



Product Information

SD8-STEEL

CompactPCI[®] Serial • SATA Removable SSD

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SD8-STEEL

General

The SD8-STEEL is a peripheral slot card for CompactPCI® Serial systems. The SD8-STEEL is provided with a mobile rack, which accommodates a 2.5-inch size SATA drive, either SSD or HDD. Fast swap of the drive can be accomplished via the front panel. A push button unlocks a door and ejects the drive.

The SATA channel is derived from the CompactPCI® Serial backplane connector P1. For optimum signal integrity, the SD8-STEEL is equipped with 6Gbps SATA redrivers. As an alternate, the SD8-STEEL is also available as a carrier card for a fixed 2.5-inch drive (half-slim option), mounted directly to the PCB.

Feature Summary

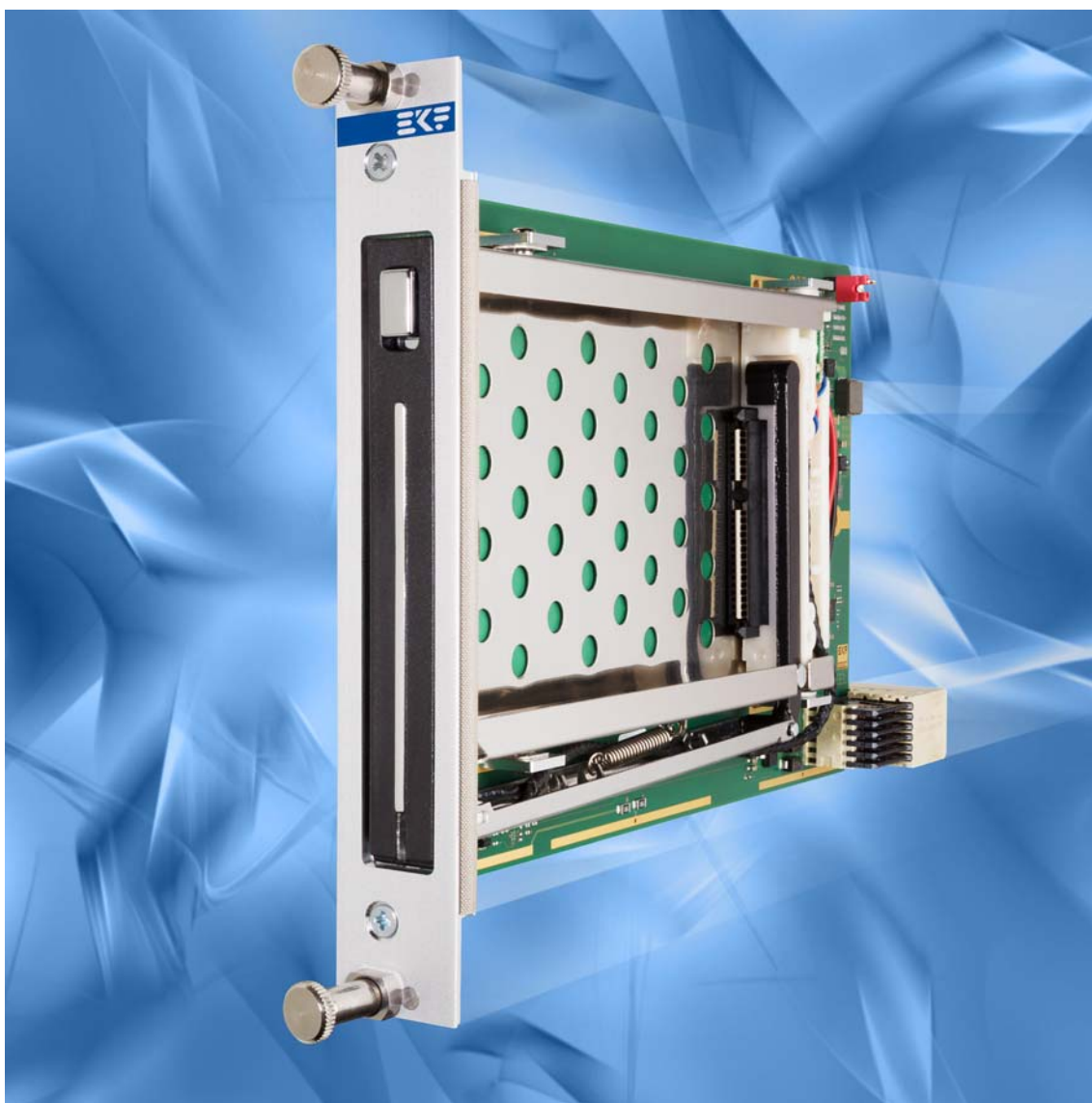
- ▶ PICMG® CompactPCI® Serial Standard (CPCI-S.0)
- ▶ Peripheral Slot Card (up to 8 SATA Channels Specified on a CPCI-S Backplane)
- ▶ Mobile Rack Accommodates 2.5-Inch SATA Drive
- ▶ Suitable for HDD/SSD drive with typical dimensions 70mm x 100mm x 9.5mm
- ▶ Fast Swap via Front Panel Door Slot
- ▶ Patented NSS connector - change rate up to 50.000 mating cycles
- ▶ Option Carrier Board for a PCB Mount 2.5-Inch SATA Drive
- ▶ Option Carrier Board for a PCB Mount 2.5-Inch SATA Half-Slim SSD
- ▶ Suitable e.g. for CompactPCI® Serial System Slot Controller SC1-ALLEGRO (CPU Board)
- ▶ Suitable e.g. for CompactPCI® PlusIO System Slot Controller PC1-GROOVE (CPU Board)
- ▶ CompactPCI® Serial Backplanes Available (Hybrid or Native)
- ▶ Rugged Solution (Coating/Sealing Available on Request)
- ▶ Long Term Available
- ▶ RoHS compliant

