

SPECTRA POWERBOX 3000-SERIES

FEATURES

- Robust Mini-PC in attractive industrial design
- Easy maintenance through front service lid
- 3 Box heights available: from 0 to 2 expansion slots
- Support Intel® Dual Core & Quad Core Desktop 4th Generation Processors
- Upgradeable system module (digitale I/Os, Gigabit-LAN, WLAN, PoE...)
- Wide input power supply range : 9 – 48 V with voltage monitoring
- Power ignition input, time triggered shut down, ideal for transport and battery-based applications
- Several flexible mounting and equipment possibilities (external fan, power adapter holder)



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COMMON TECHNICAL DATA

SYSTEM

Processor support	Supports 4th Gen. Prozessoren (max. 45 W) Intel® Celeron® G1820TE Dual Core 2,2 GHz Intel® i3-4330TE Dual Core 2,4 GHz Intel® i5-4570TE Dual Core 2,7 GHz Intel® i7-4770TE Quad Core 2,3 GHz
Chipset	Intel® Q87
BIOS	AMI 128 Mbit SPI
System memory	2 x 204-pin DDR3/DDR3L SO-DIMM, 1600/1333 MHz, max. 16 GB
Network	1 x Intel® 82583V Gigabit-LAN Controller (Ether-CAT compatible) 1 x Intel® i217LM Gigabit-LAN Controller with WoL, XPE support
Audio	Realtek ALC888S Codec
Watchdog	software programmable, 1~255 sec.

EXPANSIONS & DRIVES

Expansion slots	- 3 x mPCIe (Full Size), support 2 x mSATA per Jumper adjustable - 1 or 2 PCI/ PCIe model-specific - max. 220 mm long (10 W) - 2 x slots for Multi I/O oder Function modules - 2 x mSATA (on mPCIe slot) - 1 x CFast card slot - 1 x SIM card slot
HDD / SSD	2 x 2.5" SATA SSD/HDD (support RAID 0/1)
Additional drives	-

I/O INTERFACE

Front	- 2 x USB3.0 - 1 x Display Port - 1 x DIO (isolated 4 DI/4 DO) & 4 x RS-232/422/485 on system module - Power Switch
Rear	- 2 x USB3.0, 4 x USB2.0 - 2 x RS-232/422/485 - 1 x DVI, 1 x DisplayPort, (1 x VGA over Y-cable) - 1 x Line-out, 1 x Mic-in - 1 x PS/2 keyboard/mouse - 2 x holes for antennas - AT/ATX-Switch, external fan connector, - Remote Power on/off & Reset

* needed: active DP to DVI adapter module (see Accessories page 7)

MECHANICAL & ENVIRONMENT CONDITIONS

Chassis	Aluminium special profile
Power	AT, ATX 9 – 48 V DC (3-pin terminal block connector) 120 W power adapter, 24 V / 5 A AC/DC <u>With PoE Multi I/O option:</u> 220 W power adapter, 24 V / 9.2 A
Fan	Spectra PowerBox 3294: 120 mm external fan with montage kit
Mounting	Wall (with mounting kit)
Temperatures	Operating temperature: -10°C to +50°C (with ambient airflow) Storage temperature: -20°C to +80°C Relative humidity: 10% to 95%, non-condensing
Favored operating systems	Microsoft® Windows® 8 Microsoft® Windows® 7 Microsoft® Windows® Embedded Standard 7
Warranty	24 months
Certifications	CE, FCC Class A

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EXTENDED FUNCTIONALITIES



Support 3 independant displays.



integrated mPCIe module for Wireless Communication (Wi-Fi / 3G / GPS).



Power Ignition-Function, time triggered shut down, ideal for transport applications.



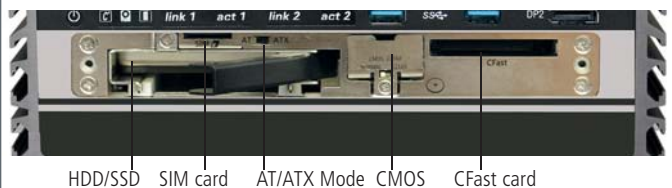
System module with 4 Gigabit-LAN or 4 PoE.



