



*Industrial PC*

# Spectra PowerBox 420

Industrial Box-PC | Alder Lake

## Features

- Compact, fanless Mini-Server
- Robust and in attractive industry design
- Supports 12th Generation Intel® Xeon® & Core™ i7/i5/i3
- 4 sockets for various expansions
- Wide range voltage: 9 – 48 V, with voltage monitoring



# Spectra PowerBox 420

## Technical Data

### Pre-defined Systems (pre-configured)

Model	Spectra PowerBox 420 Advanced 2	Spectra PowerBox 420 Advanced 2 Wide Temp	Spectra PowerBox 420 Pro 4	Spectra PowerBox 420 Pro 4 Wide Temp
Article n°	170985	170986	170992	170967
Processor	Intel® Core™ i5-12500TE	Intel® Core™ i5-12500TE	Intel® Core™ i7-12700TE	Intel® Core™ i7-12700TE
RAM	8 GB	8 GB WT	16 GB	16 GB WT
SSD	256 GB 2.5" SATA-6G	256 GB 2.5" SATA-6G WT	512 GB 2.5" SATA-6G	512 GB 2.5" SATA-6G WT
Operating system	Microsoft® Windows® 10 IoT Enterprise 2021 LTSC, 64-bit, german / english			
Operating temperature	0°C ~ +45°C	-40°C ~ +50°C	0°C ~ +45°C	-40°C ~ +50°C

### Basic Device / Barebone (unconfigured)

Motherboard with Processor Support for	12th Generation Intel® Alder Lake-S Series: <ul style="list-style-type: none"> <li>Intel® Core™ i9-12900E 16 Cores Up to 5 GHz, TDP 65W</li> <li>Intel® Core™ i7-12700E 12 Cores Up to 4.8 GHz, TDP 65W</li> <li>Intel® Core™ i5-12500E 6 Cores Up to 4.5 GHz, TDP 65W</li> <li>Intel® Core™ i3-12100E 4 Cores Up to 4.2 GHz, TDP 60W</li> <li>Intel® Core™ i9-12900TE 16 Cores Up to 4.8 GHz, TDP 35W</li> <li>Intel® Core™ i7-12700TE 12 Cores Up to 4.7 GHz, TDP 35W</li> <li>Intel® Core™ i5-12500TE 6 Cores Up to 4.3 GHz, TDP 35W</li> <li>Intel® Core™ i3-12100TE 4 Cores Up to 4.0 GHz, TDP 35W</li> <li>Intel® Pentium® G7400E 2 Cores Up to 3.6 GHz, TDP 46W</li> <li>Intel® Pentium® G7400TE 2 Cores Up to 3.0 GHz, TDP 35W</li> <li>Intel® Celeron® G6900E 2 Cores Up to 3.0 GHz, TDP 46W</li> <li>Intel® Celeron® G6900TE 2 Cores Up to 2.4 GHz, TDP 35W</li> </ul>
Chipset	Intel® R680E
Memory Socket	2 x DDR5 4800 MHz SO-DIMM, max. 64 GB

### Controllers & Interfaces

Ethernet	1 x Intel® i219 Gigabit-LAN, 1 x Intel® i210 Gigabit-LAN
Graphics	Integrated Intel® UHD Graphics 770 (Core i9/i7/i5) ; Graphics 730 (Core i3); Graphics 710 (Pentium/Celeron)
Audio	Realtek ALC888 HD
Front I/O	<ul style="list-style-type: none"> <li>4 x USB 3.2 Gen2</li> <li>1 x HDMI (3840 x 2160 @ 30 Hz)</li> </ul>
Rear I/O	<ul style="list-style-type: none"> <li>4 x USB 3.2 Gen1</li> <li>2 x RJ45</li> <li>4 x RS-232/422/485, Auto Flow Control (5V/12V), DB9</li> <li>1 x DVI-I (DVI-D: 1920 x 1200 @ 60 Hz, VGA: 1920 x 1080 @ 60 Hz)</li> <li>1 x DP (4096 x 2304 @ 60 Hz)</li> <li>1 x Line-out, 1 x Mic-in</li> </ul>