System Integration Options

The SD8-STEEL is a CompactPCI® Serial peripheral card. CompactPCI® Serial (CPCI-S.0) is a PICMG® standard for modular industrial computers, which provides high speed serial I/O (PCI Express®, SATA, USB, Gigabit Ethernet) over the backplane. The CPCI-S mechanical design is fully backward compatible to CompactPCI® Classic and will interoperate with existing systems, by means of a hybrid backplane.

Hybrid systems (providing card slots for both CPCI Classic & CPCI Serial) can be configured by means of a CompactPCI® PlusIO CPU card such as the PC3-ALLEGRO or PC4-PRESTO in combination with a suitable hybrid backplane.

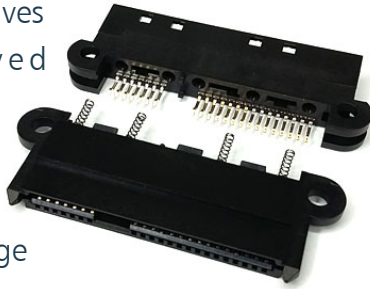
Native CompactPCI® Serial systems (up to 8 CPCI Serial peripheral card slots) can be built around a suitable system slot CPU board such as the SC3-LARGO.



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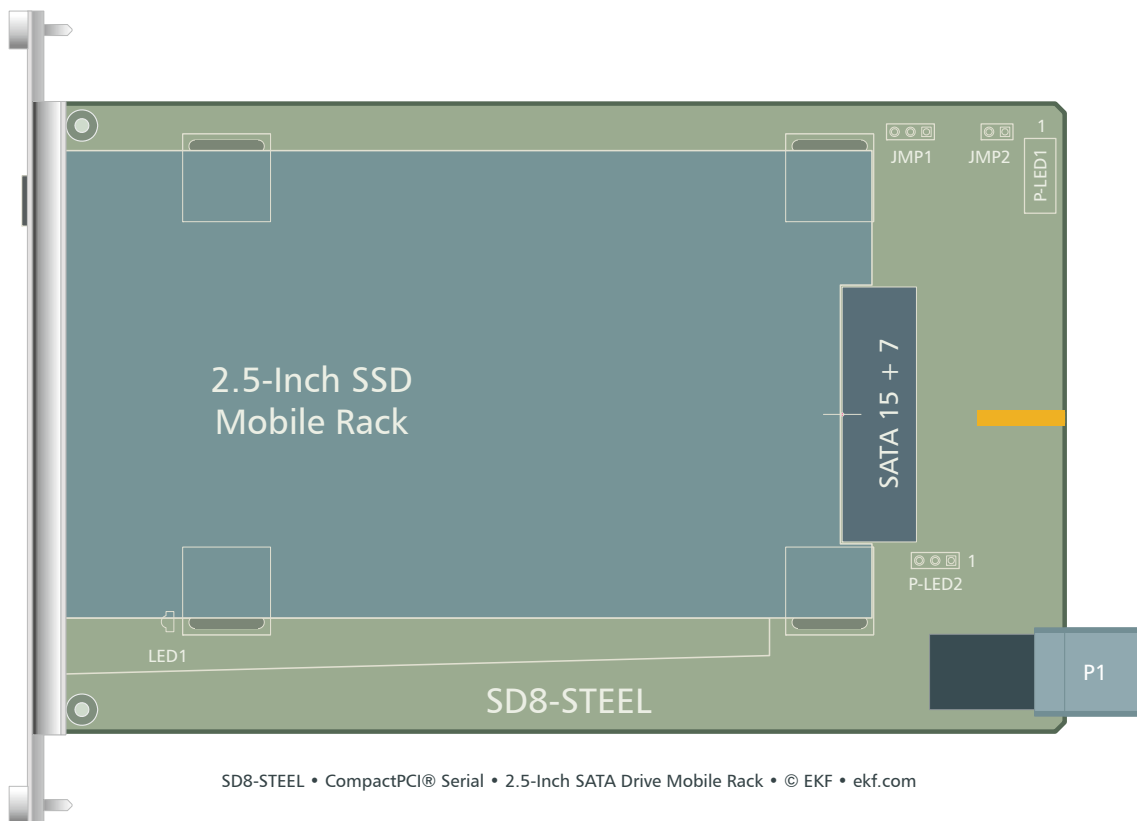
The NSS connector - Safety for mobile racks and electrical contacts

If hard disc drives
and removed
contacts wear
The special
Scratch SATA
enables a change

