P21WL01

TOUCH PANEL PC

White color available upon request

PROCESSOR	i3 Dual Core (Default)	i5 Quad Core (Option)	i7 Quad Core (Option)	Celeron Dual Core (Option)
	Intel® Core™ i3-8145UE	Intel® Core™ i5-8265U Intel® Core™ i5-8365UE	Intel® Core™ i7-8565U Intel® Core™ i7-8665UE	Intel® Celeron 4305UE
MEMORY	2 x SODIMM slot (260 pin), DDR4-2400 dual channel (max of 64GB, 32GB per DIMM)			
STORAGE	Supports 1 x 2.5" SSD, SATA 3.0 (6GB/s), can be installed via swappable drive tray*			
VIDEO GRAPHICS	Intel UHD 610/620 graphics (depending on processor)			
DISPLAY	21.5" 1920x1080 Full HD, LC, 16:9 Backlight lifetime: 30,000 hours Brightness: 300 cd/m2 IPS technology	HDMI 1.4b x 1 (1080p/60Hz, 2160p/30Hz) DVI-I x 1, (1080p/60Hz) 10-point Projected Capacitive, Multi-Touch Supports input with gloves (PVC, cotton, cotton/linen)		IP65 front panel protection Wide-screen panel
AUDIO	Realtek ALC662, 2 channel HD audio			
NETWORK	Intel Gigabit LAN x 2, Realtek RTL8821CE 10/100/1000 MB/s	802.11 a/b/g/n/ac + Bluetooth 4.2 (M.2 2230 E key)		Internal antenna x 2, external antenna (optional)
EXPANSION SLOT	M.2 2230 Type E key x 1, M.2 2280 Type M key x 1 Swappable 2.5" SSD (SATA 3.0) x 1, max 7 mm height*			
TPM	Supports Hardware TPM 2.0			
PORTS	(1) RS232 (DB-9) (2) RS232/RS422/RS485 (DB-9)** (4) USB 3.2 Gen 1 (Type A) (1) Line-out (1) MIC-in			
VIEWING ANGLE (H/V°)	89 (left), 89 (right), 89 (up), 89 (down)			
OPERATING TEMPERATURE	0 - 40°C			
STORAGE TEMPERATURE	-20°C - 60°C			
DIMENSIONS	21(L) x 13.1(W) x 1.9(H) inches			
POWER	90W 19V/4.74A external adapter Grounding connector (optional)			
RELATIVE HUMIDITY	20% - 80% RH (non-condensing)			
EMC	CE, FCC, VCCI, BSMI			
RF	US, EU, Taiwan			
SAFETY CERTIFICATION	cTUVus, CB, BSMI			
OS SUPPORT	Windows 10 64 bit, Linux 64 bit			

*SSD is not hot swappable   **RS232 supports ring in/5V power

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Front View and Bottom View

1 Full HD webcam
2 Multi-touch screen

A	2.5" drive tray for HDD/SSD	**G**	USB 3.2 Gen 1 Type A x 4
B	Perforation for POAG*	**H**	HDMI 1.4b
C	RS232/RS422/RS485 x 2	**I**	RS232
D	Audio Line-out	**J**	DC-in
E	MIC-in	**K**	Easy Rock Switch
F	Gigabit LAN port (Intel i211)		

*for optional Potential Equalization Pin
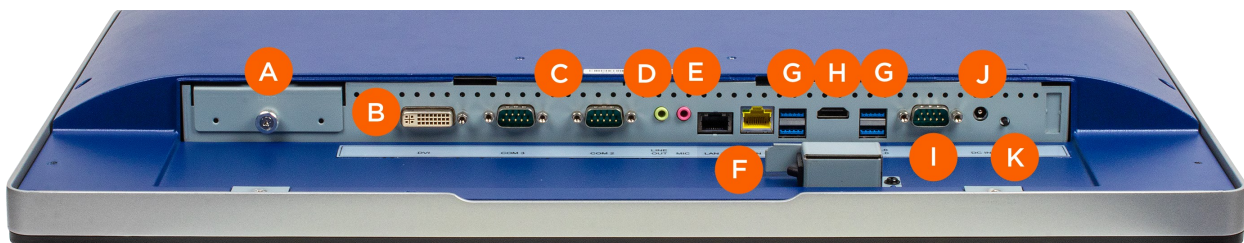
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1   2   3
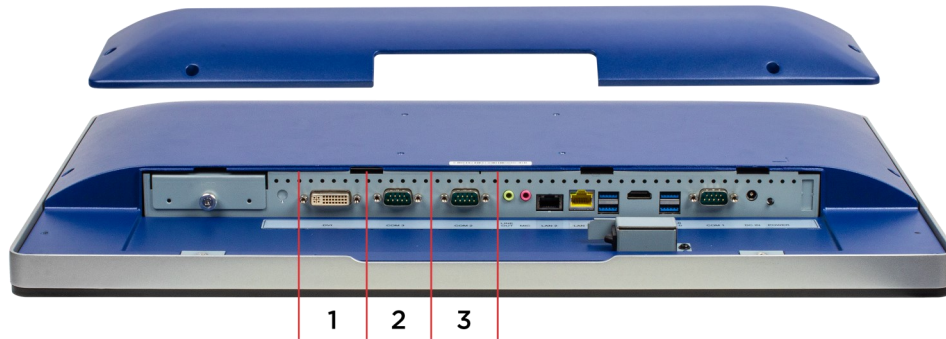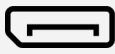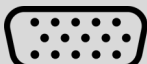
The P21WL01 can be ordered with external WLAN antennas or other connections. The back panel has three sections that can be assigned to other connections (requires modification of the metallic back panel shield).

