



Product Information

SD8-STEEL

***CompactPCI® Serial*** • SATA Removable SSD

Document No. 6814 • 21 March 2016



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
- ▶ Fast Swap via Front Panel Door Slot
- ▶ 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.

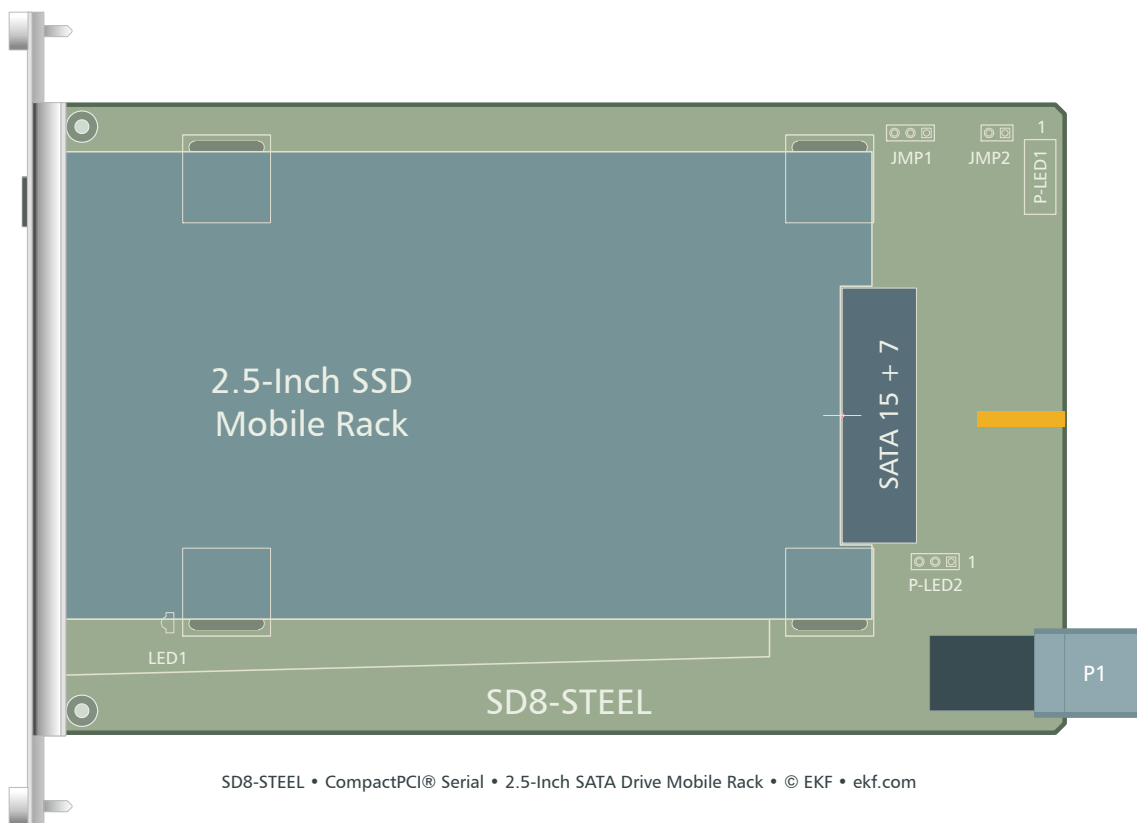
Hybrid systems (providing card slots for both CPCI Classic & CPCI Serial) can be configured by means of a CompactPCI® PlusIO CPU card such as the PC1-GROOVE or PC2-LIMBO in combination with a suitable hybrid backplane.

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 SC1-ALLEGRO.

