



Industrial PC

Spectra PowerBox 530

Industrial Box-PC | Alder Lake / Raptor Lake
with MXM GPU Interface

Features

- Compact Box PC for GPU-Computing
- Robust and in attractive design
- Supports 14th (13th/12th) Generation Intel® Processors
- MXM modules options
- Various I/O expansions
- Wide range voltage: 9 – 48 V DC, with voltage monitoring

MXM Module
with 4 DP



Spectra PowerBox 530

Technical Data

Pre-defined Systems (pre-configured)

Model	Spectra PowerBox 530 Advanced 3 MXM	Spectra PowerBox 530 Advanced 4 MXM	Spectra PowerBox 530 Pro 4 MXM	Spectra PowerBox 530 Performance 5 MXM
Article n°	175517	175516	175514	175511
Processor	Intel® Core™ i5-14500T	Intel® Core™ i5-14500T	Intel® Core™ i7-14701E	Intel® Core™ i9-14900
RAM	16 GB	16 GB	16 GB	32 GB WT
SSD	256 GB M.2 NVMe SSD	512 GB M.2 NVMe SSD	512 GB M.2 NVMe SSD	1 TB M.2 NVMe SSD
Graphics	NVIDIA RTX A500 MXM, -	NVIDIA RTX A1000 MXM, 4x DP	NVIDIA RTX 3000 MXM, 4x DP	NVIDIA RTX A4500 MXM, 4x DP
Operating system	Microsoft® Windows® 11 IoT Enterprise LTSC 2024, 64-bit, german / english			
Operating temperature	0°C ~ +45°C	0°C ~ +45°C	0°C ~ +45°C	0°C ~ +45°C
Diverse	-		incl. external fan	

Basic Device / Barebone (unconfigured)

System

Motherboard with processor support for	CPU Name	Cores	TDP	Long-term availability
14th Generation Intel Raptor Lake-S Refresh	Intel® Core™ i9-14900	24	65W	yes
	Intel® Core™ i9-14900T	24	35W (optimized consumption)	yes
	Intel® Core™ i9-14901E	8	65W	yes
	Intel® Core™ i9-14901TE	8	45W (optimized consumption)	yes
	Intel® Core™ i7-14700	20	65W	yes
	Intel® Core™ i7-14700T	20	35W (optimized consumption)	yes
	Intel® Core™ i7-14701E	8	65W	yes
	Intel® Core™ i7-14701TE	8	45W (optimized consumption)	yes
	Intel® Core™ i5-14500	14	65W	yes
	Intel® Core™ i5-14500T	14	35W (optimized consumption)	yes
	Intel® Core™ i5-14501E	6	65W	yes
	Intel® Core™ i5-14501TE	6	45W (optimized consumption)	yes
	Intel® Core™ i5-14400	10	65W	yes
	Intel® Core™ i5-14400T	10	35W (optimized consumption)	yes
	Intel® Core™ i5-14401E	6	65W	yes
	Intel® Core™ i5-14401TE	6	45W (optimized consumption)	yes
	Intel® Core™ i3-14100	4	60W	yes
	Intel® Core™ i3-14100T	4	35W (optimized consumption)	yes
13th Generation Intel Raptor Lake -S	Intel® Processor 300	2	46W	nein
	Intel® Processor 300T	2	35W (optimized consumption)	nein
	Intel® Core™ i9-13900E	24	65W	yes
	Intel® Core™ i9-13900TE	24	35W (optimized consumption)	yes
	Intel® Core™ i7-13700E	16	65W	yes
	Intel® Core™ i7-13700TE	16	35W (optimized consumption)	yes
	Intel® Core™ i5-13500E	14	65W	yes
	Intel® Core™ i5-13500TE	14	35W (optimized consumption)	yes
12th Generation Intel Alder Lake-S	Intel® Core™ i5-13400E	10	65W	yes
	Intel® Core™ i3-13100E	4	65W	yes
	Intel® Core™ i9-12900E	16	65W	yes
	Intel® Core™ i9-12900TE	16	35W (optimized consumption)	yes
	Intel® Core™ i7-12700E	12	65W	yes
	Intel® Core™ i7-12700TE	12	35W (optimized consumption)	yes
	Intel® Core™ i5-12500E	6	65W	yes
	Intel® Core™ i5-12500TE	6	35W (optimized consumption)	yes
	Intel® Core™ i3-12100E	4	60W	yes
	Intel® Core™ i3-12100TE	4	35W (optimized consumption)	yes
	Intel® Pentium® G7400E	2	46W	yes
	Intel® Pentium® G7400TE	2	35W (optimized consumption)	yes
Chipset	Intel® Celeron® G6900E	2	46W	yes
	Intel® Celeron® G6900TE	2	35W (optimized consumption)	yes
	Intel® R680E			
Memory Socket	2 x DDR5 4800 MHz SO-DIMM, max. 64 GB			