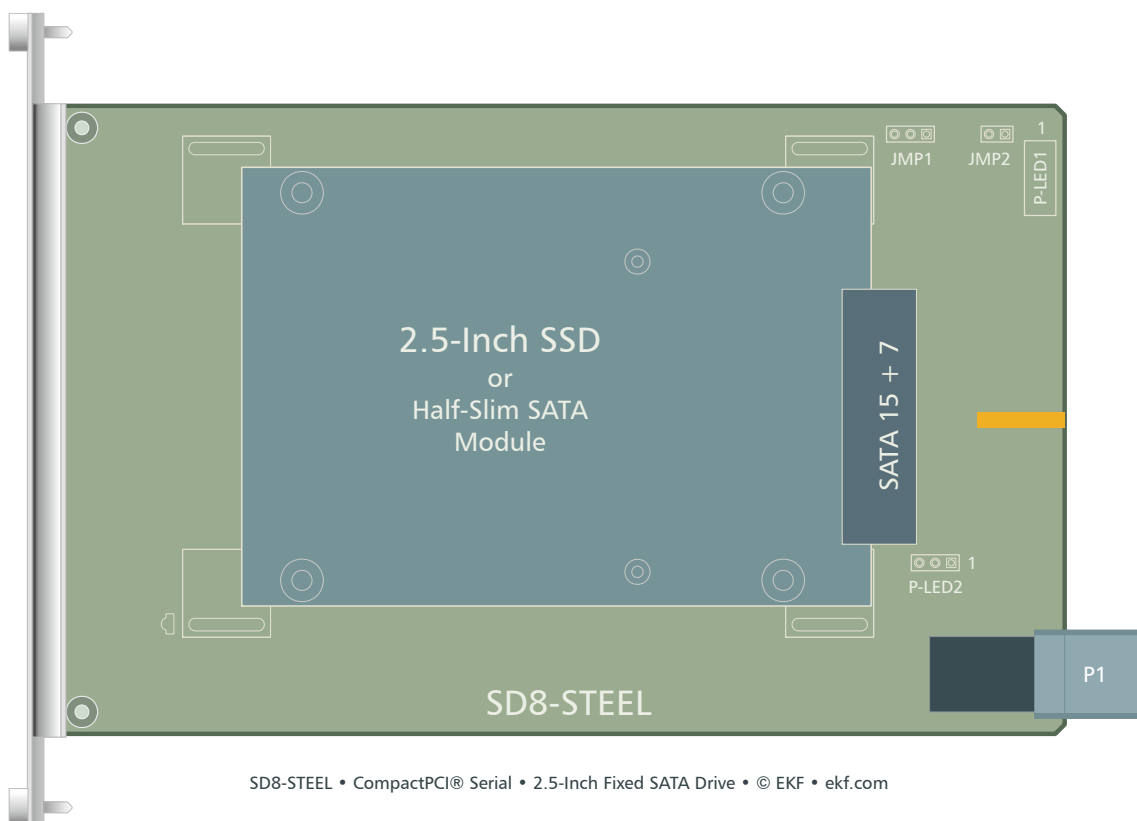


are often put into the mobile rack
again, the
off over time.
NSS (Non
Connector) was developed to prevent this risk. It
rate up to 50.000 mating cycles and is patented.

