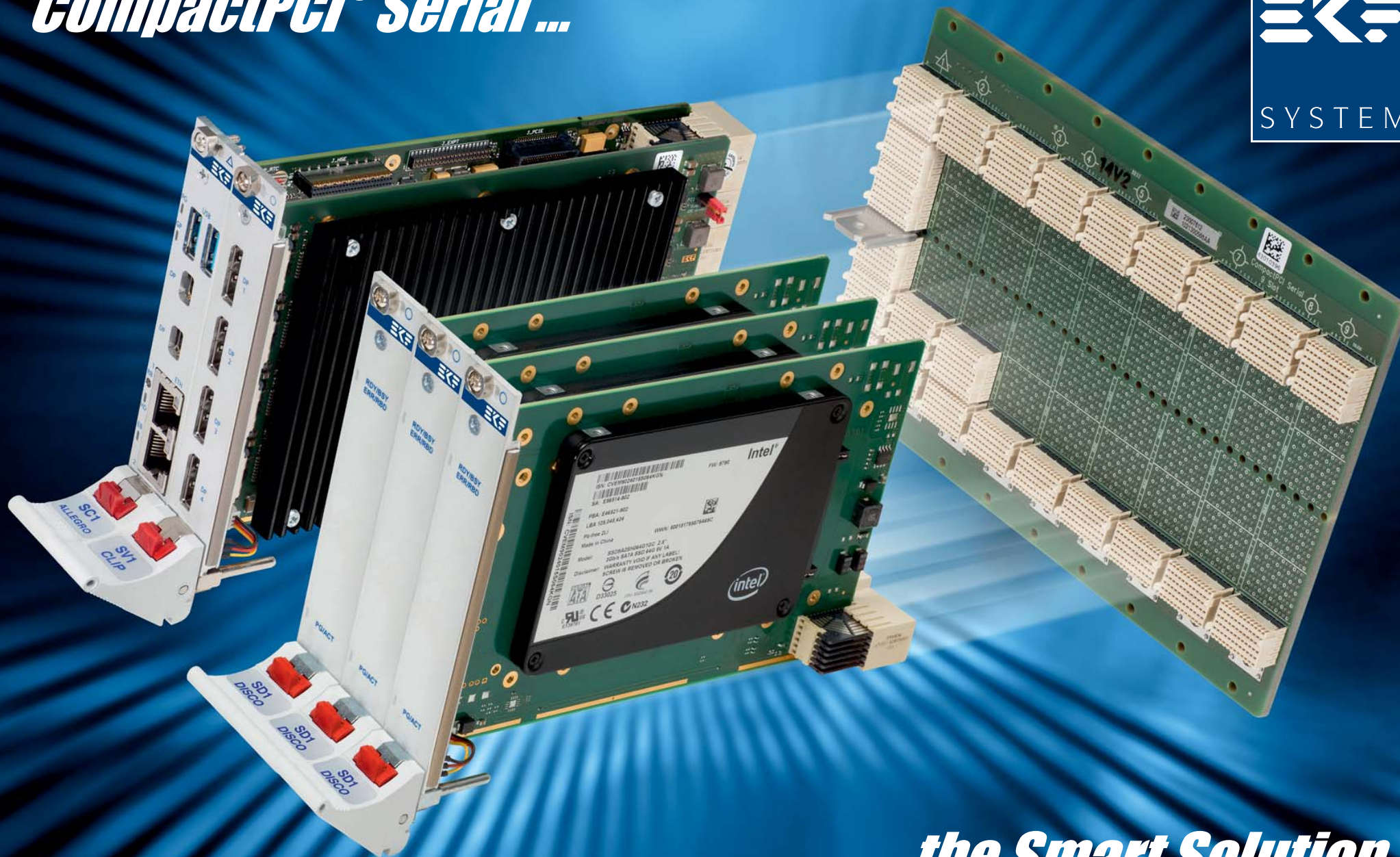


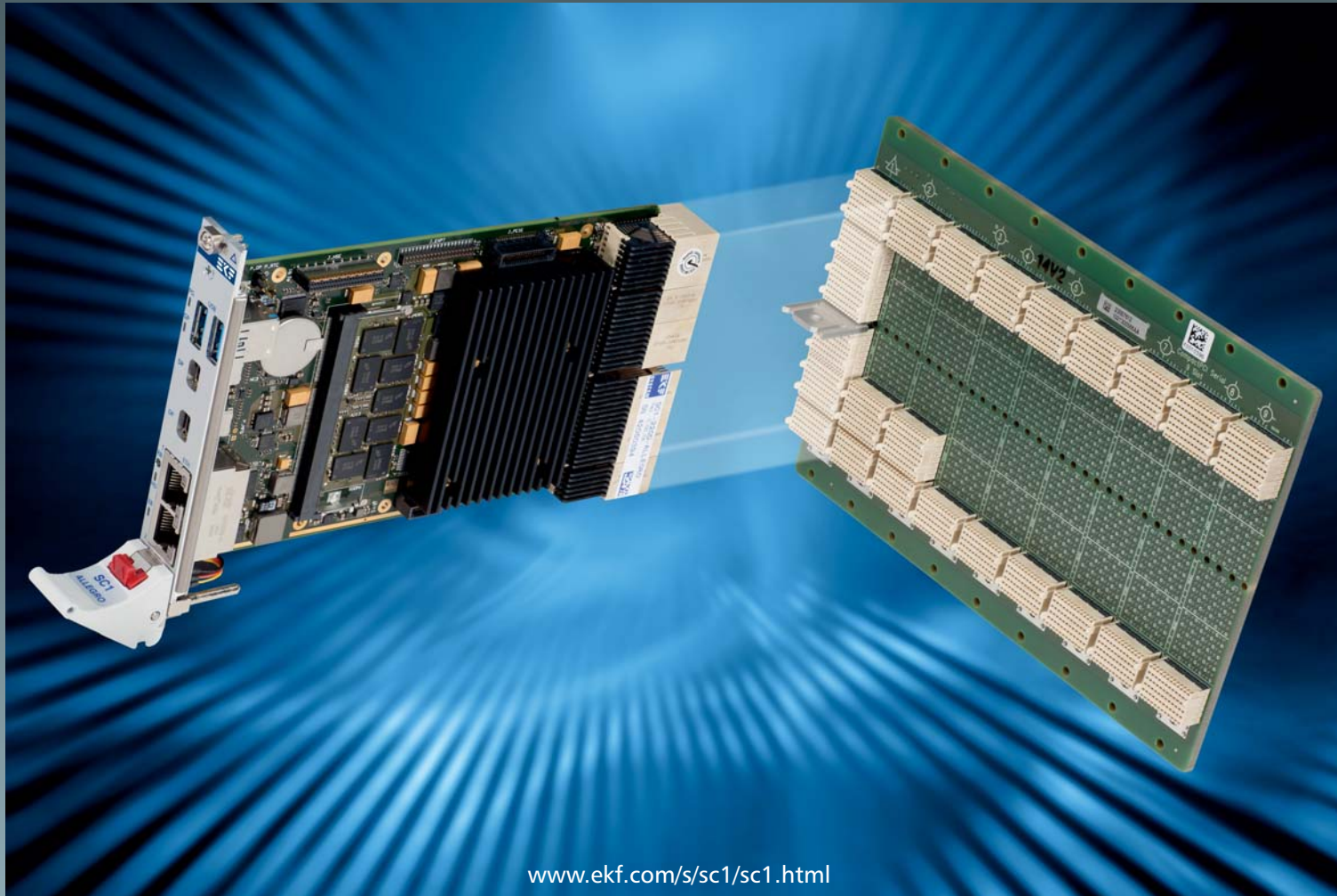
CompactPCI[®] Serial...



... *the Smart Solution*