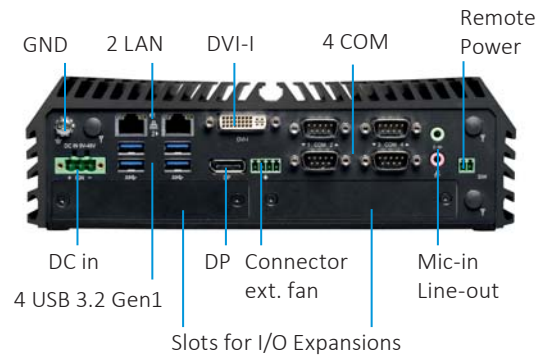
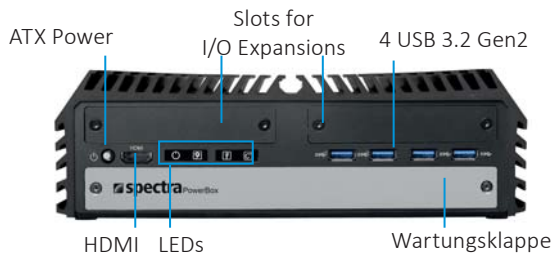
### Drives & Expansions

Storage Sockets	<ul style="list-style-type: none"> <li>2 x 2.5" SATA HDD/SSD (Pre-defined System: 1 of which taken)</li> <li>2 x mSATA (over mPCIe-Slot)</li> <li>RAID 0/1/5/10</li> </ul>
PCI/PCIe/mPCIe Slots	2 x Full-Size Mini-PCIe
Other Slots	<ul style="list-style-type: none"> <li>3 x Slot (proprietary) for optional I/O Expansions</li> <li>1 x SIM</li> <li>1 x M.2 Key E 2230 (Intel CNVi)</li> <li>1 x Interface for opt. Power Ignition Module</li> </ul>
Antenna cut-outs	3 x for wireless communication

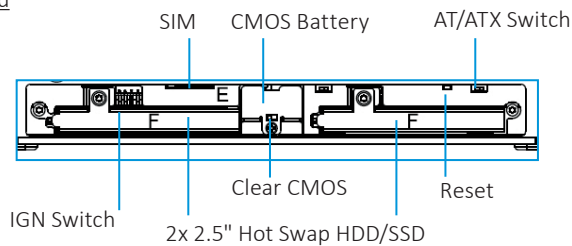
# Spectra PowerBox 420

## Technical Data

### Interfaces



### Service lid

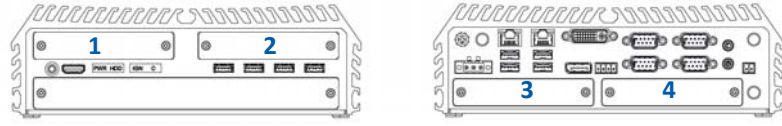


### Further Data

Power	AT/ATX 9~48 V DC
Temperatures	<ul style="list-style-type: none"> <li>Operating temperature           <ul style="list-style-type: none"> <li>- 35W TDP CPU: -40°C to 70°C (with extended temperature Peripherals)</li> <li>- 65W TDP CPU: -40°C to 50°C (with extended temperature Peripherals and external Fan kit)</li> </ul> </li> <li>Storage temperature -40°C to +85°C</li> <li>Relative humidity 95% @ 70°C, non condensing</li> </ul>
Dimensions (W x H x D)	242 x 75 x 173 mm
Weight (net/gross)	Basic device: 3,05 kg / 4,21 kg Pre-defined System: 3,45 kg / 5,05 kg
Mounting	Wall, DIN-rail, VESA, Sideboard
Warranty	24 months
Packing List	<ul style="list-style-type: none"> <li>2 x rails for wall mount</li> <li>Pre-defined System: Microsoft® Windows® Recovery Medium</li> </ul>