Mobile Rack

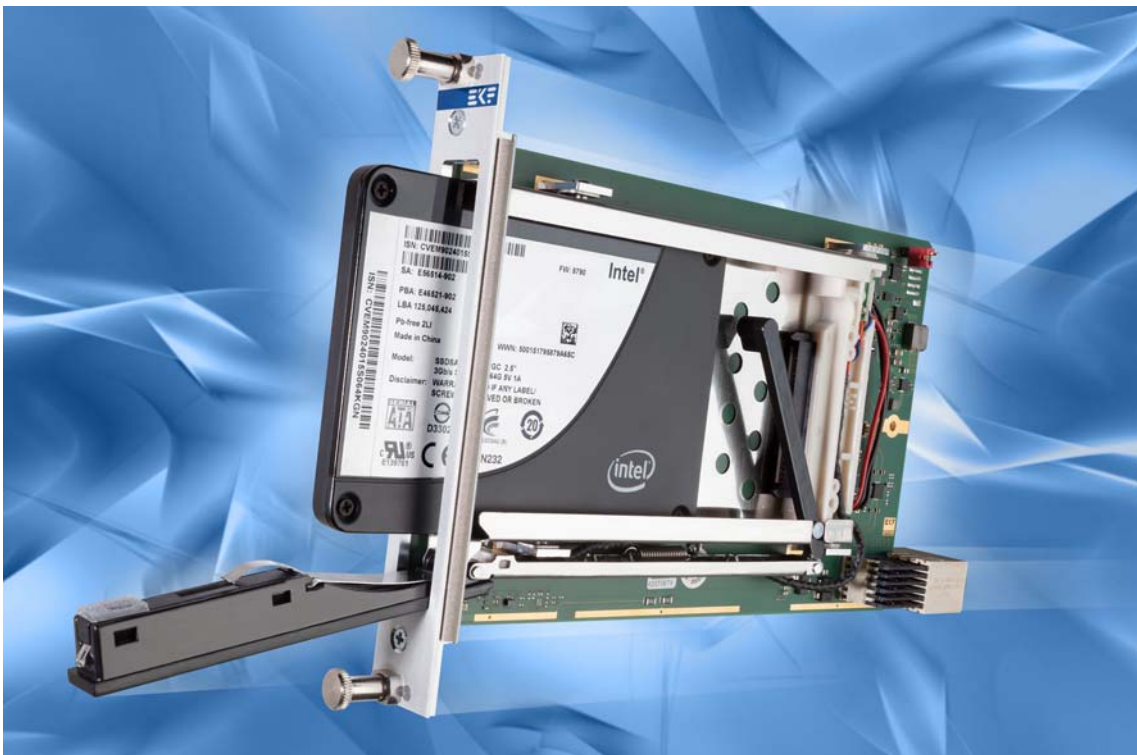


Option PCB Mount Drive



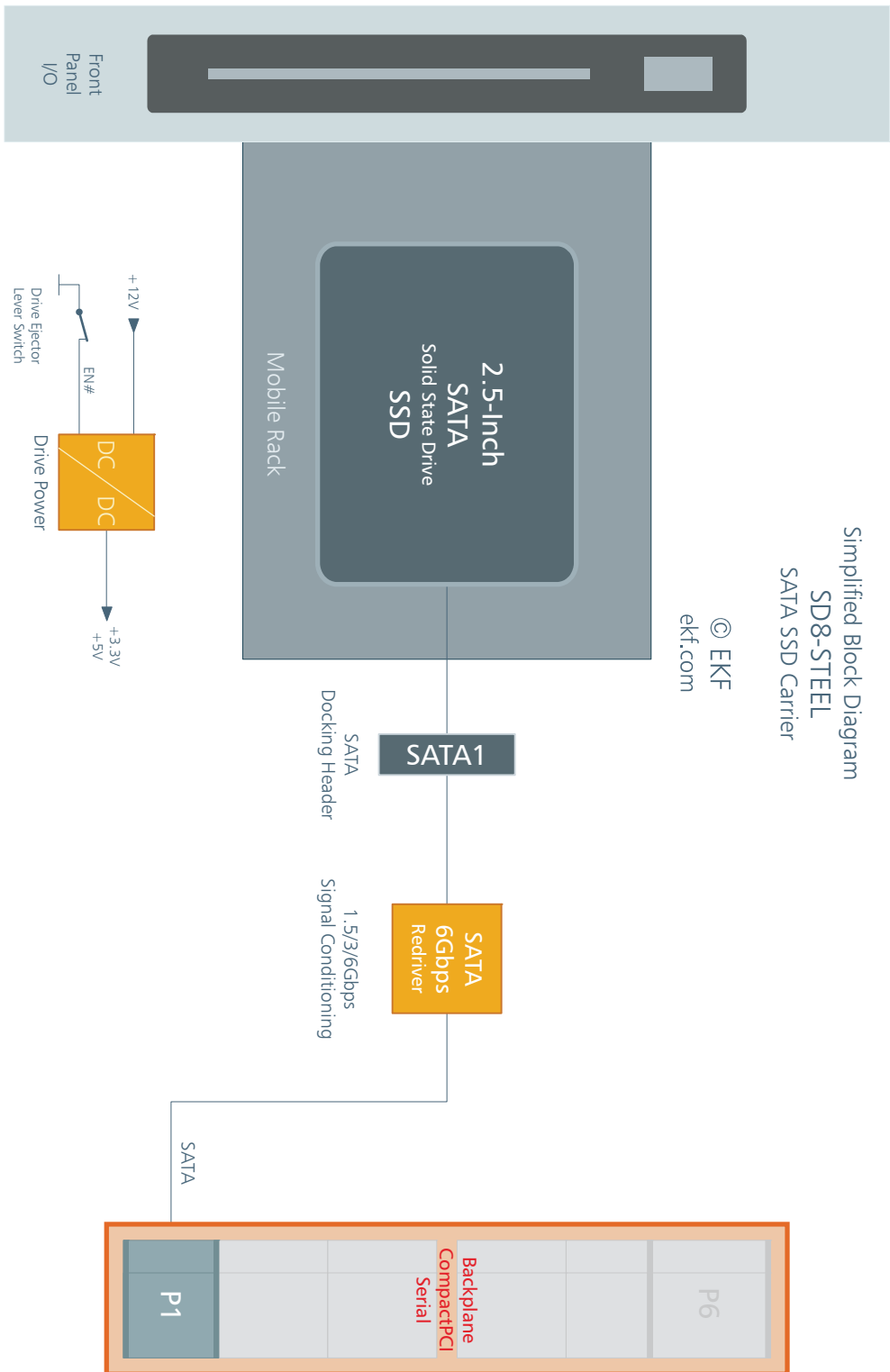


SD8-STEEL w. SSD

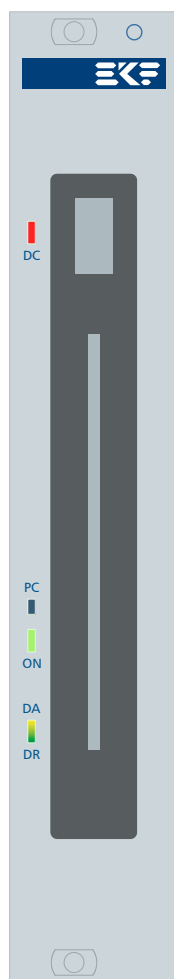


SD8-STEEL w. SSD

Block Diagram