OPTIONS FOR BACK PANEL

PORT IMAGE		# OF SECTIONS OCCUPIED	MAXIMUM KITS
HDMI 1.4		1	1
DVI-I		1 (default)	1
DISPLAYPORT 1.2		1	2
D-SUB/VGA		1	2
USB 2.0 x 4		1	1
SINGLE COM (RS232 Only)		1	1
DUAL COM (RS232/RS422/RS485)		2 (default)	1

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CHASSIS	Blue rear cover, rear cover chassis thickness: 3.0 mm (white color available upon request) Chassis with cover for I/O connectors, rear/cable cover and middle frame: alumnium VESA mount and stand are no included Dimensions: 21.3 (L) x 13.1 (W) x 1.96 (H) inches Weight: 16.7 LBS (net)
POWER SUPPLY	External 90W power adapter (fanless) AC input voltage: 100 - 240V, 50 - 60 Hz Output: 19V DC 4.74A (also supports 65W power adapter with 12V DC output) AC mains cable: 3 pins, 1.8m length, with C5/C6 coupler for power adapter, CEE-7/7 plug with earth-contact (Type E+F) for power outlet
OPERATING SYSTEM	The system comes without an operating system installed. Compatibility: Windows 10, Linux 64 bit
PROCESSOR SUPPORT	8th Gen Intel® Whiskey Lake-U processors, 15W TDP Intel® Core™ i3-8145UE, Dual Core, 4M cache, 2.2 GHz (3.9 GHz turbo), 15W (default) Intel® Core™ i5-8265U, Quad Core, 6M cache, 1.6 GHz (3.9 GHz turbo), 15W (optional) Intel® Core™ i5-8365UE, Quad Core, 6M cache, 1.6 GHz (4.1 GHz turbo), 15W (optional) Intel® Core™ i7-8565U, Quad Core, 8M cache, 1.8 GHz (4.6 GHz turbo), 15W (optional) Intel® Core™ i7-8665UE, Quad Core, 8M cache, 1.7 GHz (4.4 GHz turbo), 15W (optional) Intel® Celeron® 4305UE, Dual Core, 2M cache, 2 GHz, 15W (optional) Supports 64 bit, AES-NI, VT-x (EPT), VT-d, Enhanced SpeedStep, NX bit, SSE 4.1/4.4 System on chip processor (SoC) with integrated memory and graphics
FANLESS COOLING	Passive heatpipe cooling, no fan noise at all Suitable for noise sensitive environments Fanless, dust-free and virtually maintenance free
MEMORY SUPPORT	2 x 260 pin SODIMM slots Supports DDR4 2400 (PC4-19200) SDRAM at 1.2V Supports Dual Channel mode Supports a max. of 32GB per DIMM, up to 64GB total (2 x 32 GB) Supports two unbuffered DIMM module (no ECC or registered)
M.2 SLOT	M.2 2280 BM slot provides the following interfaces: PCI-Express Gen 2.0 X1, SATA v3.0 (6 GB/s) interface 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 BM key) and M.2 PCI-E SSDs (with M key) with auto detection.
AUDIO	Realtek® ALC662 audio codec, HD audio Digital multi-channel audio output via HDMI Two analog audio connectors (3.5 mm) on the bottom panel: Line-out (headphones), Microphone input
WIRED NETWORK	Supports 10/100/1000 MB/s operation Intel i211 ethernet controller with MAC, PHY, PCIe interface Intel i219LM PHY connected to the MAC of the processor Supports Wake on LAN, supports Teaming mode Supports network boot by Preboot eXecution Environment (PXE)
WIRELESS NETWORK	Built-in M.2 2230 AE WLAN card with two internal antennas Supports Wi-Fi IEEE 802.11 b/g/n/ac on 2.4/5 GHz band, 1T1R Supports 20/40/80 MHz channel bandwidth, supports Bluetooth 4.2 on 2.4 GHz band Supports WPA(-PSK), WPA2(-PSK), WEP 64/128 bit, IEEE 802.11x, IEEE 802.11i
INTEGRATED GRAPHICS	Intel UHD graphics 610/620 (depending on processor) Supports DirectX12, full H264, H265 8/10 bit, VP8/9, VC-1, AVC hardware decoding Supports up to three independent screens: -Built-in Full HD display (1080p/60 Hz) -HDMI 1.4b (1080p/60 Hz or 2160p/30 Hz) -DVI-I (1080p/60 Hz) Note: DVI-I also supports analog VGA displays with an optional adapter