CompactPCI® Serial Systems

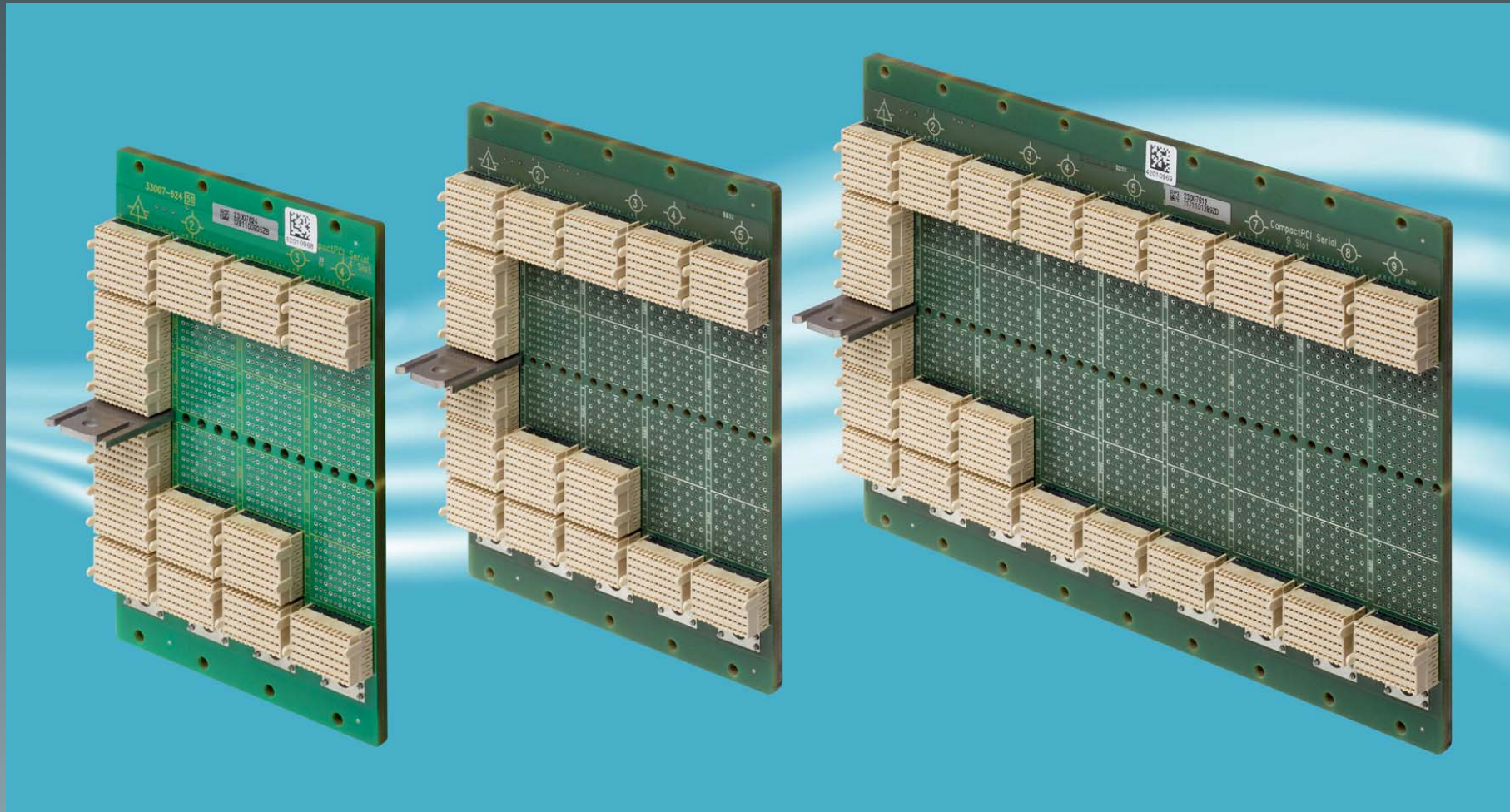
Designed for performance • 40 x PCI® Express • 8 x Gigabit Ethernet • 8 x SATA • 8 x USB3