Front Panel (Mobile Rack)

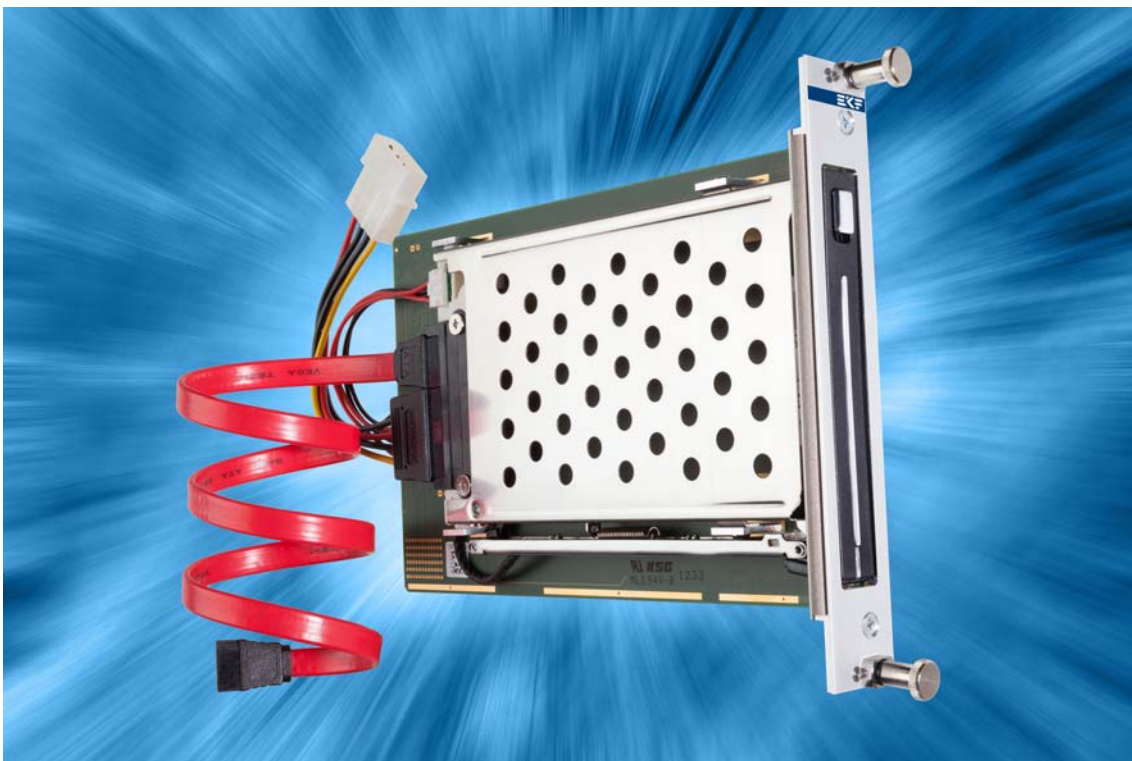


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SD8-STEEL

LED indicators shown may not be populated


Please note: The mounting frame is suitable for drives with 9.5mm height. For low profile drives e.g. 7mm height a gap filling element is supplied with the SD8-STEEL, to be inserted together with the drive (on top side). This will prevent the drive from mismatching the SATA connector position.