Universal bracket for Mini-PCIe modules, such as i.e. serial, USB, GLAN, camera, DIO, Fieldbus, Real Time Ethernet...



System module with 4 COM & 2 isolated digital I/Os.



Service lid for easy swap of SSD, CFast, SIM, replacement of CMOS Battery, switch of power mode.

EXTENDED EQUIPMENT



1. External fan connection, so that sufficient cooling is insured by extreme ambient temperatures.

2. External power adapter holder for 120 W or 220 W power adapter.

MOUNTING POSSIBILITIES



Mounting using T-slot nuts.



Included in packing list, rail kit for wall mount.

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OVERVIEW TECHNICAL DATA



Model	Spectra PowerBox 3091	Spectra PowerBox 3191	Spectra PowerBox 3294
Article n°	141581	141695	141693

TECHNICAL DATA

CPU	Intel® Celeron® G1820TE DC 2,2 GHz	Intel® Core™ i3-4330TE DC 2,4 GHz	Intel® Core™ i7-4770TE QC 2,3 GHz
Chipset	Intel® Q87		
Memory	8 GB SO-DIMM DDR3, max. 16 GB		16 GB SO-DIMM DDR3, max. 16 GB
HDD /SSD	120 GB 2.5" SATA-6G SSD		
	-		1 TB 2.5" SATA-6G HDD, 24/7 operating
mSATA/CF/SIM slots	1 x CFast-card, 1 x SIM-card slots		
	2 x mSATA (shared with mPCIe)		1 x mSATA (shared with mPCIe)
Graphics	Intel® HD Graphics	Intel® HD Graphics 4600	
	support 3 independent displays		
Watchdog Timer	software programmable 0 - 255 sec, System Reset		

I/O INTERFACE

Graphics	1 x DVI, 2 x DP (1 x front, 1 x rear), 1 x VGA (over Y-cable)		
Serial ports	6 x RS-232/422/485 (4 x front, 2 x rear)		
USB	4 x USB3.0 (2 x front, 2 x rear) 4 x USB2.0 (rear)		
Ethernet	1 x Intel® 82583V Gigabit-LAN (EtherCAT compatible) 1 x Intel® i217LM Gigabit-LAN		4 x Intel® 82583V Gigabit-LAN (front) (EtherCAT compatible)
Audio	Realtek ALC885 Codec 1 x Line-out, 1 x Mic-in		
Keyboard/mouse	1 x PS/2		
Other	1 x DIO (isolated 4 DI / 4 DO)		
	2 x WLAN/GSM Antennas		
Openings for expansions	1 x free socket for opt. Multi I/O or Function modules 2 x universal Brackets		3 x universal Brackets
Expansions	3 x mPCIe Full-Size		
	-	1 x PCIe(x16)	1 x PCIe(x16), 1 x PCIe(x1)

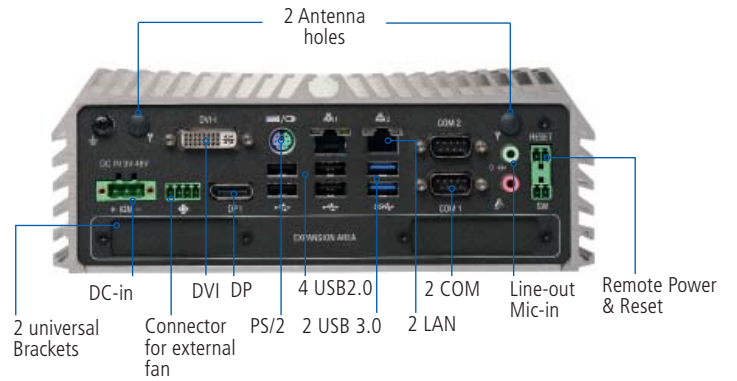
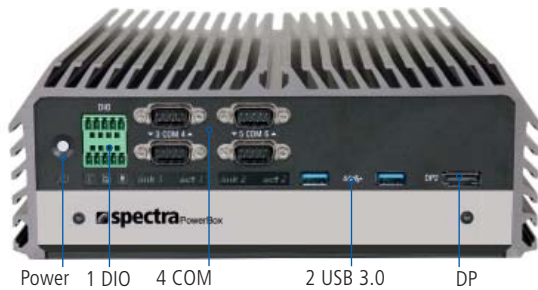
FURTHER DATA