www.ekf.com/s/sc1/sc1.html

CompactPCI® Serial Systems

CPCI Serial backplanes for optimum throughput

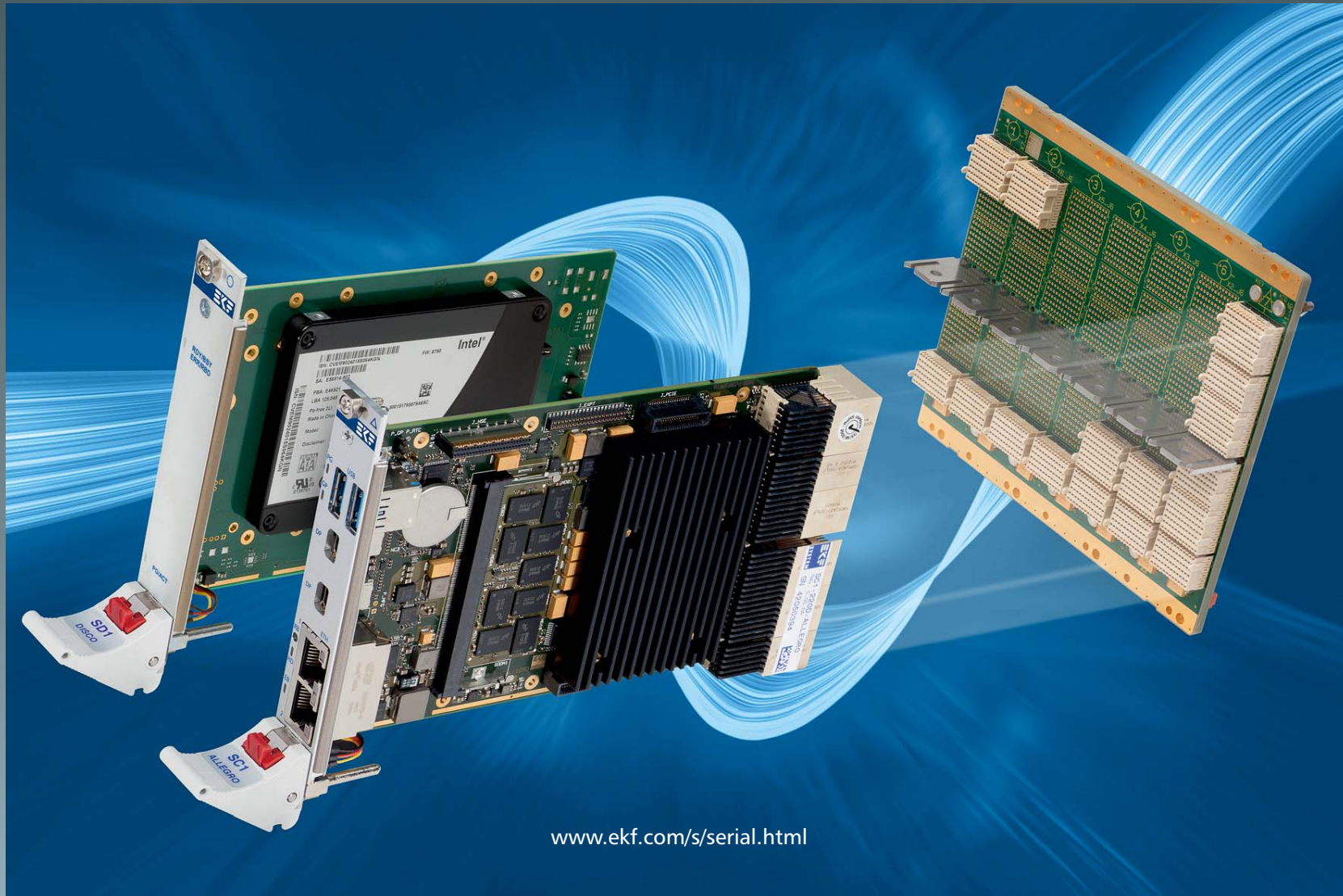


Sample Backplanes CompactPCI® Serial

The CompactPCI® Serial system slot is located either most left or most right

CompactPCI® Serial Systems

Reverse order backplanes (system slot right aligned) for CPU cards with 4HP to 12HP front panel