SD8-STEEL Assembly w/o Backplane Connector for System Internal Cabling



SATA Connector 2.5-Inch Drive

SATA-1 • Serial ATA Docking Connector Serial ATA host receptacle (256.022.10.01)	
	
Part No. 256.022.10.02 • SATA Host Receptacle • © EKF • ekf.com	
S1	GND
S2	SATA01 TXP
S3	SATA01 TXN
S4	GND
S5	SATA01 RXN
S6	SATA01 RXP
S7	GND
P1	+3.3V_SATA
P2	+3.3V_SATA
P3	+3.3V_SATA
P4	GND
P5	GND
P6	GND
P7	+5V_SATA
P8	+5V_SATA
P9	+5V_SATA
P10	GND
P11	DAS (Drive Activity)
P12	GND
P13	+12V_SATA
P14	+12V_SATA
P15	+12V_SATA

+3.3V SATA via PolyFuse 1.5A
 +5V SATA via PolyFuse 1.5A
 +12V SATA normally not connected (stuffing option)

SATA operation requires the SD8-STEEL inserted into an SATA enabled CompactPCI© Serial backplane slot. The drive connector SATA-1 is wired to the backplane connector P1 via a redriver circuitry.

CompactPCI® Serial Backplane Connector P1

P1 CompactPCI® Serial Peripheral Slot Backplane Connector												
EKF Part #250.3.1206.20.02 • 72 pos. 12x6, 14mm Width												
P1	A	B	C	D	E	F	G	H	I	J	K	L
6	GND	<i>PE TX02+</i>	<i>PE TX02-</i>	GND	<i>PE RX02+</i>	<i>PE RX02-</i>	GND	<i>PE TX03+</i>	<i>PE TX03-</i>	GND	<i>PE RX03+</i>	<i>PE RX03-</i>
5	<i>PE TX00+</i>	<i>PE TX00-</i>	GND	<i>PE RX00+</i>	<i>PE RX00-</i>	GND	<i>PE TX01+</i>	<i>PE TX01-</i>	GND	<i>PE RX01+</i>	<i>PE RX01-</i>	GND
4	GND	<i>USB2+</i>	<i>USB2-</i>	GND	<i>PE CLK+</i>	<i>PE CLK-</i>	GND	SATA TX+	SATA TX-	GND	SATA RX+	SATA RX-
3	<i>USB3 TX+</i>	<i>USB3 TX-</i>	GA0	<i>USB3 RX+</i>	<i>USB3 RX-</i>	GA1	<i>SATA SDI</i>	<i>SATA SDO</i>	GA2	<i>SATA SCL</i>	<i>SATA SL</i>	GA3
2	GND	I2C SCL	I2C SDA	GND	RSV	RSV	GND	RST#	WAKE#	GND	<i>PE EN#</i>	<i>SYS EN#</i>
1	+12V	STBY	GND	+12V	+12V	GND	+12V	+12V	GND	+12V	+12V	GND

pin positions printed white/italic: not connected

Ordering Information

For popular SD8-STEEL SKUs please refer to www.ekf.com/liste/liste_21.html#SD8

Related Documents CompactPCI® PlusIO & CompactPCI® Serial

CompactPCI® PlusIO & Serial Overview	www.ekf.com/s/smart_solution.pdf
CompactPCI® PlusIO Home	www.ekf.com/p/plus.html
CompactPCI® Serial Home	www.ekf.com/s/serial.html



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