port, S7 300/400</b>	HMIGTU	9-way SUB-D/ 9-way SUB-D	RS-232C (COM2)	3/ 9.84	<b>XBTZG9292</b>	–
	HMIGTU (3)	RJ45/flying leads at other end	RS-485 (2) (COM1)	3/ 9.84	<b>VW3A8306D30</b>	0.150/ 0.331
		RJ45/9-way SUB-D	RS-485 (2) (COM1)	2.5/ 8.20	<b>XBTZG9721</b>	–

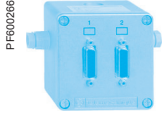
(1) XBTZG939 adapter should be used with cables with “+ (1)” after the reference (see page 19).

(2) Non-isolated RS-485 serial link, 12 Mbps.

(3) Available only with Premium Box HMIG3U.

#### Connection of Magelis terminals via serial links and Ethernet network

Type of bus/network	Tap-off units	Connector (tap-off unit end)	Terminal type	Length m/ft	Reference	Weight kg/lb
Uni-Telway serial link	Subscriber socket <b>TSXSACA62</b>	15-way female SUB-D	HMIGTU	3/9.84	<b>VW3A8306</b>	0.150/ 0.331
	Connection box <b>TSXPACC01</b>	8-way female mini-DIN	HMIGTU	2.5/8.20	<b>XBTZ9780</b>	0.180/ 0.396
Modbus serial link	Subscriber socket <b>TSXSACA64</b>	15-way female SUB-D	HMIGTU	3/9.84	<b>VW3A8306</b>	0.150/ 0.331
	T-junction box	With integrated cable, RJ45 fitted	HMIGTU	1/6.56	<b>VW3A8306TF10</b>	—
Ethernet TCP/IP network	Hubs 499 NEH/NOH Switches 499 NES, 499 NMS, 499 NSS and 499 NOS	RJ45	HMIGTU	2/6.56	<b>490NTW00002</b>	—
				5/16.40	<b>490NTW00005</b>	—
				12/39.37	<b>490NTW00012</b>	—
				40/131.23	<b>490NTW00040</b>	—
				80/262.47	<b>490NTW00080</b>	—



**TSXSACA62**



**TSXPACC01**



**TSXSACA64**



**VW3A8306TF10**

#### Connection of Magelis terminals to fieldbuses

Type of bus/network	Connection components	Type of terminal	Reference	Weight kg/lb
FIPWAY, FIPIO	USB gateway	HMIGTU (only on Premium Box)	<b>TSXCUSBFIP</b>	—
Modbus Plus	USB gateway	HMIGTU (only on Premium Box)	<b>XBTZGUMP</b>	—
		HMIGTU (only on Open Box)	<b>TSXCUSBMBP</b>	—
CANopen (Slave)	Copla Magelis module	HMIGTU	<b>HMIZGCAN</b>	—
Profibus DP (Slave)	Copla Magelis module	HMIGTU	<b>HMIZGPDP</b>	—

# Human/Machine Interfaces

## Magelis GTU Universal panels

### Equivalent product table

Equivalent product table between XBTGT terminals and HMIGTU terminals		
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 Magelis XBT range to the Magelis 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 Magelis GTU