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WEBCAM	Integrated Full HD 2.0 Megapixel (1920 x 1080)	
IP65 PROTECTED	The front panel is dust and splash water protected with protection class IP65	
TOUCHSCREEN	21.5" LCD display, IPS technology 16:9 widescreen panel (1920x1080 px), 2 Megapixel Luminance: 300 cd/sqm, 10-point multi-touch Contrast: 1000:1, backlight lifetime: 30,000 hours Supports fingertip input, stylus pen not supported Viewing angle (left/right/up/down): 89°	
BIOS	AMI BIOS in EEPROM with SPI interface -Non-vPro version - SPI ROM size: 16MB -vPro version - SPI ROM size is 32MB Supports Power on by RTC alarm vPro is supported for i5/i7 models only	Supports resume after power failure Supports hardware monitoring and watch dog functionality Supports booting from M.2 SSD cards and USB devices Supports Unified Extensible Firmware Interface (UEFI)
STORAGE	Supports one 2.5" SATA hard disk or SSD drive, max height 7 mm Supports SATA III, 6 GB/s bandwidth, M.2 slot for SSDs Drive can be installed via swappable drive tray, no hot-swap capability (exchanging during operation)	
CONNECTORS	Power Button and Easy Rock Switch HDMI 1.4b (digital video/audio) DVI-I (video, analog + digital) USB 3.2 Gen 1 Type A x 4 (max 5GB/s) Gigabit LAN x 2 (RJ45, i211/i219LM)	Serial Port DB9/D-sub (1 x RS232, RS232/RS422/RS485 x 2) DC input for external power adapter (19V/90W) Perforation (6.5 mm) for optional equalization pin (POAG) Microphone input (3.5 mm) Headphones output (3.5 mm)
OTHER CONNECTORS	Back panel has three sections, which can be assigned with other connections Requires a modification of the metallic back panel shield Available ports: HDMI, DisplayPort, DVI-I, VGA, Quad USB 2.0, COM	
INCLUDED ACCESSORIES	XPC installation guide Driver DVD Screw pack	External 65W/19V power adapter with cord Serial ATA cable for 2.5" drive
OPTIONAL ACCESSORIES	COM/LPT adapter (POS01): -1 x Parallel (25p, VGA) -2 x Serial RS232 (9p, VGA, 5/12V) -2 x Serial RS232 (8p, RJ45) -1 x DIO/RJ11 connector (12/24V)	COM/LPT adapter (PLC71): -1 x Parallel (25p, VGA) -2 x Serial RS232 (9p, VGA, 5/12V)
ENVIRONMENTAL CRITERIA	Operating temperature: 0 - 40°C Storage temperature: -20 - 60°C	Humidity: 20 - 80% (non-condensing)
CERTIFICATIONS	EMI: FCC Class A, CE, BSMI, VCCI Safety: CB, cTUVus, BSMI This model is classed as a technical information equipment (ITE) in class A is for products used in commercial and industrial areas. The CE mark approves 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 related to Radio Equipment Directive (RED)	RF: EU, US, Taiwan

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PRODUCT WARRANTY: https://www.shuttlecomputers.com/policies

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TOUCH PANEL PC

SUPPORTS 8TH GEN INTEL® PROCESSORS

The P21WL01 supports Intel® 8th Generation Celeron® and Core™ i3/i5/i7 processors as well as commercial or embedded Whiskeylake-U CPUs.*

*Available configurations for this model: Intel® Core™ i3-8145UE, Intel® Core™ i5-8365UE, Intel® Core™ i7-8665UE

IP65 CERTIFIED DESIGN

The front panel of the P21WL01 is IP65 certified for dust and splash water resistance, suitable for indoor applications where the touch screen my be exposed to humidity and the occasional splashing of water.

ALUMINUM CHASSIS

The rear chassis and middle frame are completely made of aluminum (3 mm thickness). Multiple I/O ports include connections like HDMI, DVI-I, USB 3.2 Gen 1 ports, and COM ports. The back panel cover makes for effective cable management

FANLESS DESIGN

With a passive heatpipe cooling, the fanless design reduces power consumption required by a fan, perfect for noise-sensitive environments.

24/7 NONSTOP OPERATION

Officially approved for 24/7 nonstop operation, the P21WL01 keeps things cool and stable for long term demands of applications with heat pipe cooling technology.*

*Space around unit needed for circulation of air; HDD/SSD installed must be approved for permanent operation by the manufacturer

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