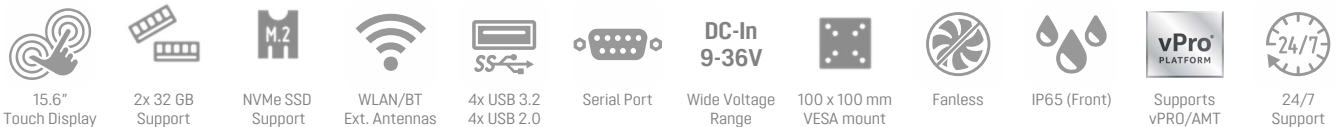


Panel-PC P15WL01-i5 White

Intel Core-i5 ULV CPU

INDUSTRY-GRADE PANEL PC WITH 15.6" DISPLAY

The high-value P15WL01-i5 Panel PCs comes with a rugged Aluminium chassis with a IP65 compliant front panel and is powered by an Intel Core-i5 ULV processor. The display is Full-HD and sports a projected capacitive 10-point multi-touch function. With its passive cooling the system is virtually noiseless, maintenance-free and approved for 24/7 nonstop operation. This makes it the perfect choice for rugged and public applications such as healthcare, hospitality sector, digital signage, POI, POS, Kiosk and industry.



ROBUST CHASSIS

- Robust Aluminium chassis (3 mm thickness) with magnetic cover for the I/O connectors
- IP65 front panel protection
- Dimensions (WHD): 394.3 x 256.2 x 48.9 mm
- Net weight: 4.6 kg
- Fanless cooling system
- Operating temperature: 0 ~ 40 °C
- Humidity: 20 ~ 80% RH non-condensing
- Mounting holes for 100 x 100 mm VESA mount (VESA mount and stand are not included)

TOUCH DISPLAY

- High quality 15.6" / 39.6cm display with 1920x1080 pixels
- Brightness: 350 cd/m2, Contrast ratio 1000:1, Viewing angle: 85° (all directions)
- Capacitive touch panel with 10-point multi-touch
- Supports two additional displays with HDMI 1.4 and VGA ports

OPERATING SYSTEM

- An operating system is not included.
- Supports Windows 10, Windows 11 and Linux (64-bit)

PROCESSOR & GRAPHICS

- Intel Core i5-8365UE, 4 Cores, 8 Threads, 1.6-4.1 GHz, 6 MB Cache
- Supports Intel vPRO and ATM technology
- "Whiskey Lake" ULV Prozessor, 15 W TDP
- Integrated Intel UHD 620 graphics

MEMORY SUPPORT

- 2x 260-pin SO-DIMM slot
- Supports Dual Channel, up to 2x 32 GB DDR4-2400

STORAGE

- M.2-2280/2260 M slot supports one SSD card (supports PCIe X4 NVMe and SATA interface)

BACK PANEL CONNECTORS

- HDMI 1.4b
- VGA
- 4x USB 3.2 Gen 1
- 4x USB 2.0
- 2x Gigabit LAN (Intel i219/211)
- COM Port (RS232)
- Mic-in and Line-out (Realtek)
- DC-input: 9-36V
- Optional: HDMI 2.0 port (then VGA or USB 2.0 are omitted)

OTHER FEATURES

- WLAN 802.11ac and BT 4.2 with two external antennas
- Hardware TPM v2.0 Infineon SLB9670VQ2 onboard
- AMI BIOS, 32 MB SPI ROM supports Intel vPro and ATM features
- Embedded I/O controller: ITE IT8528E/FX, Full-HD Webcam
- Two speakers (2x 2W)

POWER SUPPLY

- External 90W/19V power adapter
- AC input 100~240V 50~60 Hz, 3-pin connector
- DC-input: 9-36V (Wide Voltage Range)

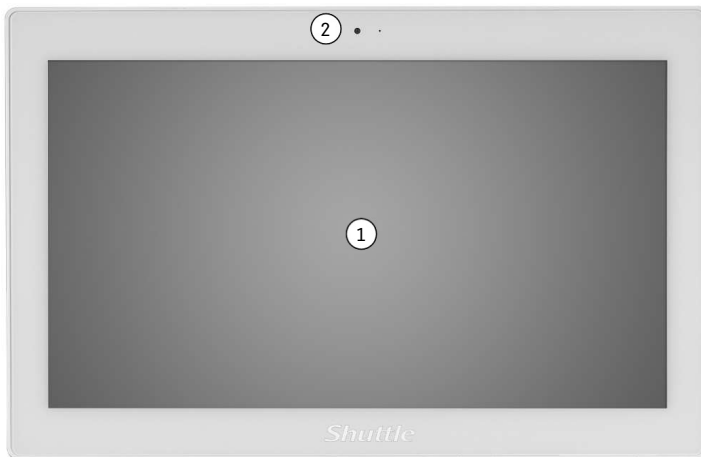


Models available from stock in EU:

Product	Type	Processor	Colour	Coating	UPC Code
P15WL01-i5 (Blue)	Panel PC	Intel Core i5-8365UE	Display frame: black, back side: dark blue	-	887993006260
P15WL01-i5 (White)			Display frame: white, back side: white	Anti-septic	887993006253

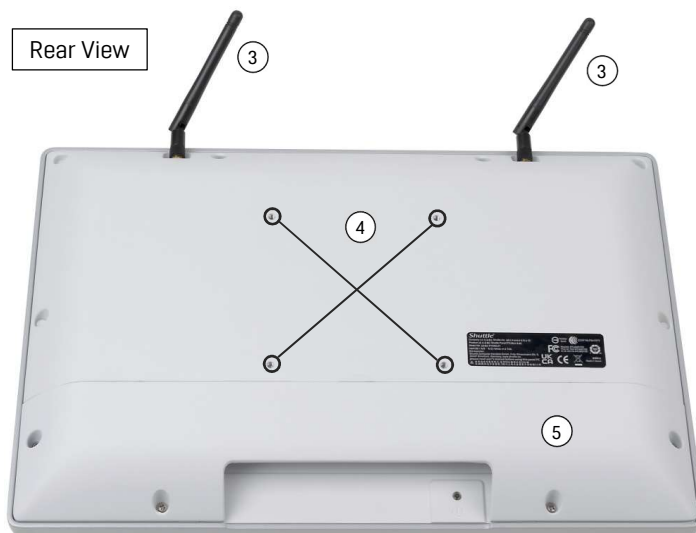
Front and Back Panel

Front panel



- 1. 15.6" Touch Panel
- 2. Full-HD Webcam

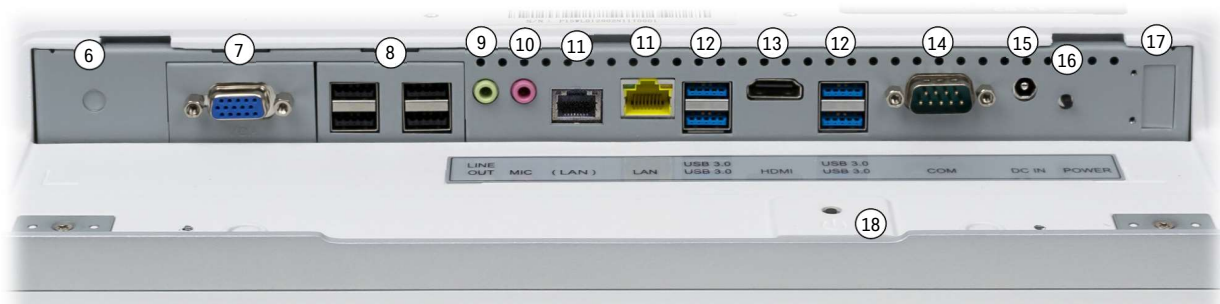
Rear View



- 3. 2x SMA connectors with WLAN antennas
- 4. Screw threads for VESA mount (100x100 mm)
- 5. Mounted back panel cover
- 6. Perforation for optional Potential Equalization Pin (POAG) according to DIN 42801
- 7. D-Sub/VGA port
- 8. 4x USB 2.0 Type A port
- 9. Audio Line Out (Headphones output)
- 10. Microphone input
- 11. 2x Gigabit LAN port (Intel i219 and i211)
- 12. 4x USB 3.2 Gen 1 Type A port
- 13. HDMI 1.4b graphics port
- 14. RS232 Serial COM port
- 15. DC-in connector for power adapter
- 16. Power Button
- 17. Perforation (reserved)
- 18. Second Power Button



Back Panel



SPECIAL FEATURES



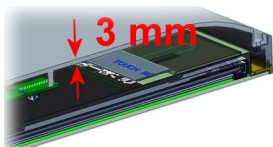
Reliable nonstop operation

The Shuttle Panel PC P15WL01-i5 is officially approved for 24/7 permanent operation at an ambient temperature of up to 40 °C. Thanks to its low power consumption and completely passive cooling, this PC runs highly reliably and is virtually noiseless.