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Controllers & Interfaces

Ethernet	• 1 x 2.5GbE LAN Intel® i225 • 1 x 1GbE LAN Intel® i229
Graphics	integrated Intel® UHD Graphics 770 (Core i9/i7/i5) ; Graphics 730 (Core i3); Graphics 710 (Pentium/Celeron)
Audio	Realtek ALC888HD
Front I/O	• 1 x USB3.2 Gen2 x2, Typ C (20Gbps) • 3 x USB3.2 Gen2 x1, Typ A (10Gbps)
Rear I/O	• 4 x USB 3.2 Gen1 x1, Typ A (5Gbps) • 2 x RJ45 • 4 x RS-232/422/485, Auto Flow Control (5V/12V), DB9 • 1 x VGA (1920 x 1200 @ 60 Hz) • 1 x HDMI (4096 x 2160 @ 30 Hz) • 1 x DP (4096 x 2304 @ 60 Hz) • 1 x Line-out, 1 x Mic-in

Drives & Expansions

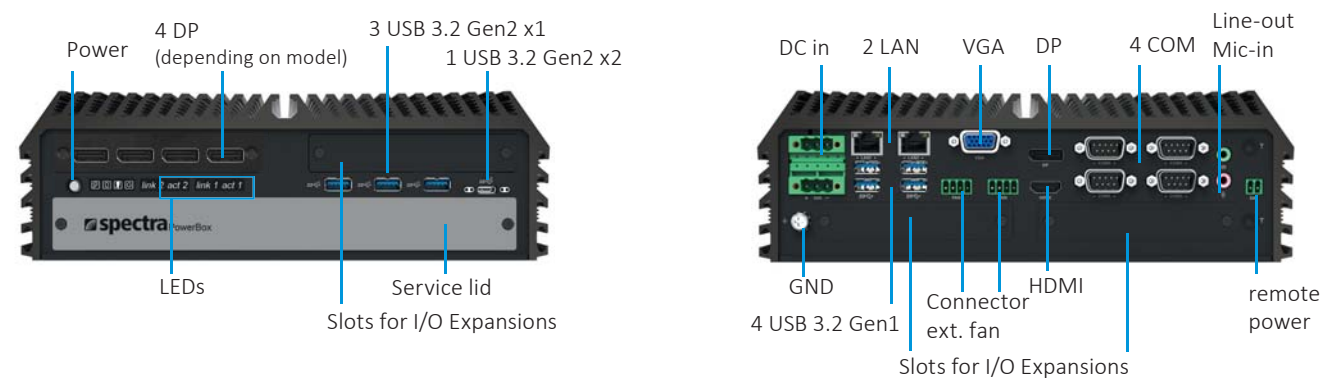
Storage Sockets	• 2 x 2.5" SATA HDD/SSD, RAID 0/1/5/10 • 1 x M.2 Key M, 2280 Socket (NVMe/SATA3.0 SSD), by pre-defined systems, slot taken! • 3 x M.2 Key B (s. Weitere Slots)
PCI/PCIe/mPCIe Slots	-
Other Slots	• 1 x MXM Carrier Board for MXM GPU Modules, by pre-defined systems, slot taken! • 1 x M.2 Key E, 2230 Socket (Wireless/CNVi Modules) • 1 x M.2 Key B, 3042/3052 Socket (5G/Storage/Add-on expansion cards) • 2 x M.2 Key B, 2242 Socket (Storage/Add-on expansion cards) • 4 x Slots (proprietary) for optional I/O-Expansions • 1 x SIM • 1 x Interface for opt. Power Ignition Module
Antenna cut-outs	2 x for wireless communication