www.ekf.com/s/serial.html

CompactPCI® Serial Systems

CPCI Serial BluBoxx series - small and economic



www.ekf.com/s/srs/srs3201/srs3201.html

SRS-3201-BLUBOXX CompactPCI® Serial

CompactPCI® Serial - the Smart Solution

CompactPCI® Serial Systems

CPCI Serial rugged system racks

www.ekf.com/s/srs/srs4401/srs4401.html



SRS-4401-SERIAL CompactPCI® Serial

CompactPCI® Serial Systems

CPCI Serial racks 84HP

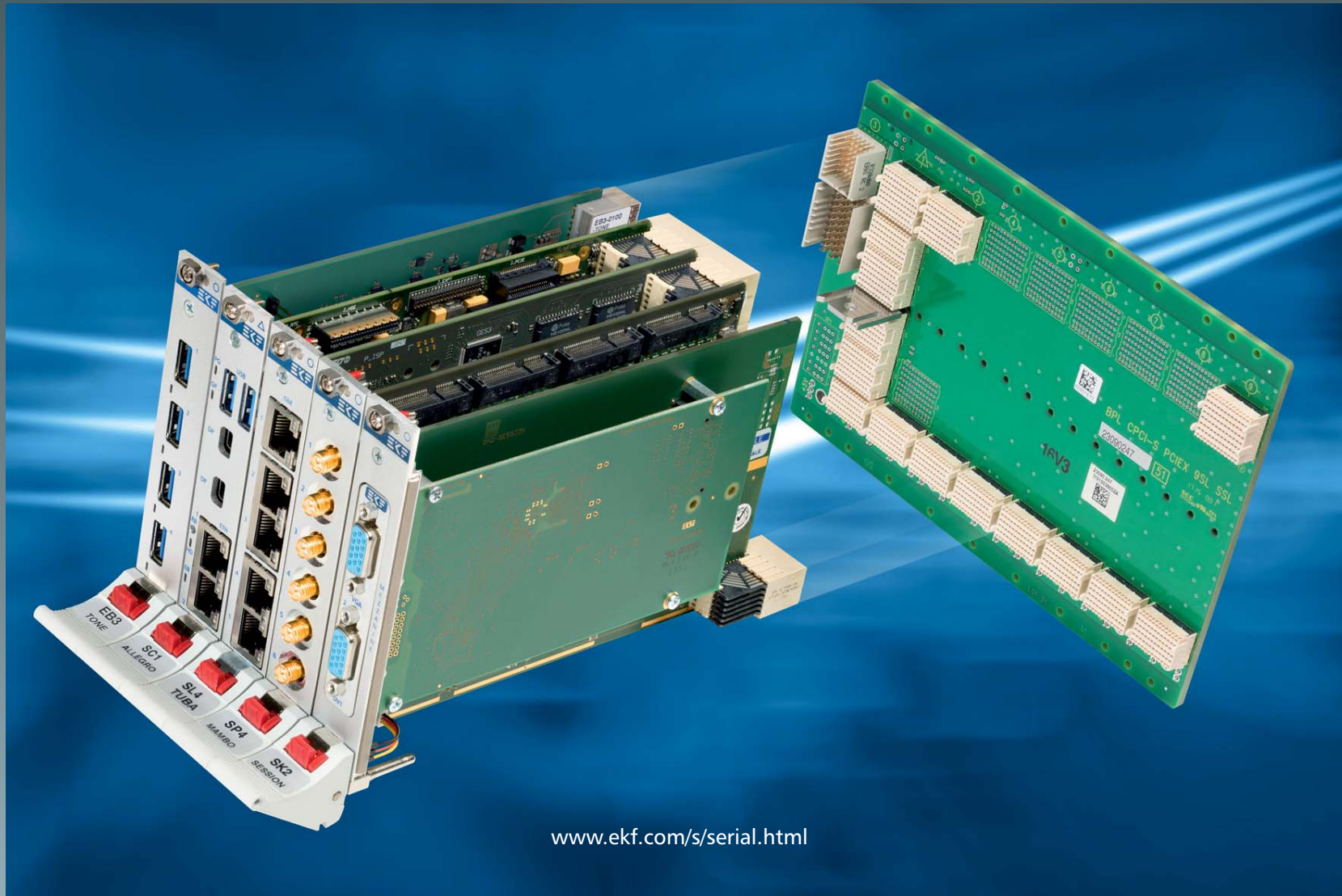
www.ekf.com/s/srs/srs8423/srs8423.html



SRS-8423-SERIAL CompactPCI® Serial

CompactPCI® Serial Systems

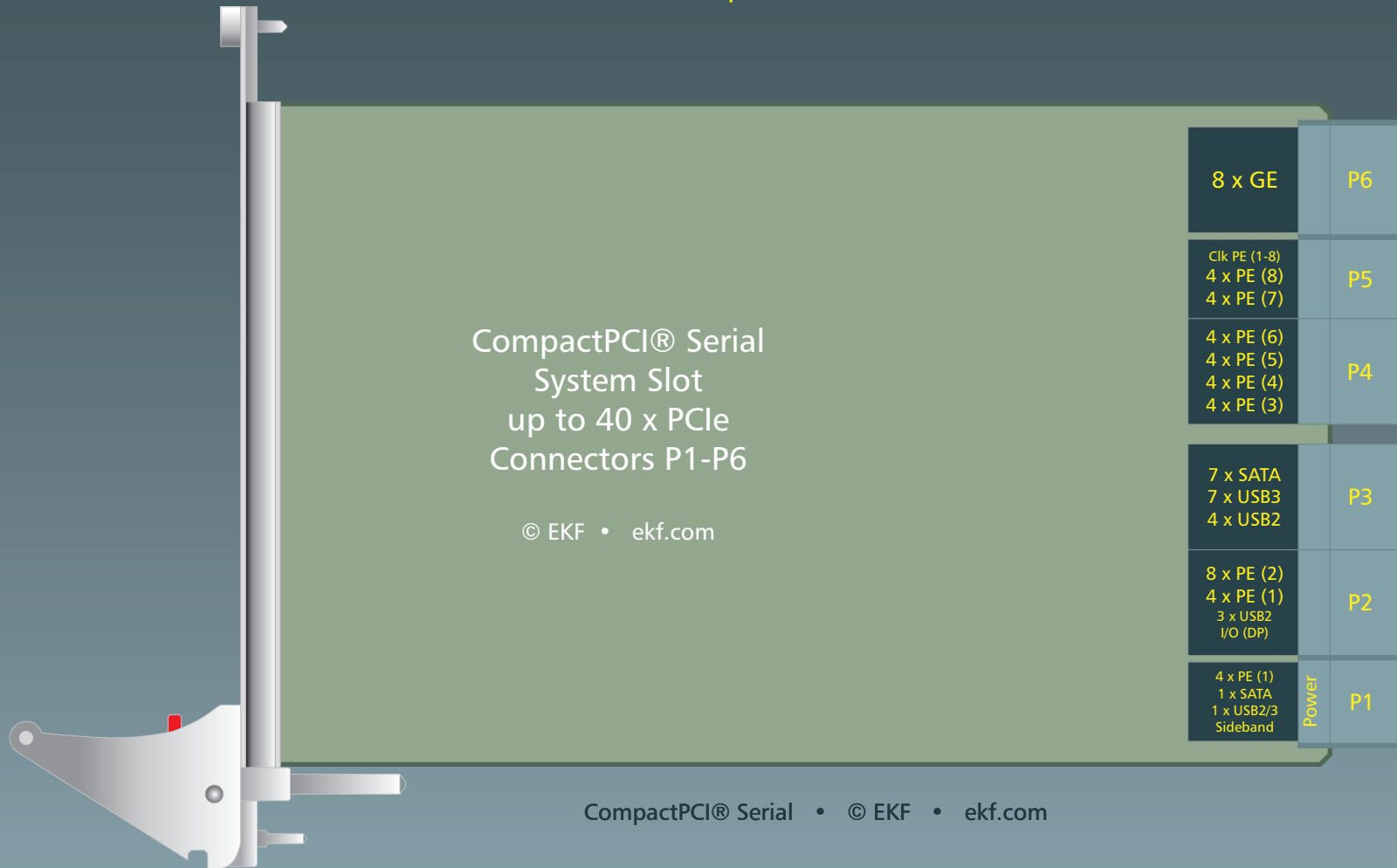
Hybrid backplanes available with CompactPCI® Express (PXI Express™) slots