15.6" Full-HD Touch Screen

This Panel PC has a high-grade 15.6" (39.6 cm) Full-HD display with high brightness (350 cd/qm) and low viewing angle dependence ($\pm 85^\circ$). The capacitive multitouch screen can also be operated with gloves and allows precise input with two or more fingers at the same time.



Robust Aluminium Chassis

Rear chassis and middle frame are completely made of high-grade Aluminium of 3 mm thickness.



Protection Class IP65

The front panel is dust-protected and protected from splashing of water according to IP protection class 65. Consequently, this All-in-One PC can be used for those indoor applications, where the touchscreen may be exposed to humidity and splashing of water. This is particularly welcome in restaurants, laboratories, production or other places.



VESA Mounting

The Shuttle Panel PC P15WL01-i5 has four threaded holes for mounting a 100 x 100 mm VESA mount. For example, a suitable stand, VESA arm or wall mount can be used to mount the Panel PC.

Note: VESA mount and stand are not included in the scope of delivery.



Optimized cable management

The connections on the back panel are facing down and hidden by a cover. The cover snaps in magnetically and is also fixed with screws.

Through a small opening the cables are led away from the PC in an orderly fashion. This leads to an effective cable management making for a clean, tidy appearance.



Hidden Power Button

Since the primary power button is not accessible when the cover is on, there is also a second power button hidden on the back. You can also enable the "Restore on AC Power Loss" option in the BIOS so that it always starts immediately once voltage is applied.



Triple Display Support

In addition to the built-in display two more independent Full-HD displays can be connected via HDMI 1.4b and VGA.



Dual Intel Gigabit Network

The Shuttle Panel PC P15WL01-i5 supports Dual Gigabit LAN with Intel network adapters, which are known for their excellent performance and driver compatibility and therefore are the preferred choice in professional environments.



Potential equalization (opt.)

A 6.5 mm perforation allows the installation of an optional potential equalization pin (POAG) according to DIN 42801 in order to connect the Panel PC with a suitable potential equalization terminal, that can be required in medical environments, for example.



External WLAN Antennas

P15WL01 is delivered with two external omnidirectional antennas, which ensures better reception compared to integrated antennas.

Shuttle Product Comparison: Industrial Panel-PCs

MODEL	P21WL01	M21WL01	P15WL01 (blue or white)	
Application	Industry (24/7) Medical (24/7)		Industry (24/7)	
Display size Touch function	21.5" (54.6 cm) 1920 x 1080 pixels (FHD) 10-point multi-touch (capacitive)		15.6" (39.6 cm) 1920 x 1080 pixels (FHD) 10-point multi-touch (capacitive)	
IP protection	IP65 (front only)		IP65 (front only)	
Cooling System	Fanless passive cooling		Fanless passive cooling	
Color Display Frame	Black	White	Black	White
Color Back Side	Blue	White	Blue	White
Chassis Dimensions	543 x 334 x 49.9 mm (WHD)		394.3 x 256.2 x 48.9 mm (WHD)	
Special Coating	—	Anti-Septic	—	Anti-Septic
OS compatibility	Windows 10/11, Linux (64-bit)		Windows 10/11, Linux (64-bit)	
Intel ULV Processor (Options)	Core i3-8145UE Core i5-8365UE Core i7-8665UE	Core i5-8365UE	Core i5-8365UE	
Intel AMT/vPro	Supported (but not for Core i3)		Supported	
2.5" bay for SSD	1 (SATA)		—	
M.2-2280 slot for SSD	1 (NVMe or SATA)		1 (NVMe or SATA)	
RAM support	max. 2x 32 GB DDR4 (SO-DIMM)		max. 2x 32 GB DDR4 (SO-DIMM)	
Webcam	2,0 Megapixel (FHD)		2,0 Megapixel (FHD)	
Graphics ports	HDMI 1.4 and DVI-I		HDMI 1.4 and VGA	
USB 3.2 Gen 1 ports	4		4	
USB 2.0 Ports	—		4	
LAN ports (1 Gbps)	2		2	
COM ports	3		1	
Audio ports	Line out / Mic in		Line out / Mic in	
WLAN / Bluetooth	WLAN-ac / BT4.2, 2x internal antenna		WLAN-ac / BT4.2, 2x external antenna	
POAG pin	No (optional)	Yes	No (optional)	
DC-in Voltage	19V (optional 9-36 V)		Supports 9-36 V	
VESA mount holes	100 x 100 mm (without stand incl.)		100 x 100 mm (without stand incl.)	
TPM function	Hardware TPM 2.0 chip		Hardware TPM 2.0 chip	
Power Adapter	90W (IEC 62368)	90W (IEC 60601)	90W (IEC 62368)	
Operating Temp.	0-40 °C		0-40 °C	



