

System

XPC all-in-one

X5080PA

Black

Celeron CPU, 4GB RAM, 120GB SSD, Win10 IoT

15.6" ALL-IN-ONE PC FOR POS, POI AND KIOSK APPLICATIONS

The Shuttle X5080PA is a fully equipped All-in-One pc with 15.6" touchscreen. It is powered by an Intel ULV processor of the 10th generation "Comet Lake". The modern processor architecture helps improve on power consumption and computing power. Thanks to its passive cooling, the system is virtually noiseless, maintenance-free and approved for 24/7 nonstop operation. Particularly suitable for vertical applications is the arrangement of connectors at the bottom and the IP54 compliant front panel which is dust-protected and protected from splashing of water.



COMMON FEATURES

- IP54 compliant front panel
- Dimensions: 391 x 327 x 42 mm (WHD)
- Supports 24/7 Nonstop Operation
- 100 mm VESA mount capable
- Operating temperature: 0~40 °C
- Fanless heatpipe cooling system

DISPLAY & GRAPHICS

- 39.6 cm (15.6") LC Display, 1366 x 768 pixel
- Resistive touchscreen
- Integrated Intel UHD graphics
- HDMI 1.4 & VGA

OPERATING SYSTEM

- Windows 10 IoT Enterprise Entry (64-bit)

PROCESSOR

- Intel Celeron 5205U, Dual Core, clock rate: 1.9 GHz
- Intel Generation 10 "Comet Lake-U" TDP: 15W

STORAGE

- 4 GB DDR4-2666 SO-DIMM
- 120 GB SSD (M.2, NVMe)
- Supports one 2.5" SATA hard disk / SSD
- Supports internal USB stick (USB 2.0, type A)

CONNECTIVITY

- HDMI 1.4
- D-Sub/VGA
- 4x USB 3.2 Gen 1
- 2x USB 2.0
- internal: 1x USB 2.0 (Type A)
- 2x Audio (Mic & headphones)
- Gigabit LAN (Intel)

BUILT-IN

- SD card reader
- 2.0 Megapixel FHD webcam
- 2x 2 W speakers
- Electret Condenser Microphone
- Wi-Fi 5 Wireless Network with two Antennas (supports WLAN 802.11ac and Bluetooth 4.2)

POWER SUPPLY

- External 65 W / 19 V power adapter (DC-in supports 12 or 19 V)

MODELS OF THE X50V8 SERIES

Category	Product	Processor	Operating System	RAM	SSD	COM/LPT	Color	Bar-Code (depends on LAN chip)	
								with Intel 211	with Intel 219LM
Barebone	X50V8	Celeron 5205U	—	—	—	—	Black	887993005072	887993005201
							White	887993005096	887993005225
	X50V8U3	Core i3-10110U	—	—	—	—	Black	887993005089	887993005218
							White	887993005102	887993005232
System	POS X508	Celeron 5205U	—	4 GB	120 GB 2.5"	2x COM 1x LPT	Black	4046047103805	—
							White	4046047103799	—
	X5080PA	Celeron 5205U	Win10 IoT	4 GB	120 GB M.2	—	Black	4046047103812	—

PRODUCT FEATURES



All applications at your fingertips

The innovative touchscreen technology delivers the simplest operation possible and makes the screen the centre of action. Its high-quality design lets you control the whole range of multimedia - music, movies, video playback and web browsers start by just touching the screen.



24/7 nonstop operation

The Shuttle XPC all-in-one X5080PA is officially approved for 24/7 permanent operation. Thanks to its low power consumption and completely passive cooling, this PC runs highly reliable making it perfectly suitable for digital signage and POI/POS applications.

Conditions for permanent use:

- Ambient temperature while under load: 5 - 40 °C
- Air humidity while under load: 10 - 80 % (not condensing)
- Free circulation of air amongst the PC must be guaranteed
- Ventilation holes must be kept clear



Fanless and quiet

The Shuttle XPC all-in-one X5080PA uses a passive thermal module to lead heat out of the case quickly and evenly. The unique fanless design makes it perfect to be used in noise-sensitive environments. As an additional benefit, fanless cases rarely gather dust on the inside and stay cleaner than others. So it's not only quiet and low in energy use, but also virtually maintenance-free.