www.ekf.com/s/serial.html

CompactPCI® Serial Connectors

A system slot card (CPU) provides up to 40 x PCIe
 In addition up to 8 x SATA 8 x USB 8 x GbE



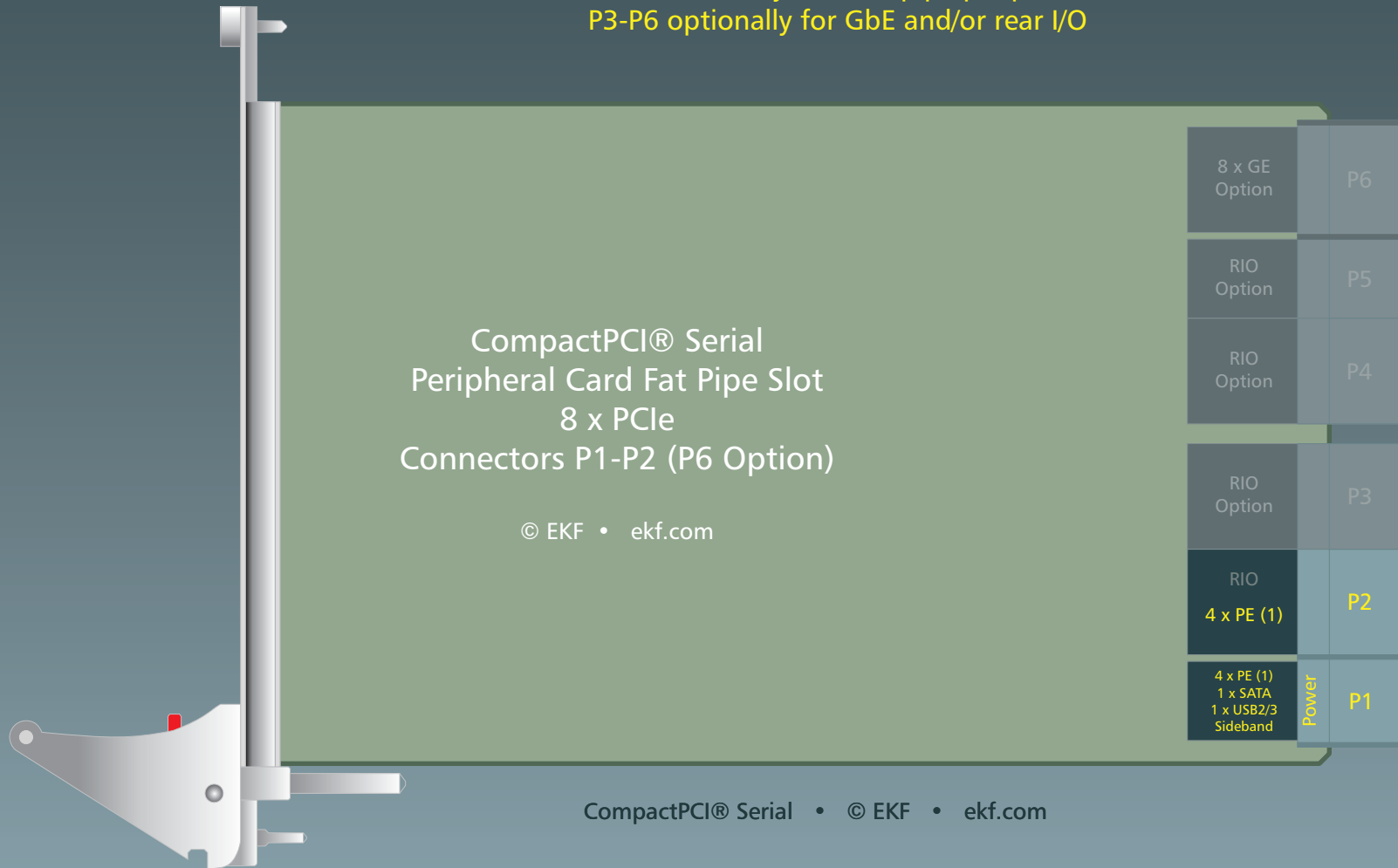
Gigabit Ethernet
 star architecture
 or full mesh