Operating system	Microsoft® Windows® 7 Professional 64-bit, German		
Operating temperatures	-10°C to +50°C, with ambient airflow		
Storage temperature	-20°C to +80°C		
Relative humidity	10% to 90%		
Fan	-		ext. fan with mounting kit
Power	AT/ATX, 9 to 48V DC, 120 W external power adapter 24 V/5 A		
Dimensions (W x H x D)	227 x 85,8 x 261 mm	227 x 106 x 261 mm	227 x 126 x 261 mm

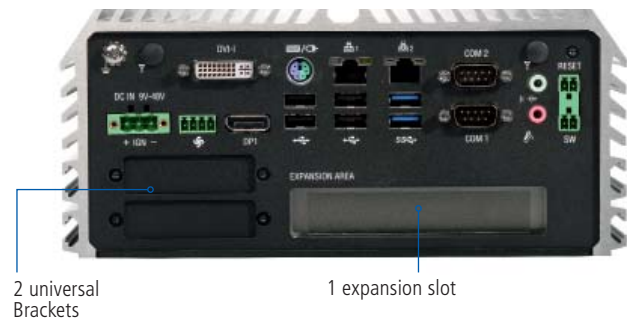
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CONSTRUCTION & INTERFACES

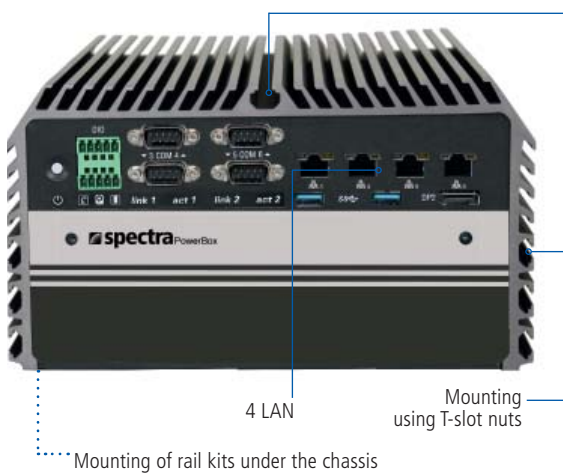
SPECTRA POWERBOX 3091



SPECTRA POWERBOX 3191



SPECTRA POWERBOX 3294



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ORDERING INFORMATION & PACKING LIST

ORDERING INFORMATION

N° 141581 Spectra PowerBox 3091

Fanless Mini-PC, Intel® Celeron® DC, 120 GB SSD,
8 GB RAM, 3 mPCIe, 2 GLAN, 6 COM, DIO

N° 141695 Spectra PowerBox 3191

Fanless Mini-PC, Intel® Core™ i3 DC, 120 GB SSD,
8 GB RAM, 3 mPCIe, 1 PCIe(x16), 2 GLAN, 6 COM, DIO

N° 141693 Spectra PowerBox 3294

Fanless Mini-PC, Intel® Core™ i7 QC, 120 GB SSD, 1 TB HDD,
16 GB RAM, 3 mPCIe, 1 PCIe(x16), 1 PCIe(x1), 6 GLAN, 6 COM, DIO

PACKING LIST

- 1 x Power adapter
- 1 x Power Terminal Block connector (female)
- 1 x manual & Driver CD
- 1 x Microsoft® Windows® CD
- 2 x rail kits for wall mount
- 2 x DIO Terminal Block connectors (female)
- 1 x external fan Terminal Block connector
- 1 x DVI-I to VGA Adapter
- 1 x Pack screws

PRODUCT CODE

SPECTRA POWERBOX 3 X 9 X

Box height (expansions)

- 0= without slot
- 1= with 1 slot
- 2= with 2 slots

Platform

- 9= Intel® 4. Gen. Core™ i (Haswell)

Option model (Multi I/O modules)