Further Data

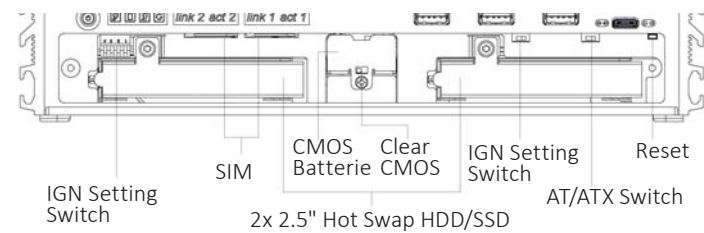
Power	AT/ATX 9~48 V DC
Temperatures	• Operating temperature - 35W TDP CPU: -40°C to 70°C (with extended temperature Peripherals, without MXM Module) - 65W TDP CPU: -40°C to 60°C (with extended temperature Peripherals and external Fan kit, without MXM Module) • Storage temperature -40°C up to +85°C • Relative humidity 95% @ 70°C, non condensing
Dimensions (W x D x H)	260 x 85 x 200 mm
Weight (net/gross)	Basic Device: 4,6 kg / 5,0 kg Pre-defined systems: 5,2 kg / 7,3 kg (Advanced), 5,4 kg / 7,5 kg (Performance, Pro)
Mounting	Wall, VESA DIN-rail and Sideboard via opt. accessories
Warranty	24 Months
Packing List	• 2 x rails for wall mount • Pre-defined Systems: Microsoft® Windows® Recovery Medium

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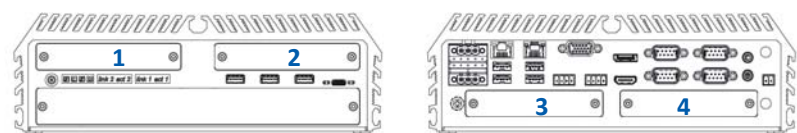
Interfaces



Service lid



Extended Equipment



Multi-IO Modules

and possible assignment of the expansion slots

	1	2	3	4
1x MXM Interface, 4 DP	✓	—	—	—
4 x Intel I210 1GbE LAN, RJ45 Variants: M12 A-Coded, M12 X-coded connectors	—	✓	—	—
2 x Intel X550 10GbE LAN, RJ45	—	✓	—	—
16 DIO (8x in / 8 x out)	—	—	—	✓
2 x RS-232/422/485 (5V/12V), DB9	—	—	—	✓
3 x Antenna cut-outs	✓	✓	✓	✓



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Extended Equipment

MXM GPU Modules

NVIDIA Embedded RTX A4500

- GPU-Memory: 16GB GDDR6
- Display-Interface 4 x DisplayPort 1.4a (4K @ 120Hz or 8K @ 60Hz)

NVIDIA Embedded RTX A2000

- GPU-Memory: 8GB GDDR6
- Display-Interface 4 x DisplayPort 1.4a (4K @ 120Hz or 8K @ 60Hz)

NVIDIA Embedded RTX A1000

- GPU-Memory: 4GB GDDR6
- Display-Interface 4 x DisplayPort 1.4a (4K @ 120Hz or 8K @ 60Hz)

NVIDIA Embedded RTX A500

- GPU-Memory: 4GB GDDR6
- Display-Interface: -

NVIDIA Quadro Embedded RTX 3000

- GPU-Memory: 6GB GDDR6
- Display-Interface 4 x DisplayPort 1.4a (4K @ 120Hz or 8K @ 60Hz)