CompactPCI® Serial • © EKF • ekf.com

In a CPCI Serial system, up to 40 x PCIe lanes can be distributed across the backplane
 to 2 x fat pipe peripheral slots (8 lanes each) and 6 x standard peripheral slots (up to 4 lanes each)

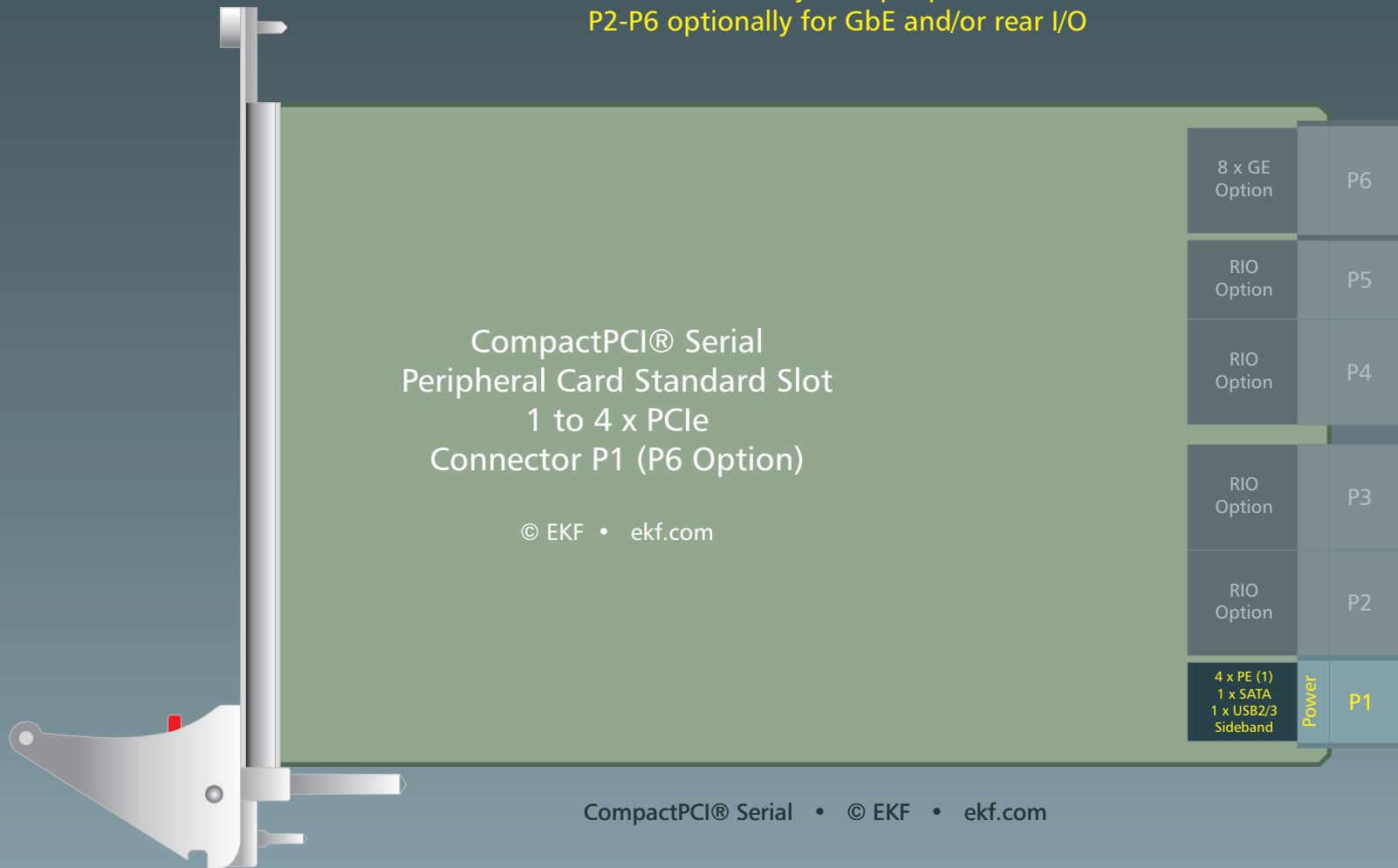
CompactPCI® Serial Connectors

A fat pipe peripheral slot provides 8 x PCIe 1 x USB 1 x SATA
P1-P2 are mandatory on a fat pipe peripheral card
P3-P6 optionally for GbE and/or rear I/O