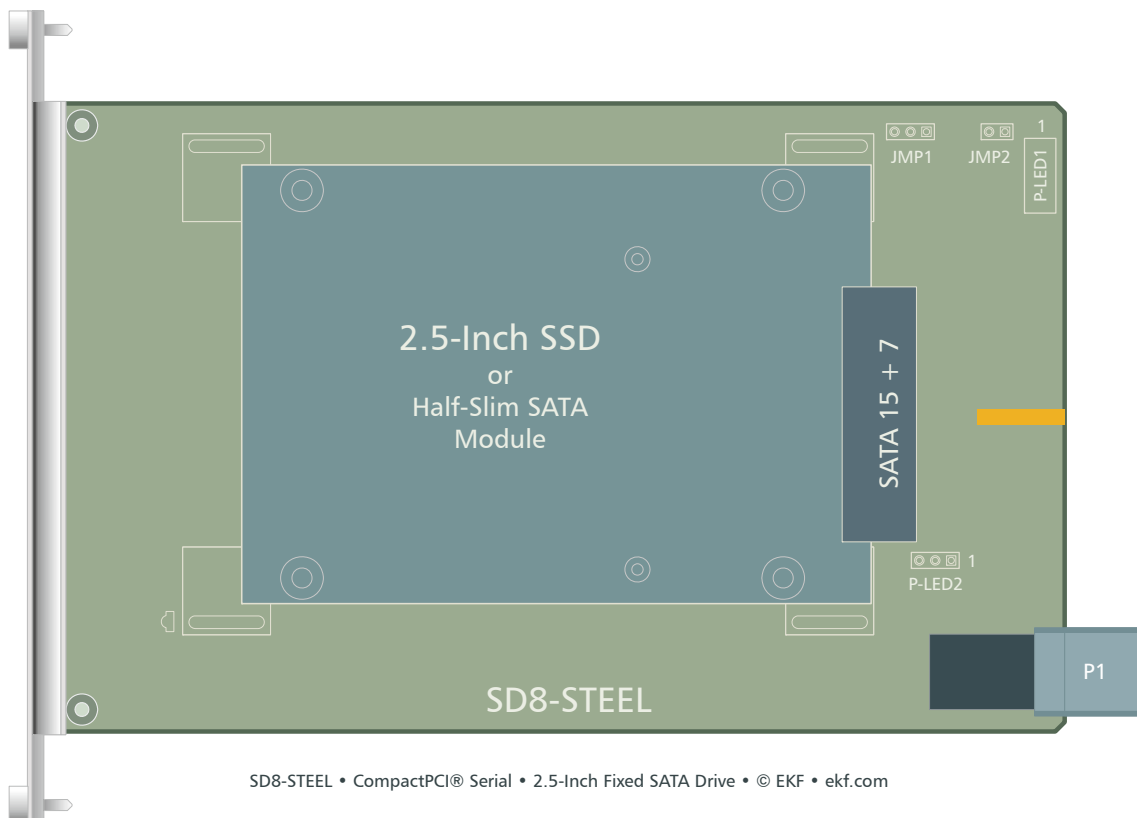


SD8-STEEL

### Mobile Rack

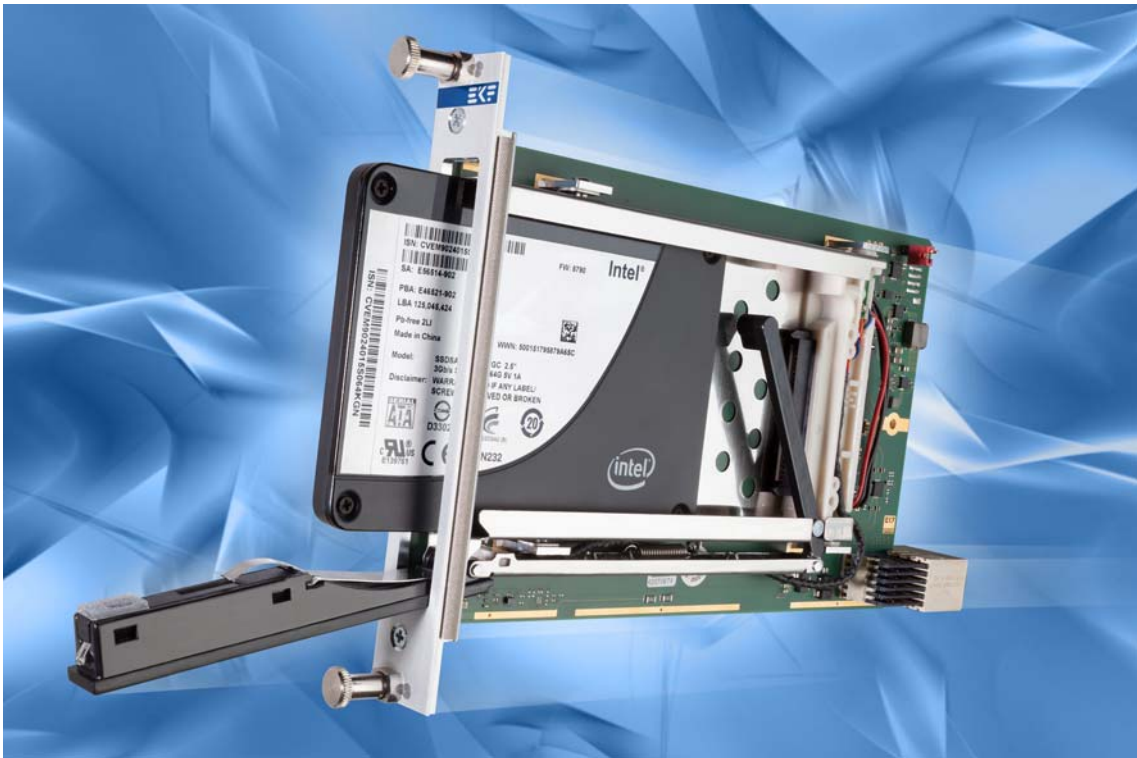


### Option PCB Mount Drive





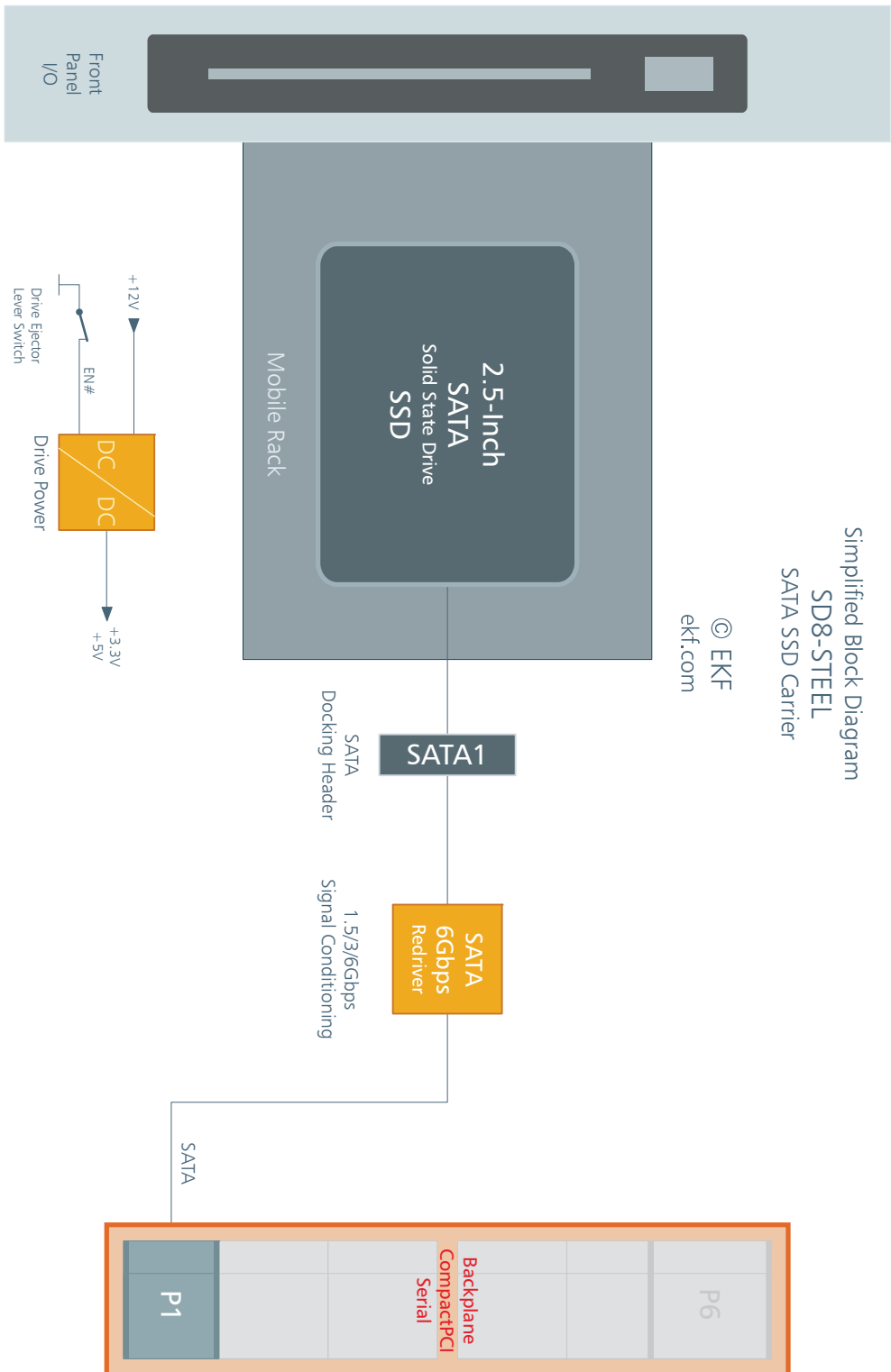
SD8-STEEL w. SSD



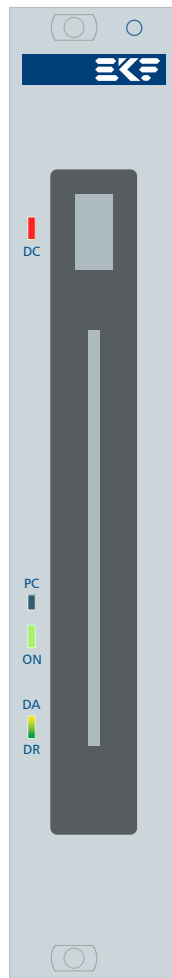
SD8-STEEL w. SSD



### Block Diagram



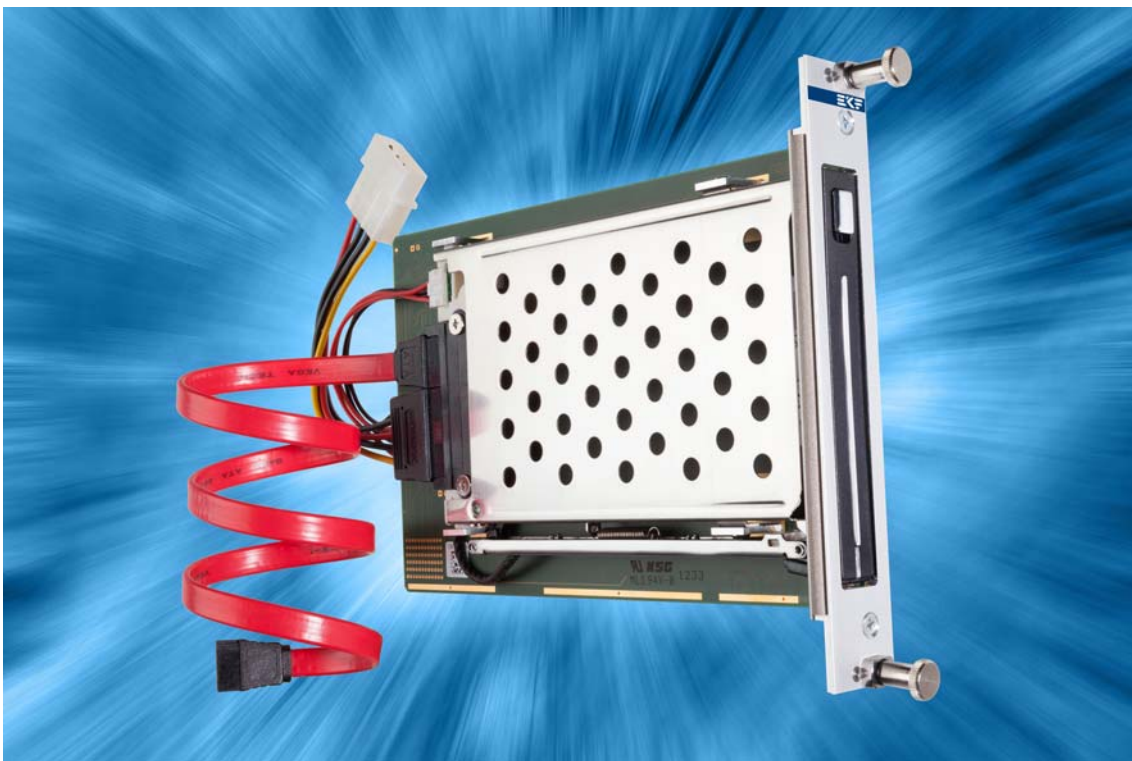
### Front Panel (Mobile Rack)



© EKF • draft - do not scale • ekf.com

SD8-STEEL

LED indicators shown may not be populated




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](http://www.ekf.com/liste/liste_21.html#SD8)

## Related Documents CompactPCI® PlusIO &amp; CompactPCI® Serial

CompactPCI® PlusIO & Serial Overview	<a href="http://www.ekf.com/s/smart_solution.pdf">www.ekf.com/s/smart_solution.pdf</a>
CompactPCI® PlusIO Home	<a href="http://www.ekf.com/p/plus.html">www.ekf.com/p/plus.html</a>
CompactPCI® Serial Home	<a href="http://www.ekf.com/s/serial.html">www.ekf.com/s/serial.html</a>



EKF Elektronik GmbH  
Philipp-Reis-Str. 4 (Haus 1)  
Lilienthalstr. 2 (Haus 2)  
59065 HAMM  
Germany



Phone +49 (0)2381/6890-0  
Fax +49 (0)2381/6890-90  
Internet [www.ekf.com](http://www.ekf.com)  
E-Mail [sales@ekf.com](mailto:sales@ekf.com)