Protection Class IP54

The front panel of the Shuttle XPC all-in-one X5080PA is dust-protected and protected from splashing of water according to IP protection class 54. Consequently, this All-in-One PC can be used for those indoor applications, where the touchscreen may be exposed to humidity and occasional splashing of water. This is particularly welcome in restaurants, laboratories, production or other places.



Optimised Cable Management

Most of the connectors are now located at the back panel facing down. This leads to an effective cable management making for a clean, tidy appearance on the desk. On the left side sit those connectors which need to be accessed from the front: the card reader and two USB ports.



Connects to two external Full HD displays

The Shuttle XPC all-in-one X5080PA features two video outputs: One analog D-Sub/VGA connector and one HDMI connector. Two separate Full HD displays can be connected in extended mode. Now add the built-in display of the X5080PA and there are three displays showing different content.



Hidden Power Button

The power button can be deactivated to prevent unauthorised use. Still, it can be used with a straightened paper clip (see photo).



VESA mount *)

The stand on the rear can easily be removed to unveil four VESA mounting screw holes that can be used for mounting arms and other mounting devices from a variety of manufacturers.

*) VESA mount is not included



Black and White versions available

Choose the right colour for your application. As a rule, black is preferred for use in the office, as a POS system in retail or as a control unit in manufacturing. The white version is often used in the health sector, in the kitchen area or as a POS system in the cosmetics/massage studio.

Front and Back Panel



- | | | |
|---|----------------------------------|-------------------------------------|
| 1. Stand
(a) Stand mounting plate
(b) VESA cover
(c) 100 x 100 mm VESA mount | 8. SD card reader | 18. 2x RJ45 COM port (optional) |
| 2. Full HD Webcam | 9. 4x USB 3.2 Gen 1 (5 Gbps) | 19. RJ11 for cash drawer (optional) |
| 3. Microphone | 10. Power LED | 20. DC-input for power adapter |
| 4. Touchscreen LC-display | 11. Hard disk LED | 21. 2x USB 2.0 |
| 5. Power button | 12. 2x speakers (stereo) | 22. RJ45 Gigabit LAN port |
| 6. 2x Perforation for external antenna | 13. Name plate (rating label) | 23. HDMI video output |
| 7. Hole for hidden power button | 14. Hole for Kensington lock | 24. Audio Line-out (headphones) |
| | 15. D-Sub/VGA video output | 25. Microphone input |
| | 16. LPT Parallel Port (optional) | 26. Openings for ventilation |
| | 17. 2x D-Sub COM port (optional) | 27. Stylus with holder |

Range of Applications (Examples)

Digital Signage
Visual advertising,
Info Terminal



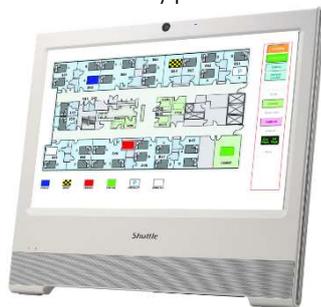
POS
Checkout system in Retail Stores, Res-
taurants, Hotels



POS Radio
Playing advertising
and music



Call System
e.g. for nurses (hospital)
or security personnel



Smart Home Control
Surveillance,
Home Automation



Device Control
e.g. for copy
machines



Device Control
e.g. for health services or fitness
equipment



Communication Device
e.g. for the elderly



Visualisation
e.g. for industrial production machines



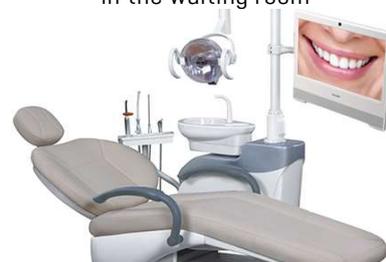
On a boat
e.g. for navigation and entertainment



Data Collector
e.g. Recording of
working hours



Entertainment
e.g. at the dentist or
in the waiting room



Product Comparison: Shuttle XPC All-in-One Models (Barebone Versions only)