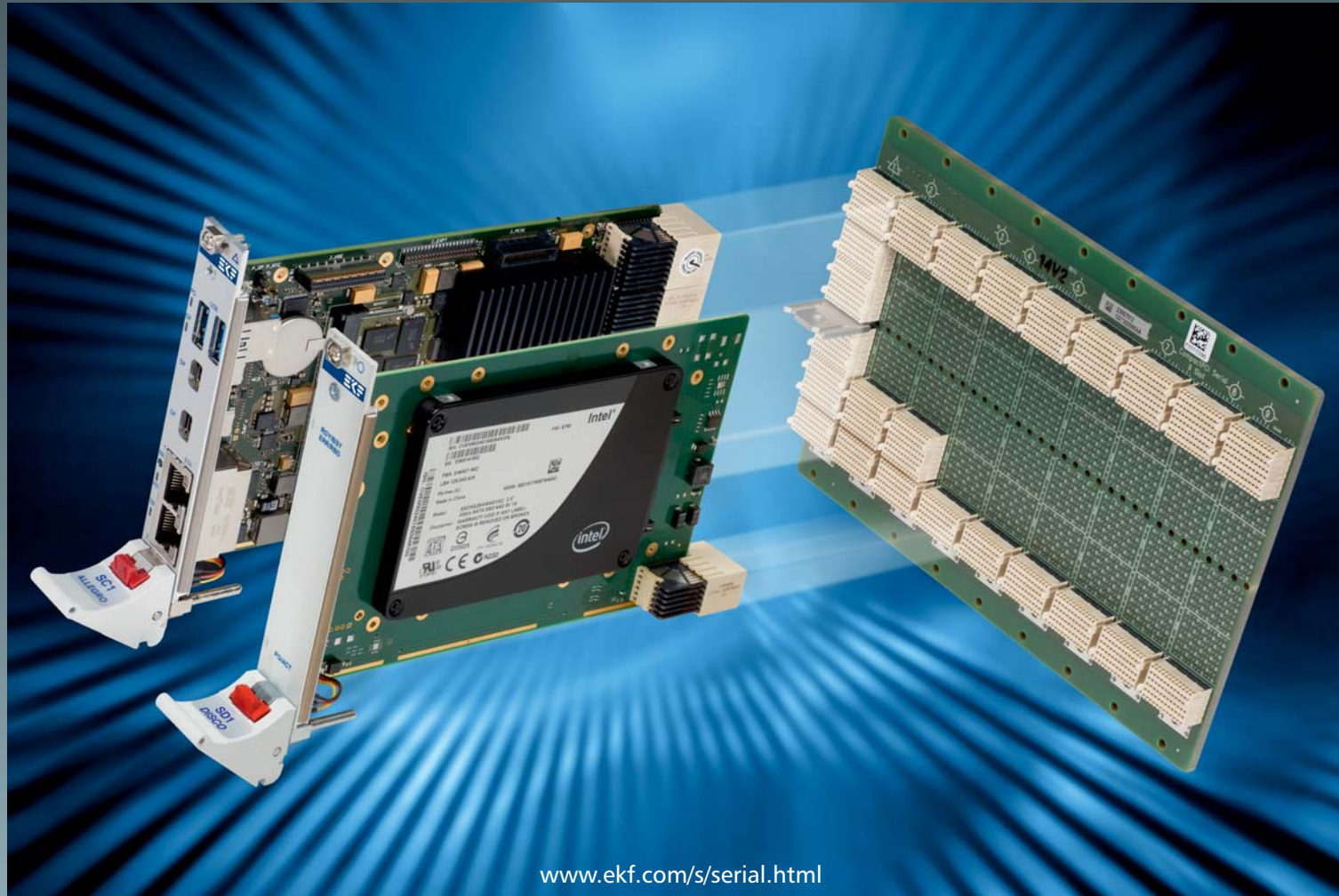
CompactPCI® Serial Connectors

A CompactPCI® Serial peripheral slot provides up to 4 x PCIe 1 x USB 1 x SATA
P1 is mandatory on a peripheral card
P2-P6 optionally for GbE and/or rear I/O



CompactPCI® Serial Systems

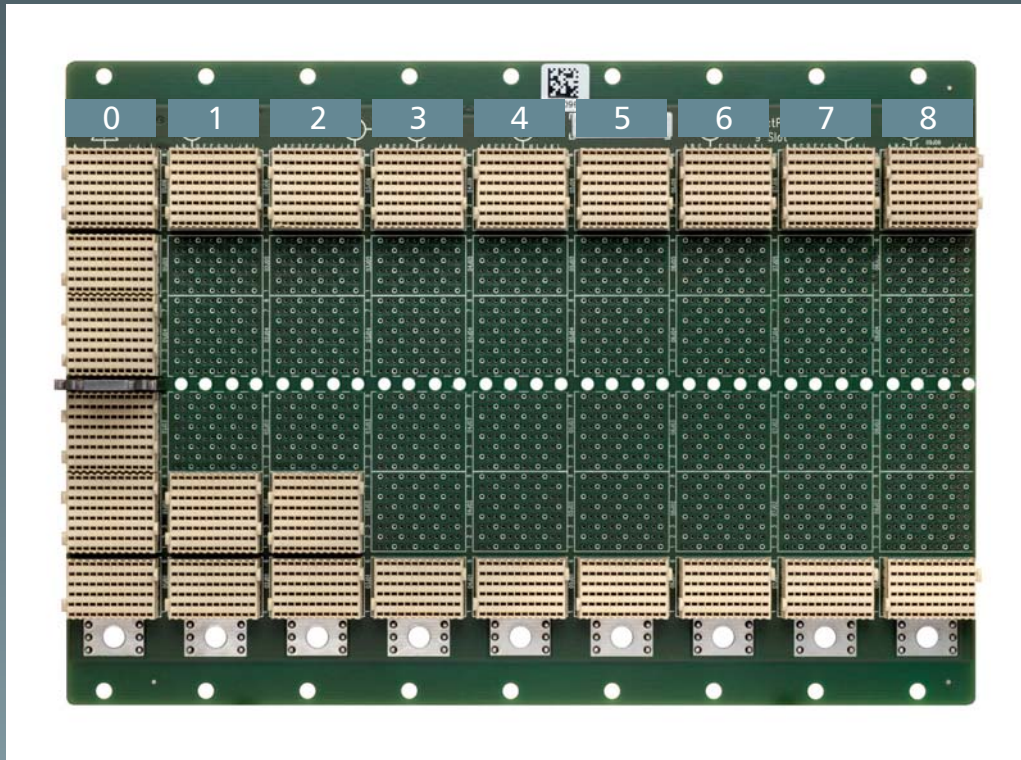
System expansion made easy - add mass storage cards or I/O as required by your application



