

TPC121-EKT

12.1" All-in-one Panel PC



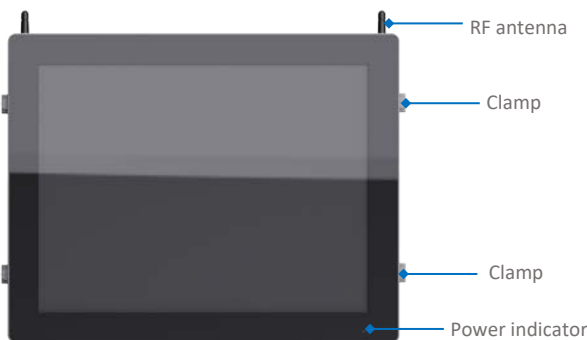
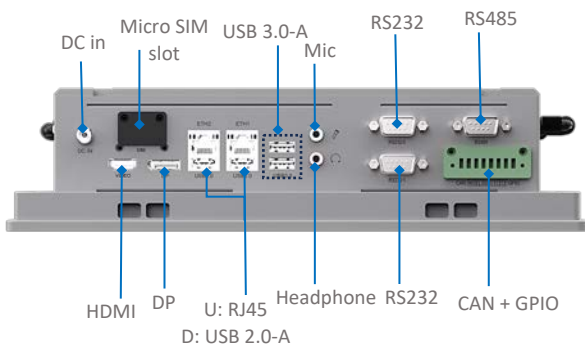
Product Brief






Vantron TPC121-EKT is a 12.1" panel mount all-in-one panel PC. It is powered by Intel® Elkhart Lake quad-core high-performance processor that offers rich interfaces such as RS232, RS485, GPIO, USB, and CAN, enabling seamless connection with diverse peripherals.

TPC121-EKT features a 10-point PCAP touchscreen monitor with an XGA native resolution and a 4:3 aspect ratio. It offers multiple connectivity options, including dual Ethernet, Wi-Fi, Bluetooth, and optional 4G LTE. The front panel is IP65 rated, making it ideal for industrial control applications such as retail, smart city, and healthcare when panel mounted with the provided clamps. In addition, the 75mm x 75mm VESA pattern provides it with flexibility for installation in various settings.

Vantron TPC series all-in-one panel PCs offer an overall solution that integrates the touchscreen monitor, display, processor, and software operating system, making them a first choice in IoT applications.

Exterior and Features

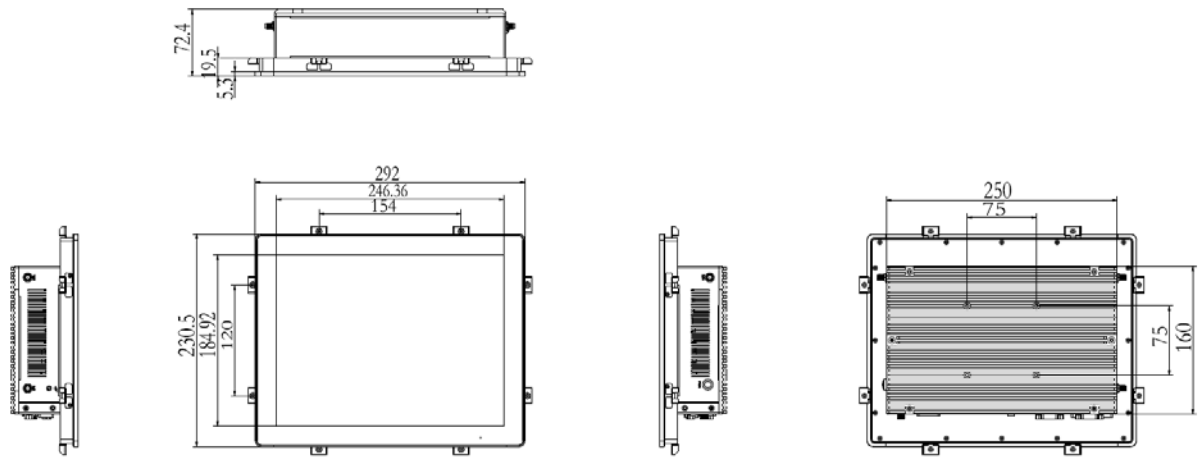


TPC121-EKT	
	Intel® Elkhart Lake high-performance processor
	12.1" XGA TFT LCD, 300 nits
	10-point PCAP touch screen, gloves compatible
	Windows 10 IoT, Ubuntu 20.04
	Ethernet, Wi-Fi, Bluetooth, optional 4G LTE
	Rich I/O: RS232, RS485, GPIO, USB, CAN
	Front panel IP65 rated
	Fanless design
	Panel mount, VESA mount