Chassis	Display Size / Pixel / Type	Processor Type	Product Name by Intel processor-generations			Chassis Colour
			Gen. 7	Gen. 8	Gen. 10	
	11.6" 1366 x 768 Capacitive Multitouch	Celeron	P20U	—	P22U	Black
	15.6" 1366 x 768 Resistive Singletouch	Celeron	X50V6	X50V7 <small>X50V7L *)</small>	X50V8	Black, White
		Core i3	X50V6U3	X50V7U3 <small>X50V7U3L *)</small>	X50V8U3	Black, White
	15.6" 1920 x 1080 Capacitive Multitouch	Celeron	P51U	—	P52U	Black
		Core i3	P51U3	—	P52U3	Black
	19.5" 1600 x 900 Capacitive Multitouch	Celeron	P90U	—	P92U	Black, White
		Core i3	P90U3	—	P92U3	Black, White
		Core i5	P90U5	—	P92U5	Black

X50V7L and **X50V7U3L** are model variants without WLAN module

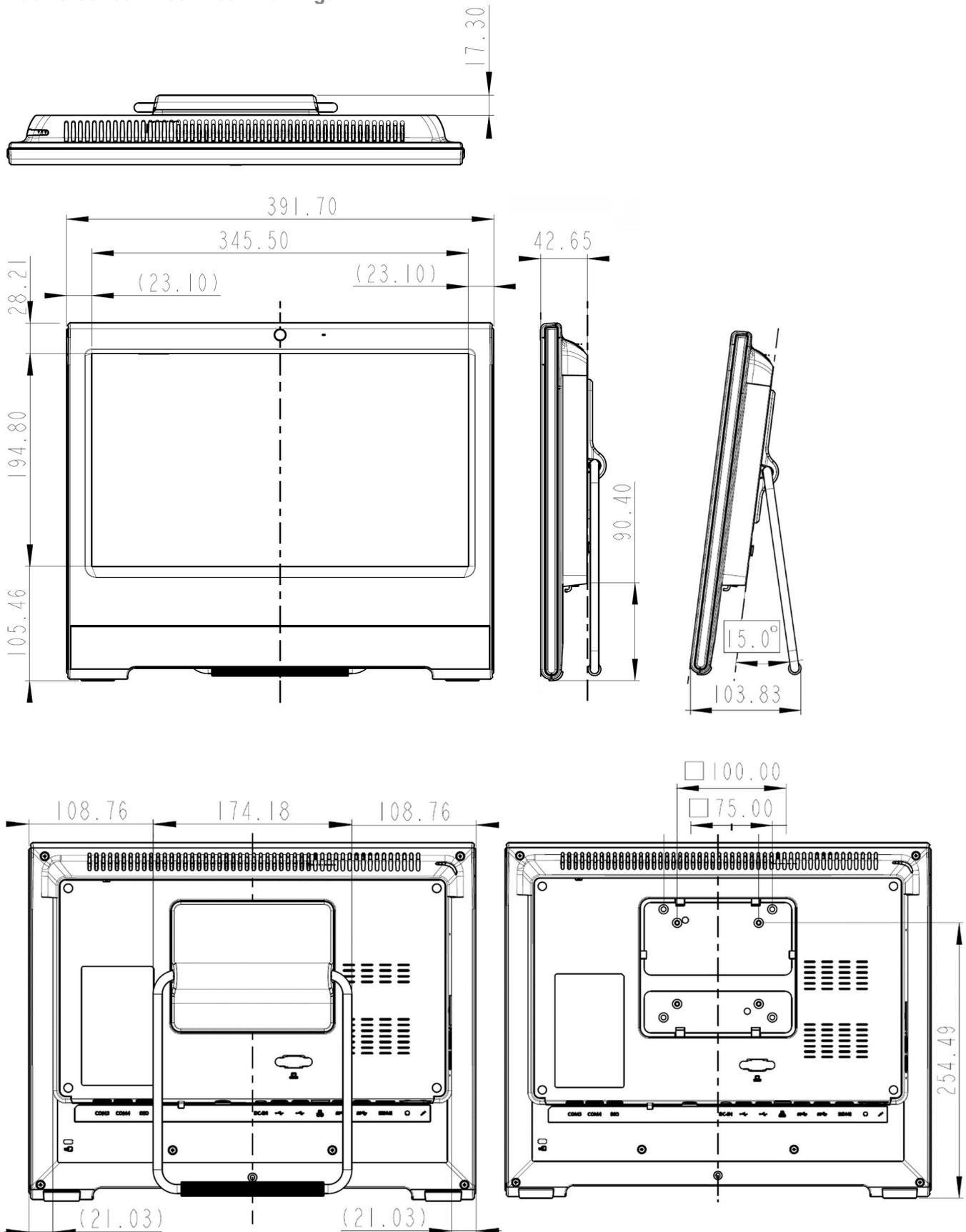
SHUTTLE XPC all-in-one SYSTEM X5080PA Black – SPECIFICATIONS