SHUTTLE Panel PC P15WL01-i5 – SPECIFICATIONS

FANLESS AND SILENT	<p>Passive heatpipe cooling, absolutely no fan noise</p> <p>Perfect for noise-sensitive environments</p> <p>Fanless, dust-free and thus virtually maintenance-free</p>
24/7 NONSTOP OPERATION	<p>This device is approved for 24/7 permanent operation.</p> <p>Requirements: free circulation of air amongst the PC must be guaranteed.</p>
IP65 PROTECTED	<p>The front panel is protected from dust and jets of water according to protection class IP65.</p>
CHASSIS	<p>Robust chassis with cover for the I/O connectors</p> <p>Rear/cable cover and middle frame are all made of Aluminium</p> <p>Rear cover chassis thickness: 3.0 mm</p> <p>Colour: Display Frame and back side = white</p> <p>Dimensions: 394.3 x 256.2 x 48.9 mm (W x H x D)</p> <p>100x100 mm VESA mountable (4x M4x6L screws required)</p> <p>VESA mount and stand are not included in the scope of delivery.</p> <p>Net weight: 4.6 kg</p>
OPERATING SYSTEM	<p>This system comes without operating system. It is compatible with:</p> <ul style="list-style-type: none"> - Windows 10 (64-bit) - Windows 11 (64-bit) - please enable TPM function - Linux (64-bit)
TOUCHSCREEN	<p>Touchscreen function supports fingertip input</p> <p>Projected capacitive touch panel with 10-point multi-touch</p> <p>Supports input with gloves (PVC, cotton, cotton/linen)</p> <p>Stylus pen not supported</p>
DISPLAY (39.6 cm / 15.6")	<p>39.6 cm / 15.6" LC display</p> <p>Type: a-Si TFT-LCD</p> <p>Ratio: 16:9 wide-screen panel</p> <p>Native resolution: 1920 x 1080 = 2 Megapixel (Full HD / 1080p)</p> <p>Viewing angle (left/right/up/down): 85°</p> <p>Brightness: 350 cd/sqm or nits (typ.)</p> <p>Contrast: 1000:1 (typ.)</p> <p>Signal Interface: eDP 30 pins (2 lanes)</p>
PROCESSOR	<p>Model: Intel Core i5-8365UE (ULV)</p> <p>System-on-a-chip architecture (SoC) with integrated memory and graphics controller</p> <p>FCBGA1528 package - directly soldered onto the mainboard</p> <p>Code name: Whiskey Lake-U (8th Generation Intel Core)</p> <p>Cores / Threads: 4 / 8</p> <p>Clock rate: 1.6 GHz, Turbo clock rate: 4.1 GHz</p>
INTEGRATED GRAPHICS	<p>Intel UHD Graphics 620</p> <p>GPU clock frequency: 300~1050 MHz</p> <p>Execution Units (EUs): 24</p> <p>Supports up to three independent screens:</p> <ol style="list-style-type: none"> 1) Built-in Full-HD display (supports 1080p/60) 2) HDMI 1.4b port (supports 1080p/60 and 2160p/30) 3) D-Sub/VGA port (analog)
UEFI BIOS	<p>Supports resume after power failure</p> <p>Supports Wake on LAN (WOL)</p> <p>Supports Power on by RTC Alarm</p> <p>Supports boot from M.2 SSD cards and USB devices</p> <p>AMI BIOS in 32 MB EEPROM with SPI interface</p> <p>Supports hardware monitoring and Watchdog function</p> <p>Supports Unified Extensible Firmware Interface (UEFI)</p>
INTEL vPRO & AMT	<p>Intel® vPro™ is a brand name for a specific set of management and security technologies. Intel® Active Management Technology (AMT) is a subset of Intel vPro. This technology allows remote management of PCs, even in power-off mode or with non-functional operating systems. You can audit, repair and restore AMT-based platforms in a LAN. These functions can increase the uptime of desktops with lower maintenance costs.</p> <p><u>Note:</u> Intel vPro requires appropriate software.</p> <p>The Intel® MEBX configuration user interface can be accessed after pressing CTRL-P at the beginning of the boot process.</p> <p>Only the Intel i219 LAN port (yellow color) supports the Intel vPro® function.</p>
TPM MODULE	<p>Hardware Trusted Platform Module (Infineon SLB9670VQ2 TPM 2.0)</p>