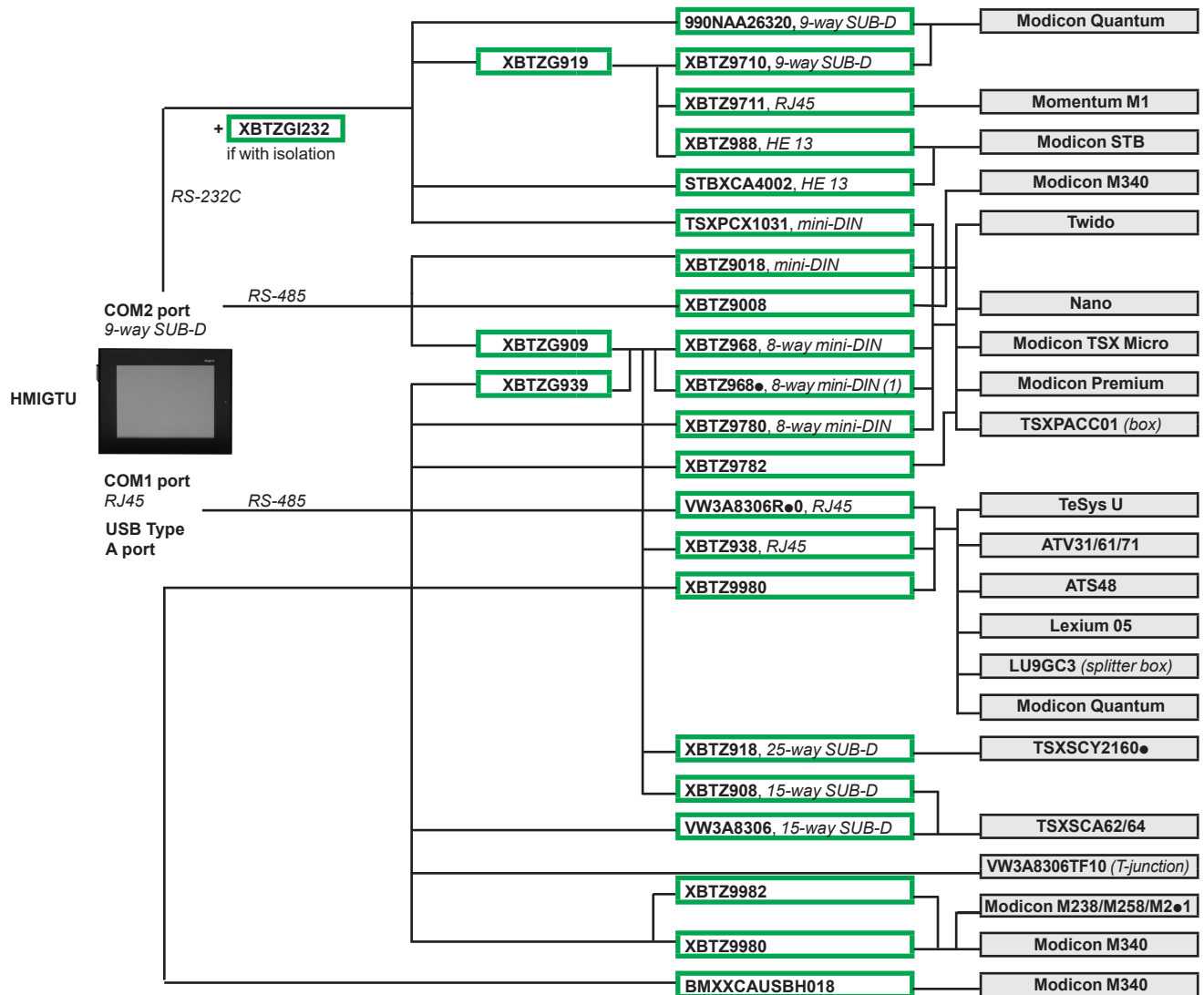
Equivalent product table between HMIGTW terminals and HMIGTU terminals		
Old range XBTGTW/HMIGTW	New range HMIGTU	Comments
HMIGTW5354	HMIDT542 + HMIG5U2	Different cut-out, no adapter
HMIGTW7354	HMIDT732 + HMIG5U2	3 USB hosts, no jack output but auxiliary output for speakers
XBTGTW652	HMIDT642 + HMIG5U2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

**Notes:** When upgrading from the Magelis XBTGTW/HMIGTW range to the Magelis 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 is provided for operating system