TPC121-EKT 12.1" All-in-one Panel PC Datasheet

TPC121-EKT				
System	CPU	Intel® Atom® x6425E Processor, 4C4T, 2.0GHz (base), 3.0GHz (turbo), 12W TDP Intel® Celeron® J6412 Processor, 4C4T, 2.0GHz (base), 2.6GHz (turbo), 10W TDP		
	Memory	1 x DDR4 SO-DIMM, 3200MT/s, up to 16 GB (Default: 8GB)		
	Storage	128GB eMMC 5.1 Optional: Up to 1TB SATA SSD (M.2 B-Key 2242, multiplexed with 4G LTE)		
Communication	Ethernet	2 x RJ45, 10/100/1000Mbps		
	Wi-Fi & BT	Wi-Fi 802.11 a/b/g/n/ac + BT 5.0		
	4G LTE	Optional, CAT 4 (M.2 B-Key 2230, multiplexed with SATA SSD)		
Media	Display	12.1-inch TFT LCD	Contrast ratio: 800:1	
		Resolution: 1024 x 768 @60Hz	Aspect ratio: 4:3	
		Brightness: 300 nits (typical)	Viewing angle: 80/80/85/85 (U/D/L/R)	
	Extended display	1 x HDMI 2.0b, up to 4K @60Hz	1 x DP1.4, up to 4K @60Hz	
	TP	10-point PCAP touch screen		Surface hardness: 6H
		Surface treatment: Anti-fingerprint (AF)		Cover lens: IK07 rated
		Optional: Anti-glare (AG)		Light transmittance ratio: > 85%
Touch input: Finger, stylus, gloves (conductive or ≤1mm thick non-conductive)				
Audio	1 x 3.5mm Microphone jack	1 x 3.5mm 3-pole headphone jack		
I/O	USB	2 x USB 2.0 Type-A	2 x USB 3.0 Type-A	
	Serial port	2 x RS232, DB9	1 x RS232/485/422, DB9	
	CAN	Atom® x6425E: 1 x CAN Celeron®J6412: Optional 1 x CAN		
	GPIO	4 x GPIO (3.3V)		
	Antenna	RF0: Wi-Fi & Bluetooth antenna	RF1, RF2: 4G LTE antenna	
	SIM slot	1 x Micro SIM slot		
	Miscellaneous	RTC	Supported	
WDT		Supported		
Security		Discrete TPM2.0		
System control	Button	1 x Power button		
	LED indicator	1 x Power indicator (Green: Normal operation; Red: Standby)		
Software	OS	Windows 10 IoT	Ubuntu 20.04	
	Display orientation	Landscape mode by default (Portrait mode supported)		
Power	Input	12V~36V DC	1 x Power jack	
	Consumption	Typical: 19W	Max.: 29W	
Mechanical	Dimensions	292mm x 230.5mm x 72.4mm		
	Installation	VESA mount (75mm x 75mm, M4 x 6mm)	Panel mount	
	Weight	3.2kg		
	IP rating	Front panel IP65		
	Heat dissipation	Fanless		
Environment condition	Temperature	Operating: -20°C ~ +60°C	Storage: -30°C ~ +80°C	
	Humidity	10%-85% RH (Non-condensing)		
	Certification	FCC, CE	ESD: ±4KV (Contact); ±8KV (Air)	
Reliability	MTBF	50,000 hours		
	Warranty	2 years		

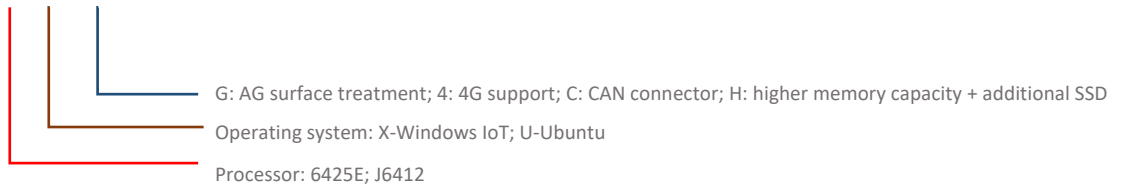
Product Outlines



Ordering Information

Nomenclature

TPC121-EKT-P-OS-Add-on features



Example Ordering No.	Memory	Storage	Add-on	Operating System	Processor
TPC121-EKT-6425E-X	8GB	128GB	/	Windows 10 IoT	Intel® Atom® x6425E processor
TPC121-EKT-6425E-X4	8GB	128GB	4G LTE	Windows 10 IoT	
TPC121-EKT-6425E-UGH	16GB	128GB	512GB SSD, AG treatment	Ubuntu 20.04	
TPC121-EKT-J6412-X	8GB	128GB	/	Windows 10 IoT	Intel® Celeron® J6412 processor
TPC121-EKT-J6412-X4	8GB	128GB	4G LTE	Windows 10 IoT	
TPC121-EKT-J6412-UC	8GB	128GB	CAN connector	Ubuntu 20.04	
TPC121-EKT-J6412-UGH	16GB	128GB	512GB SSD, AG treatment	Ubuntu 20.04	

Packing list			
TPC121-EKT all-in-one panel PC	1	GPIO mating connector	1
Wi-Fi & BT antenna	1	Mounting clamp	4
CAN mating connector for x6425E processor	1	/	/
Optional accessories			
19V 3.42A DC power adapter	1	AC power cable (US)	1
4G LTE antenna for 4G version	2	CAN mating connector for J6412 with CAN version	1

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