Embedded Box PC

BPCAL03

Unparalleled Real-Time Edge Computing Prowess

Selecting an outstanding and reliable embedded PC is crucial to enhance intelligent workloads, especially in the evolving commercial and extreme-environment industrial sectors. Critical operations, such as extensive data collection, exchange, analysis, and decision-making, heavily depend on robust and stable computing performance.

Utilizing Intel® 12th Gen Alder Lake platform technology, Shuttle's embedded IPC, the BPCAL03, proves to be well-suited for a range of IoT applications across industries. With DDR5-4800 memory support, enhanced caching, and advanced security features, it ensures optimal performance. Powered by i5/i7 processors and leveraging Intel® Iris Xe graphics architecture, the BPCAL03 efficiently handles intelligent workloads, enhancing graphical computing capabilities and expediting AI tasks. Tailored specifically for edge AI inference, data analysis, engineering control, and image recognition, it boasts a flexible I/O modular design and various installation options to meet diverse custom needs in industrial IoT environments, delivering a comprehensive and adaptable solution.

FANLESS

WIDE TEMP RANGE

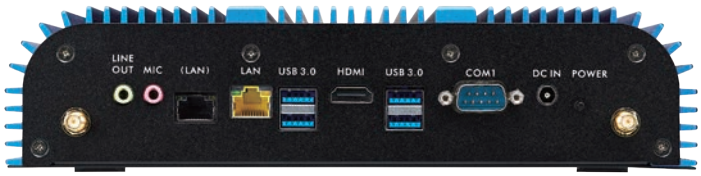
DUAL 2.5G LAN

FLEXIBLE I/O CUSTOMIZATION KIT

FEATURES

- Powered by 12th Gen Intel® Alder Lake Core™ / Celeron® processors
- Exceptional operating temperature versatility : -20°C to 60°C
- 1 x M.2 2280, M key (PCIe NVMe / SATA), 1 x 2.5" HDD / SSD (Optional)
- Supports VESA, Ear Mount, and DIN-Rail installation for diverse application scenarios
- Supports up to 4 independent displays via equipped HDMI 2.0 and flexible expansion slots
- 2 x Intel® 2.5G LAN, 4 x USB3.2 Gen 2 (Type A), 4 x USB2.0, 1 x RS232, 2 x RS232 / 422 / 485
- Modular design for flexible network connectivity and I/O configuration, meeting industrial IoT needs

* Intel® Iris Xe applies only to Core i5/i7 models



Specifications

System			
Processor	12th Gen. Intel® Alder Lake Core i3-1215UE (default) Optional : i5-1235U, i5-1245UE, i7-1255U, i7-1265UE, Celeron® 7305E		
Memory	2 x 262 pin SO-DIMM up to 64GB Dual Channel DDR5 4800 MHz		
BIOS	AMI UEFI 64 Mbit		
Graphics			
Chipset	Intel® UHD or Iris® Xe Graphics	**Display Interface**	2 x HDMI 2.0 : 4096 x 2160@60Hz
Display Output	Max : 4 independent or clone	**Video Decoder**	WMV,AVC / H264,JPEG / MJPEG,HEVC / H265,VP9,AV1
Storage			
Internal	1 x M.2 2280 M key (PCIe NVMe / SATA)		
Audio			
Audio Codec	Realtek ALC888S-VD 2-channel		
Network			
Ethernet	2 x Intel® LAN / Support Wake On LAN		
WLAN	Realtek RTL8821CE 802.11a/b/g/n/ac + Bluetooth 5.0 WLAN card M.2 2230 E key (Optional) External antenna (Dipole) x2 (Optional)		
I/O Interface			
Serial Ports	1 x RS-232 (DB-9) 2 x RS-232/422/485 (DB-9) (RS-232 with power supply : ring in/ 5V (standard) &12V (with specific optional board))		
USB	4 x USB3.2 Gen 2 (Type A) 4 x USB2.0	**Audio**	1 x Line-out 1 x Mic-in
Power			
Bundled Adapter	19V/7.89A 150W external adapter		
Option	With option wide range board, MB support 9-36V DC-in		
Watchdog Timer			
Watchdog	Support watchdog		
OS Support			
OS Support	Windows 11 64bit / Linux 64bit		
Mechanism			
Mounting	VESA Mount 75 x 75 mm Ear Mount 256 x 100 mm Din Rail	**Dimension** (WxHxD)	245 x 169 x 57 mm
		Weight	2.85kg
Environment			
Operating Temperature	-20°C ~ 60°C	**Relative Humidity**	20% - 80% RH (non-condensing)
EMC	CE, FCC, VCCI, BSMI, RCM	**Safety**	CB, CEC, cTUVus, BSMI, EAC