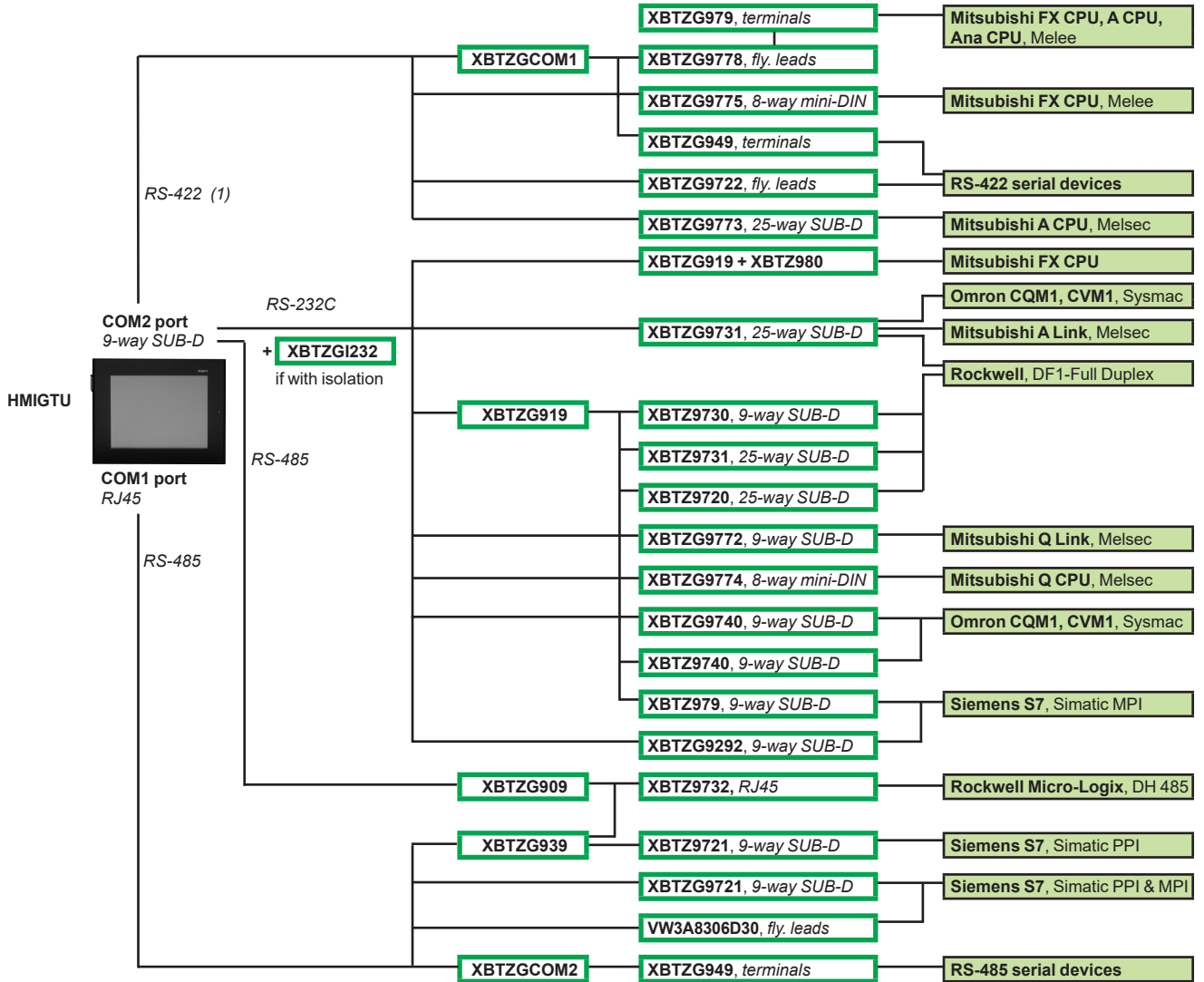


**HMI GTU terminals and Schneider Electric products**

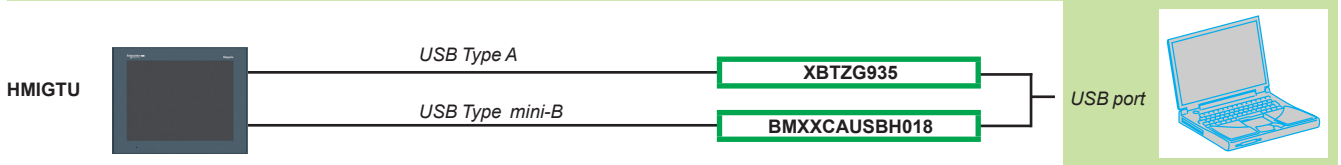


(1) ● defines the length:  
 - 0 m/0 ft, 2.5 m/8.20 ft (elbowed connector)  
 - 1 m/3.28 ft, 5 m/16.40 ft  
 - 6 m/19.68 ft, 16 m/52.49 ft  
 - 7 m/22.96 ft, 20 m/65.61 ft  
 - 8 m/26.24 ft, 25 m/82.02 ft

## HMIGTU terminals and third-party PLCs



## Application transfer from HMIGTU terminals to PC



#			
490NTW00002	22	HMIZURS	19
490NTW00005	22	HMIZUV3W	18
490NTW00012	22	HMIZUV5	18
490NTW00040	22	HMIZUV5W	18
490NTW00080	22	HMIZUV6	18
990NAA26320	20	HMIZUV6W	18
		HMIZUV7	18
<b>B</b>		<b>M</b>	
BMXXCAUSBH018	19 20	MPCYK50SPSKIT	18
BMXXCAUSBH045	20		
<b>H</b>		<b>S</b>	
HMIDT351	17	STBXCA4002	20
HMIDT542	17		
HMIDT551	17	<b>T</b>	
HMIDT642	17	TSXCUSBFIP	22
HMIDT643	17	TSXCUSBMBP	22
HMIDT651	17	TSXPCX1031	20
HMIDT732	17		
HMIDT752	17	<b>V</b>	
HMIDT952	17	VW3A8306	22
HMIG2U	17	VW3A8306D30	21
HMIG3U	17	VW3A8306R10	20
HMIG5U2	17	VW3A8306R30	20
HMIG5UL8A	17	VW3A8306TF10	22
HMIG5UL8B	17		