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. Requirements:</p> <ul style="list-style-type: none"> - Free circulation of air amongst the PC must be guaranteed. - Ventilation holes must be kept clear.
IP54 PROTECTED	<p>The front panel is dust-protected and protected from splashing of water according to protection class IP54.</p>
CHASSIS	<p>Colour: black</p> <p>Dimensions: 391 x 327 x 42 mm (W x H x D)</p> <p>100mm VESA mount capable</p> <p>Mounting hole for Kensington lock</p> <p>Weight: 3.5 kg net, 4.2 kg gross</p>
OPERATING SYSTEM	<p>Windows 10 IoT Enterprise Entry (64 bit)</p>
TOUCHSCREEN	<p>Touchscreen function supports fingertip input</p> <p>Resistive 5-wire single-touch technology</p> <p>Stylus for the built-in touchscreen</p>
15.6" DISPLAY	<p>39.6 cm / 15.6" LC-display, ratio: 16:9 wide-screen panel</p> <p>Resolution: 1366 x 768 = 1.05 Megapixel</p> <p>Backlight unit: High power LED, Luminance: 220 cd/sqm</p> <p>Glass thickness: 0.5 mm</p>
PROCESSOR	<p>Model: Intel Celeron 5205U (ULV)</p> <p>System-on-a-chip architecture (SoC): no chipset required</p> <p>FCBGA1528 package - directly soldered onto the mainboard</p> <p>Code name: Comet Lake-U (10th Generation Intel Core)</p> <p>Cores / Threads: 2 / 2</p> <p>Clock rate: 1.9 GHz</p> <p>L1/L2/L3 Cache: 256 kB / 1 MB / 2 MB</p> <p>Memory controller: DDR4-2400 Dual Channel (1.2 V)</p> <p>TDP wattage: 15 W maximum</p> <p>Manufacturing process: 14 nm</p> <p>Maximum Tjunction Temperature: 100 °C</p> <p>Supports 64-bit, VT-x (EPT), VT-d, Enhanced SpeedStep, NX bit, AES-NI, SSE 4.1/4.2</p>
INTEGRATED GRAPHICS	<p>Intel® UHD Graphics for 10th Gen Intel® Core™ Processors</p> <p>GPU clock frequency: 300~900 MHz</p> <p>Execution Units (EUs): 12</p> <p>Supports DirectX 12</p> <p>Supports full H264, H265 8/10 bit, VP8/9, VC-1, AVC hardware decoding</p> <p>Supports Quick Sync Video and Clear Video HD technology</p>
SUPPORTS TRIPLE DISPLAY	<p>Two video ports support two additional independent screens:</p> <ol style="list-style-type: none"> 1) HDMI 1.4b supports 1920 x 1080 @ 60 Hz or 3840 x 2160 @ 30 Hz 2) VGA / D-Sub analog video supports 1920 x 1080 @ 60 Hz <p>Multi-Monitoring modes as follow:</p> <p>Clone mode: All displays show the same content at 1366 x 768.</p> <p>Extended mode: all displays show different content.</p>
BIOS	<p>AMI BIOS in 16 MByte EEPROM with SPI interface</p> <p>Supports Power-on-after-power-fail / always on</p> <p>Supports Wake-on-LAN (WOL) from S3, S4, S5 ACPI states</p> <p>Supports hardware monitoring and Watchdog function</p> <p>Supports Firmware TPM v2.0 function</p>
MEMORY	<p>4 GB DDR4-2666</p> <p>S0-DIMM module with 260 pins</p> <p>Supports a maximum of 32 GB per DIMM, maximum total size: 64 GB</p>
2.5" BAY FOR HDD/SSD	<p>Supports one SATA hard disk or one SATA SSD drive in 6.35 cm / 2.5" format</p> <p>The SATA 3.0 interface supports up to 600 MB/s of data transfer speed (6 Gbit/s)</p> <p>Supports one drive with up to 12.5 mm in height</p> <p>SATA cable pre-installed</p>