- 0= without any
- 1= with DIO/COM
- 2= with 4 x GLAN (RJ45)
- 3= with 4 x PoE (RJ45)
- 4= with DIO/COM & 4 x GLAN (RJ45)
- 5= with DIO/COM & 4 x PoE (RJ45)
- A= with iDIO/COM
- B= with iDIO/COM & 4 x GLAN (RJ45)
- C= with iDIO/COM & 4 x PoE (RJ45)

EXAMPLES OF SYSTEM MODULE CONFIGURATION



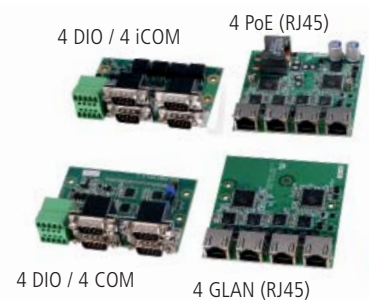
Spectra PowerBox 3090 without system module



Spectra PowerBox 3192 with 4 GLAN
Spectra PowerBox 3193 with 4 PoE



Spectra PowerBox 3291 with DIO/COM
Spectra PowerBox 329A with iDIO/COM



SPECTRA POWERBOX 3000-SERIES

VERSIONS & OPTIONAL ACCESSORIES

PCI/PCIE EXPANSIONS

N° 150445 RSC-P

Riser Card, 1 x PCI for SPB 31xx

N° 146878 RSC-E16

Riser Card, 1 x PCIe(x16) for SPB 31xx

N° 141164 RSC-PIPI

Riser Card, 2 x PCI for SPB 32xx

N° 151163 RSC-E8E8

Riser Card, 2 x PCIe(x8) for SPB 32xx

N° 141163 RSC-E16P1

Riser Card, 1 x PCI, 1 x PCIe(x16) for SPB 32xx

N° 141162 RSC-E1E16

Riser Card, 1 x PCIe(x1), 1 x PCIe(x16) for SPB 32xx



MINI-PCIE MODULES

N° 151164 MEC-COM-KIT-3000A/C

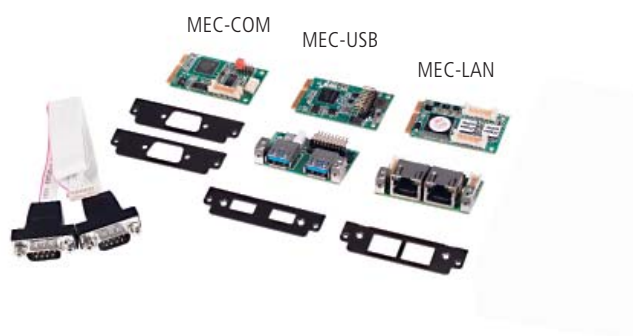
2 x RS-232, Wide Temp., incl. 2 x bracket

N° 151168 PB-3000A/C-MEC-USB-KIT V1

2 x USB 3.0, incl. bracket

N° 151167 PB-3000A/C-MEC-LAN-Set

2 x LAN, incl. bracket



OTHERS

N° 156611 PB-CFAST Kit

Bracket, for CFAST Socket, for SPB 31xx/32xx

N° 143058 PB-3000 ext. Fan

Fan 120 mm with mounting kit

N° 152353 DP to DVI adapter V1.1

OLV-DP active cable 100 mm

N° 155057 Netzteil, 120W/24 V.2

120 W Power adapter 24V/5A, 3-pin Phoenix

N° 155058 PoE-Netzteil 220W/24V V.2

220 W Power adapter 24V/9,2A, 3-pin Phoenix

MOUNTING ACCESSORIES

N° 141797 PB-VH-3000 VESA Holder

VESA 100 Adapter board

N° 141794 PB-NH-3000-120 Poweradapter Holder

Holder for 120 W power adapter

N° 141795 PB-NH-3000-220 Poweradapter Holder

Holder for 220 W power adapter (Models with PoE)



CFast card reader

UPON REQUEST

- T-slot nuts (Bosch Rexroth)
- T-profile
- WLAN, LTE, UMTS, GPSCommunication modules