



## PART NUMBER: IPC-RUGGED

- 11th Gen. Intel® Core™ U-Series processors
- Advanced video surveillance with AI accelerator
- Fanless operating on -40 ~70°C temperature
- Support 4 ports Gigabit Ethernet or PoE options
- IP65 enclosures for demanding AIoT applications
- Intelligent vehicle power ignition control
- E-Mark(13), EN50155, and MIL-STD810H certified

## SPECIFICATION

<b>Model</b>		i5	Core
<b>Processor System</b>	CPU	Intel i5-1145GRE	Intel Celeron 6305E
	Frequency	1.5/ 4.1 GHz (Max Turbo)	1.8 GHz
	L3 Cache	8 MB	4 MB
	BIOS	AMI EFI 128 Mbit	
<b>Memory</b>	Technology	DDR4 Dual-channel memory, Up to 3200MT/S	DDR4 Dual-channel memory, Up to 3200MT/S
	Onboard Memory	8GB	None
	SODIMM Memory	1x SO-DIMM socket (up to 32GB)	1x DDR4-3200 8GB DRAM
<b>Graphics</b>	Controller	Intel® Iris® Xe Graphics 1.30 GHz	Intel® Iris® Xe Graphics 1.25 GHz
	HW Acceleration	HW Encode: Supports AVC, MPEG-2, HEVC, and VP9. HW Decode: Supports Direct3D* 9 Video API (DXVA2), Direct3D12 Video API, Intel Media SDK, MFT (Media Foundation Transform) filters, Intel VA API	
	HDMI	2x HDMI 2.0b with 4Kx2K support at 48-60Hz/24bpp	
<b>Audio</b>	Main System	1x Pin header, Line-in, Line out, Mic-in (support by project)	
<b>Ethernet</b>	LAN (PoE)	4x M12 circular connectors with 10/100/1000 Mbps speed	
		(IEEE802.3af PoE options with maximum power output of 60W. Support by project)	
<b>I/O Interface</b>	Serial Ports	2x DB-9 RS-232/422/485 with auto flow control	
	USB Interface	2x USB type-A 3.0 & 2.0	
		2x M12 circular with USB 2.0 support	
<b>Other</b>	Watchdog Timer	255-level timer interval, setup by software	
	TPM	TPM2.0	
<b>Expansion</b>	mPCIe (MINIPCE2)	1x Full size mini PCIe slot (with PCIe Gen 1/USB 3.0, USB 2.0)	
	mPCIe/mSATA (MINIPCE1)	1x Full size mini PCIe slot (with PCIe Gen 1/USB 3.0, USB 2.0 & SATA)	
	M.2	1x M.2 2230 E key (with PCIe Gen 1, USB 2.0)	
<b>Storage</b>	mSATA	1x MSATA (leverage mSATA/mPCIe slot)	
	SATA	1x SATA-III (mounting kits, option)	
	Onboard NVMe SSD	Up to 32GB (support by project)	
<b>Software Support</b>	Microsoft Windows	Windows 10	
	Linux	Ubuntu 20.04 LTS	
<b>Power Requirement</b>	Power Input Voltage	In-Vehicle: +12/24VDC	
		Railway: +24VDC	
	Vehicle Power Ignition	Selectable boot-up & shut-down voltage, on/off delay time	
Power Consumption	Maximum load 52.82W with used +12VDC		

	Power Consumption	Idle mode (S0) 26.1W with used +12VDC
	Isolation	1.5 KV Isolated
Mechanical	Construction	Aluminum housing, Black
	Mounting	Desk/Wall-mounting
		Din-Rail/VESA mounting by project based support
	Dimensions (W x H x D)	280 x 81 x 230 mm (without wall-mounting)
316 x 81 x 230 mm (with wall-mounting)		
Environment	Operating Temperature	Standard: 0-60 °C
		Extended: -40-70 °C with air flow 0.7m/s (with extended temperature peripherals)
	Storage Temperature	-40 ~ 85 °C (-40~185 °F)
	Relative Humidity	95% @ 40 °C (non-condensing)
	Sealing Level	IP65 (work with option Amphenol waterproof cap and boot style hood to protect mating interfaces against water and dust incursion)
	Vibration/Shock	IEC 60721-3-5 (Vehicle-5M3)
MIL-STD-810H method 814.8 (Category 4. Trucks and trailer)		
Regulation	EMC	CE/FCC Class B
	Safety	12V/ 24VDC: E-Mark (E13)*
		24VDC: EN50155 and EN45545*
In-vehicle Power	ISO7637-2 Lev.4	
Others	Warranty	3 years
	Production	Made in Taiwan

Note: Product based support. Please contact sales for details.

## The Power to Outperform

Would you like to find out more? Be sure to speak to our on-stand team or contact us via the details here and we would be happy to help.

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