M.2 SSD CARD	120 GB SSD card in M.2 2280 form factor PCI-Express interface, supports NVMe
CARD READER	Integrated card reader supports SD, SDHC and SDXC memory flash cards
WEBCAM	Integrated Full HD webcam (1920 x 1080 pixels)
MICROPHONE AND SPEAKERS	Front panel with integrated Electret Condenser Microphone and 2x 2 W speakers
INTEGRATED AUDIO	Realtek ALC269 (HD-Audio) or C-Media CM6542 (USB) Two analog audio connectors (3.5 mm) on the bottom side: 1) Line-out (head-phones) 2) Microphone input Digital Audio is supported via HDMI.
WIRED NETWORK	Intel i211 or i219LM Ethernet Controller Supports 10 / 100 / 1.000 MBit/s operation Supports WAKE ON LAN (WOL) from S3, S4 modes Supports network boot by Preboot eXecution Environment (PXE)
WIRELESS NETWORK (WLAN)	Built-in M.2-2230-E WLAN card with two internal antennas WLAN Controller Realtek RTL8821CE-CG Supports WiFi IEEE 802.11b/g/n/ac on 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 on the 2.4 GHz band
FRONT LEDS	Power LED (blue) Hard disk LED (orange)
CONNECTORS LEFT SIDE	2x USB 3.2 Gen 1 (5 Gbps) SD card reader Hole with power button Hole with Clear CMOS button Perforation for optional WLAN/LTE antenna (diameter: 6.5 mm)
CONNECTORS BOTTOM SIDE	HDMI 1.4a (supports digital video and digital audio) 2x USB 3.2 Gen 1 (5 Gbps) 2x USB 2.0 Gigabit Network (LAN, RJ45) Audio Line-out / head-phones (3.5 mm jack) Microphone input (3.5 mm jack) DC input for external power adapter (5.5 / 2.5 mm) Perforation for optional WLAN/LTE antenna (diameter: 6.5 mm) Optional: 2x COM/serial (RJ45), DIO (RJ11) for cash drawer (accessory POS01)
CONNECTORS REAR SIDE	VGA connector (D-Sub 15 pol., analog video) Optional: 2x COM/serial (D-Sub), 1x LPT/parallel (accessory: PCL71 or POS01)
CONNECTORS ONBOARD	Internal USB 2.0 type A connector for a USB stick Serial ATA (6 Gbps) Serial ATA power connector 3x USB 2.0 header (all occupied) eDP connector (Embedded DisplayPort) - occupied by the display Connector for optional COM/LPT adapter POS01 or PCL71
OPTIONAL ANTENNAS	The chassis features two perforated 6.5 mm holes for optional antennas mounted with an (RP-)SMA connector for wireless network such as WLAN or WWAN (e.g. LTE)
POWER ADAPTER	External 65 W power adapter (fanless) Input: 100~240 V AC, 50/60 Hz, max. 1.6 A Output: 19 V DC, max. 3.42 A, max. 65 W AC mains cable: 3 pins, ca. 1.7 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
DC INPUT CONNECTOR	DC Input Connector: 5.5 / 2.5 mm (outer/inner diameter) The DC-input of the computer supports an external power source with either 12V ±5 % or 19V ± 5%.

SUPPLIED ACCESSORIES	<p>Quick Guide Driver DVD for Windows External Power Adapter (65W / 19V) AC Power cord with protective-earth contacts Screws</p>
OPTIONAL ACCESSORIES	<p><u>PCL71</u>: COM / LPT / RJ11 adapter: - 1x Parallel (25p D-Sub) - 2x Serial RS232 (9p D-Sub) supports 0 / 5 / 12V <u>POS01</u>: COM / LPT / RJ11 adapter: - 1x Parallel (25p D-Sub) - 2x Serial RS232 (9p D-Sub) supports 0 / 5 / 12V - 2x Serial RS232 (8p RJ45) - 1x DIO/RJ11 connector for cash drawer supports 12 / 24V</p>
ENVIRONMENTAL SPECIFICATIONS	<p>Operating temperature: 0~40 °C Humidity: 10~90 %</p>
CERTIFICATIONS / COMPLIANCE	<p>EMI: CE, FCC, BSMI, RCM, VCCI Safety: CB, cTUVus, BSMI Other compliances: RoHS, ErP Lot3, Energy Star v8.0</p>
CONFORMITY	<p>This device is classed as a technical information equipment (ITE) in class B and is intended for use in living room and office. 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)</p>

X50V8 Series – Technical Drawings



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