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## Extended Equipment



### Multi-IO Modules

and possible assignment of the expansion slots

	1	2	3	4
4 x Intel I210 1GbE LAN, RJ45 variants: M12 A-Coded, M12 X-coded connectors	✓	✓	-	-
2 x Intel 10GbE LAN, RJ45	✓	✓	-	-
16 DIO (8x in / 8 x out)	-	-	-	✓
2 x RS-232/422/485 (5V/12V), DB9	-	-	-	✓
4 x RS-232, DB9	-	-	✓	
2 x RS-232, DB9	-	-	✓	✓
2 x LAN, RJ45	-	-	✓	-



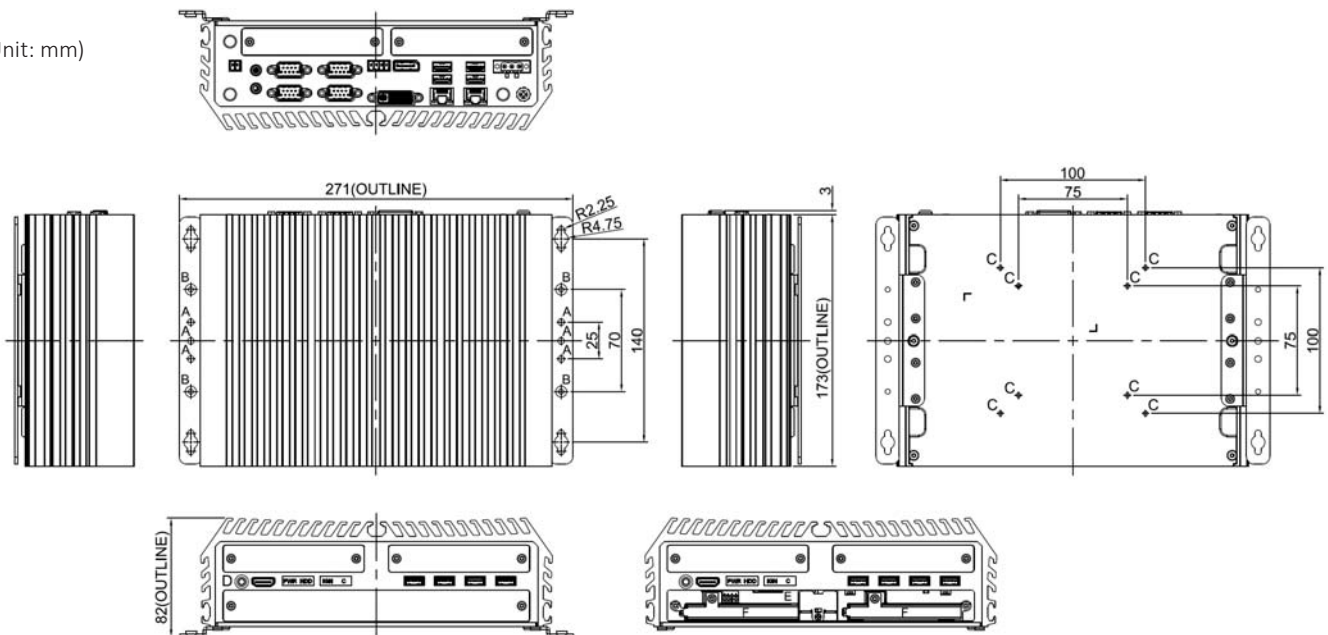
### Further optional accessories - Aks us!

- Kit for DIN-rail Mount
- Sideboard Mount, left
- Sideboard Mount, right
- External fan, 4-pin Terminal Block
- Power Ignition Sensing, 12V/24V selectable
- Power adapter, 120W, 24V/5A, C14, 3-pin, Tube



### Dimensions

(Unit: mm)



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