HMIYCABDV11011	18	<b>X</b>	
HMIZCFA16S	18	XBTZ915	19
HMIZCFA32	18	XBTZ980	21
HMIZCFA32S	18	XBTZ988	20
HMIZD53W	19	XBTZ9008	20
HMIZD55	19	XBTZ9710	20
HMIZD55W	19	XBTZ9711	20
HMIZD56	19	XBTZ9732	21
HMIZD56W	19	XBTZ9780	20 22
HMIZD57	19	XBTZ9782	20
HMIZD57W	19	XBTZ9980	20 20
HMIZD59W	19	XBTZ9982	20 20
HMIZD65W	18	XBTZG919	19 21
HMIZD66W	18	XBTZG939	19
HMIZDAG7W	18	XBTZG9292	21
HMIZDAG9W	18	XBTZG9721	21
HMIZDCOV5	18	XBTZG9731	21
HMIZDCOV6	18	XBTZG9740	21
HMIZDCOV7	18	XBTZG9772	21
HMIZG63	18	XBTZG9774	21
HMIZG65	18	XBTZGCO4	18
HMIZG66	18	XBTZGI232	19
HMIZGAUX	18	XBTZGI485	19
HMIZGBAT	18	XBTZGPEN	18
HMIZGCAN	22	XBTZGUMP	22
HMIZGCLP1	19	XBTZGUSB	18
HMIZGCO1	18		
HMIZGPDP	22		
HMIZGPWS	19		
HMIZGPWS2	19		
HMIZMDARX	18		
HMIZMDIO	19		
HMIZMDRVS	18		
HMIZSCLP3	19		
HMIZSD1GS	18		
HMIZSD4G	18		
HMIZSUSBB	18		





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#### Schneider Electric Industries SAS

Head Office  
35, rue Joseph Monier  
F-92500 Rueil-Malmaison  
France

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