POWER ADAPTER	<p>External 90 W power adapter (fanless) Input: 100~240 V AC, 50/60 Hz Output: 19 V DC, 4.74 A, max. 90 W DC Connector: 5.5/2.5 mm (outer/inner diameter) AC mains cable: 3 pins, ca. 1.8 m length, with C5/C6 coupler (called "Mickey Mouse" or "Clover-leaf") for the power adapter and CEE-7/7 plug with earth-contact (type E+F) for the power outlet</p>
DC INPUT CONNECTOR (WIDE VOLTAGE RANGE)	<p>DC Input Connector: 5.5 / 2.5 mm (outer/inner diameter) The DC input of the computer supports an extended voltage range of 9 to 36V for an external power supply.</p>
MEMORY SUPPORT	<p>2x SO-DIMM slot with 260 pins Supports DDR4-2400 (PC4-19200) SDRAM at 1.2 V Supports Dual Channel mode Supports a maximum of 32 GB per DIMM, maximum total size: 64 GB Supports two unbuffered SO-DIMM modules (no ECC or registered)</p>
M.2 SLOT FOR SSDs	<p>The M.2 2280 M slot provides the following interfaces: - PCI-Express Gen. 3.0 x4 - SATA v3.0 (max. 6 Gbps) It supports M.2 cards with a width of 22 mm and a length of 60 or 80 mm (type 2260, 2280). Supports M.2 SATA SSDs (with B+M key) and M.2 PCIe NVMe SSDs (with M key) with auto detection</p>
WEBCAM	<p>Integrated Full-HD 2.0 Megapixel (1920 x 1080) camera</p>
AUDIO AND SPEAKERS	<p>Audio Realtek® ALC662 or ALC888S High-Definition Audio Two analog audio connectors (3.5 mm) on the back panel: 1) 2 channel line out (headphones) 2) microphone input Digital multi-channel audio output: via HDMI Two Two built-in speakers (2x 2W Stereo)</p>
DUAL GIGABIT LAN	<p>Dual network with two RJ45 ports Used network chips: 1) Intel i211 Ethernet Controller with MAC, PHY and PCIe interface 2) Intel i219LM PHY connected to the MAC of the processor Supports 10 / 100 / 1000 MBit/s operation Supports WAKE ON LAN (WOL) Supports network boot by Preboot eXecution Environment (PXE) Supports Teaming mode</p>
WIRELESS NETWORK (WLAN)	<p>Built-in M.2-2230-E WLAN card with two external antennas WLAN Controller Realtek RTL8821CE Supports WiFi IEEE 802.11b/g/n/ac in the 2.4 / 5 GHz band, 1T1R Supports 20 / 40 / 80 MHz channel bandwidth Security: supports WPA(-PSK), WPA2(-PSK), WEP 64/128 bit, IEEE 802.11x, IEEE 802.11i Supports Bluetooth 4.2 in the 2.4 GHz band</p>
BACK PANEL CONNECTORS	<p>Power Button (another button available in an easily accessible place) HDMI 1.4b (digital video+audio) D-Sub/VGA (analog video) 4x USB 3.2 Gen 1 Type A (max. 5 Gbps) 4x USB 2.0 2x Intel Gigabit LAN (RJ45, i219LM and i211) 1x Serial Port (DB-9/D-sub, RS232) Microphone input (3.5 mm) Audio Line-out / Headphones (3.5 mm) DC-input connector for external power adapter (supports 9-36V voltage range) Perforation (6.5 mm) for an optional potential equalization pin (POAG) according to DIN 42801</p>
OTHER CONNECTION OPTIONS	<p>An HDMI 2.0 port can be added on request. For this, either the VGA port or 4x USB 2.0 are omitted.</p>
ENVIRONMENTAL SPECIFICATIONS	<p>Operating temperature: 0 ~ 40 °C Storage temperature: -20 ~ 60 °C Permitted relative humidity: 20 ~ 80 % (non-condensing)</p>