NVIDIA Quadro Embedded T1000

- GPU-Memory: 4GB GDDR6
- Display-Interface 4 x DisplayPort 1.4a (4K @ 120Hz or 8K @ 60Hz)



Further optional accessories

- Kit for DIN-rail Mount
- Sideboard Mount
- Power Ignition Sensing, 12V/24V selectable
- Power adapter, 360W, 24V/15A, C14, 3-pin, Tube
- External Fan, 4-pin Terminal Block (intended for more powerful systems with TDP > 46W)



External fan
accelerates heat dissipation

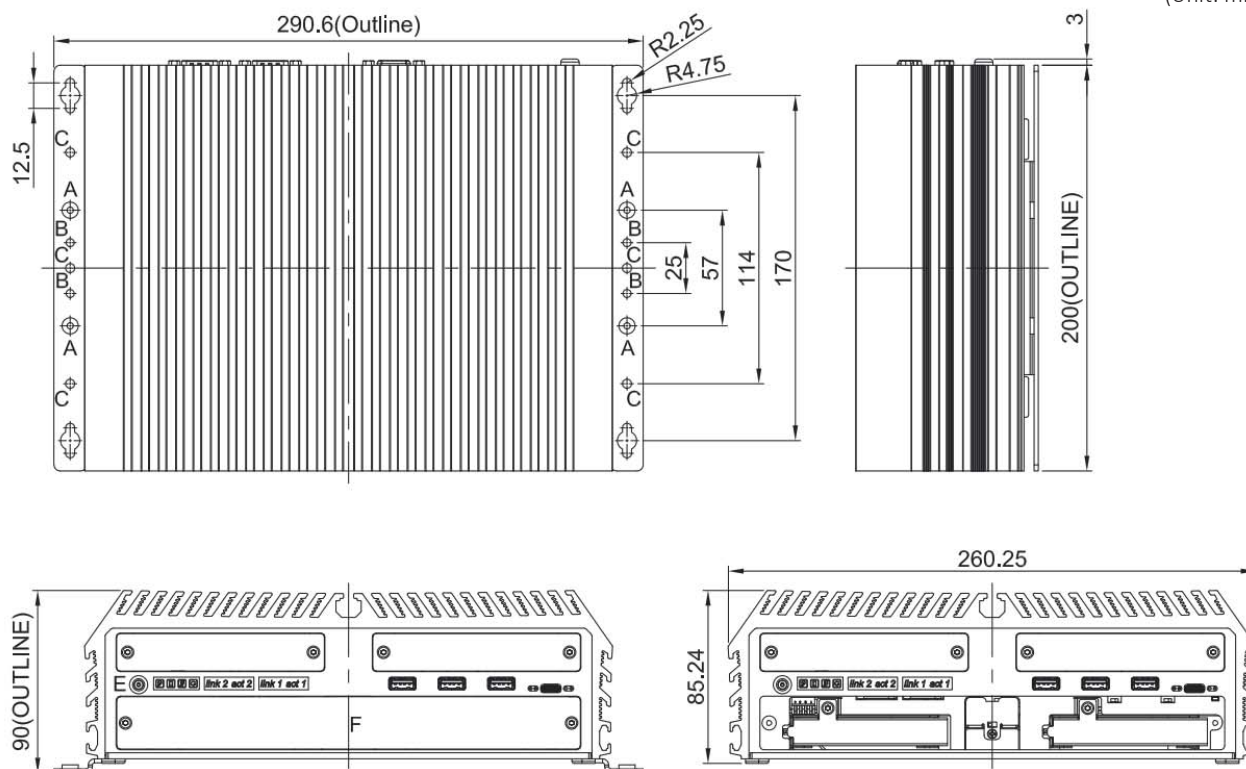


Independent cooling
for CPU & GPU

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Dimensions

(Unit: mm)



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