CONFORMITY AND CERTIFICATIONS

EMI: CE, FCC, BSMI

Safety: CB, cTUVus, BSMI

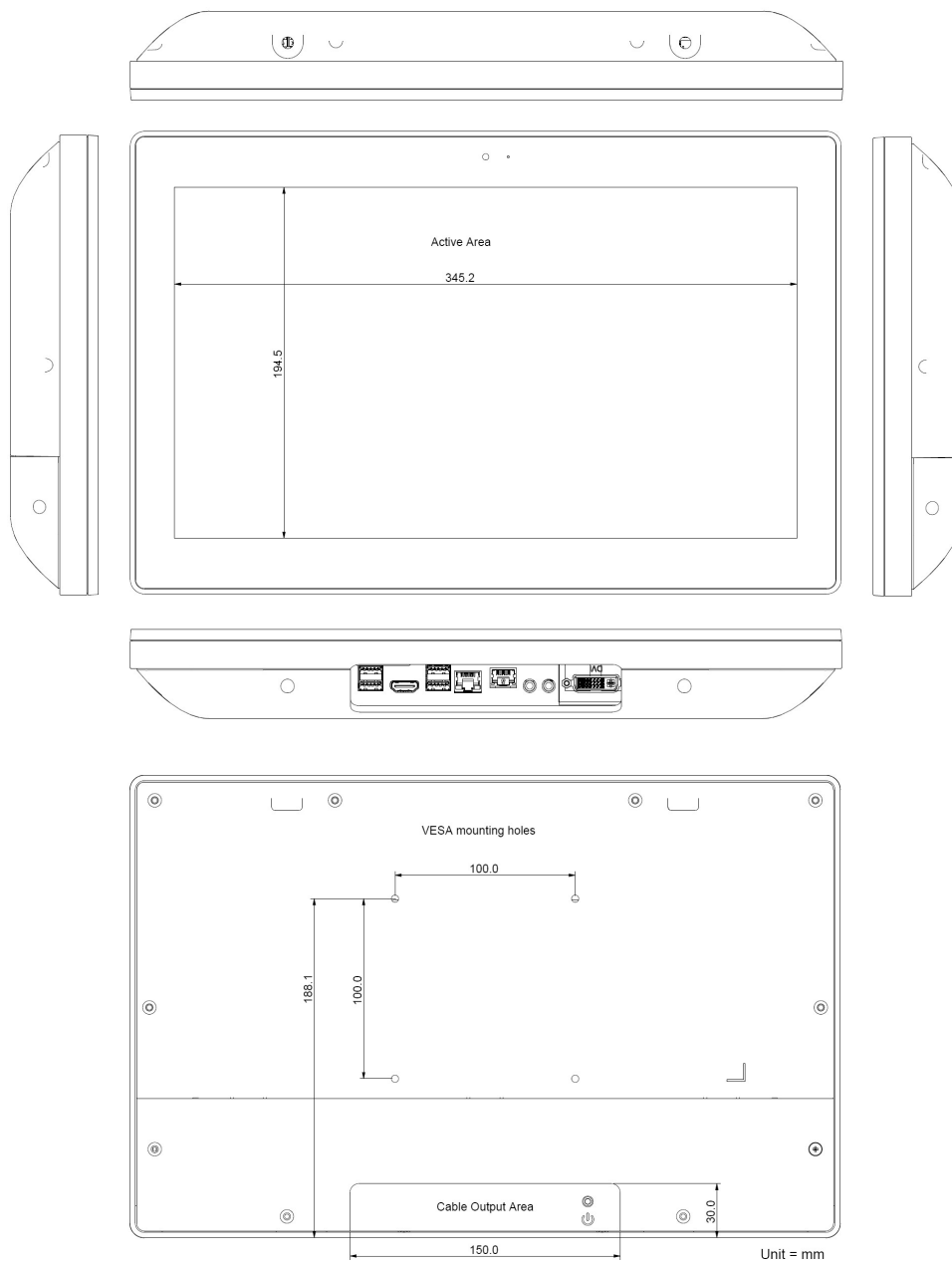
RF: EU, US, Taiwan

This device is classed as a technical information equipment (ITE) in Class A. Class A is for products used in commercial and industrial areas. The CE-mark approves the conformity by the EU directives:

- (1) 2014/30/EU relating to electromagnetic compatibility (EMC),
- (2) 2014/35/EU relating to Electrical Equipment designed for use within certain voltage limits (LVD),
- (3) 2009/125/EC relating to eco design requirements for energy-related products (ErP)
- (4) 2014/53/EU Radio Equipment Directive (RED)

SHUTTLE Panel PC P15WL01-i5 — TECHNICAL DRAWING

Overall dimensions: 394.3 x 256.2 x 48.9 mm (WHD)



VESA mount and stand are not included in the scope of delivery.