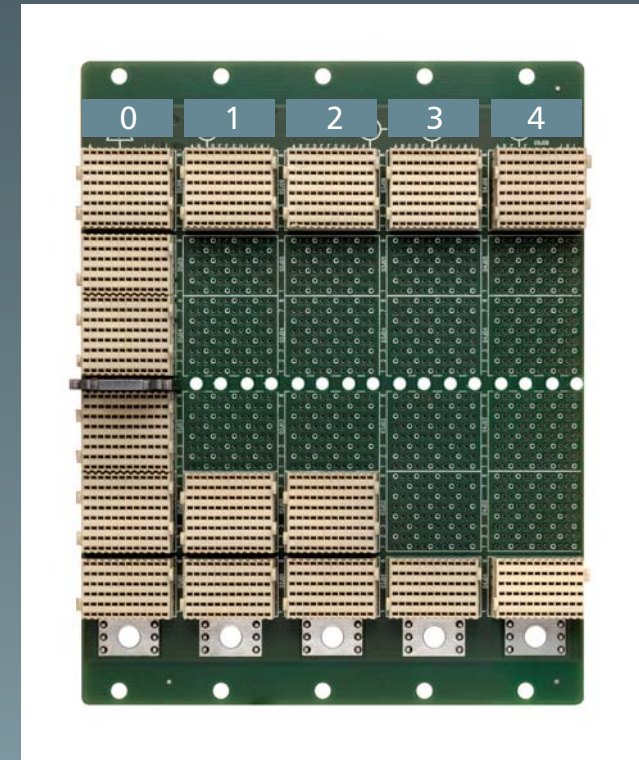
www.ekf.com/s/serial.html

CompactPCI® Serial Connectors Filling Order Rules

The System Slot board (CPU) is the root complex (source) for up to 8 x PCIe Links, 8 x SATA/SAS, 8 x USB, 8 x GbE distributed across a cPCI-S backplane to the Peripheral Slots. Please note the descending precedence order for SATA channels.



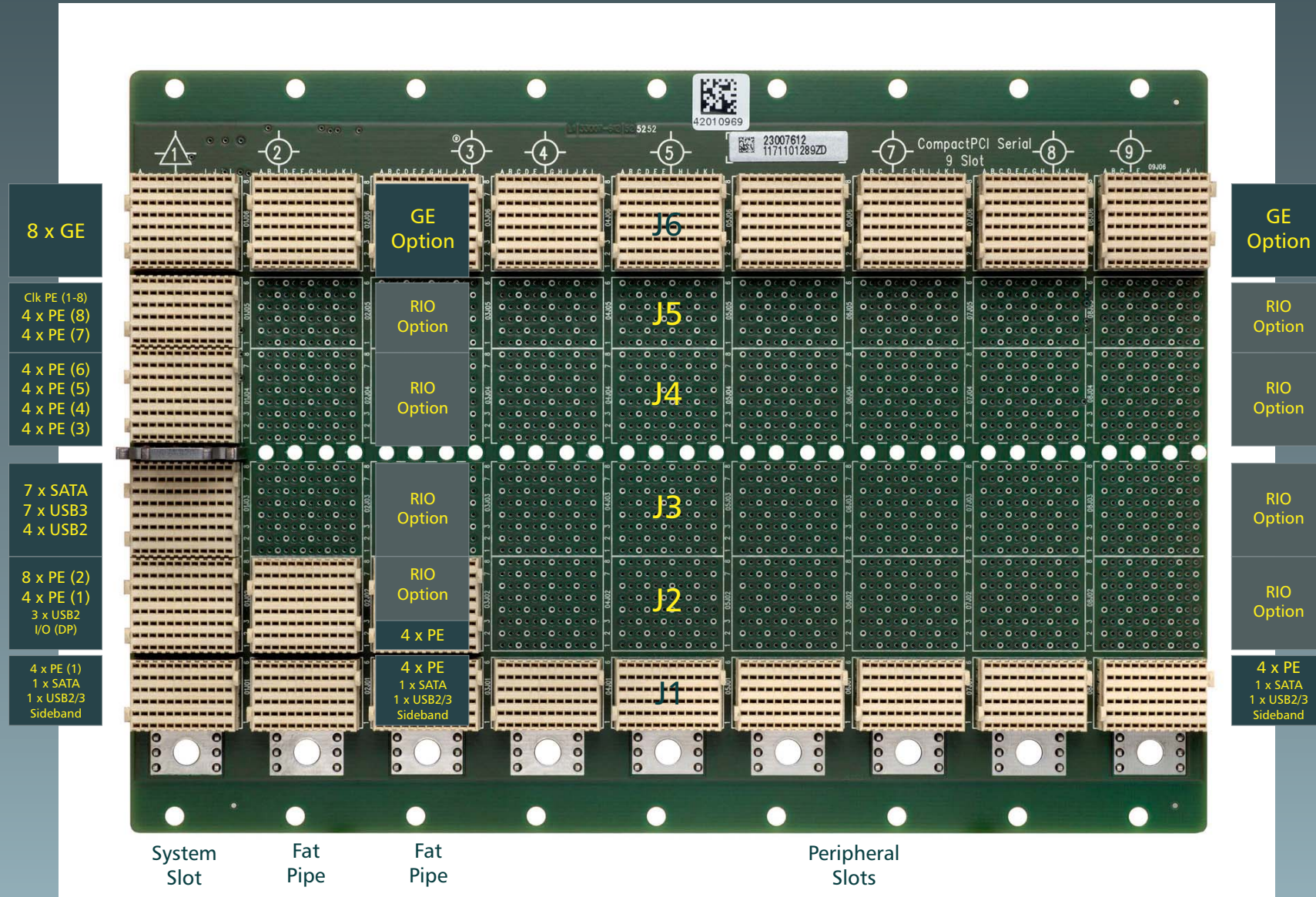
PE Link	1	2	3	4	5	6	7	8
USB	1	2	3	4	5	6	7	8
SATA	8	7	6	5	4	3	2	1
GbE	1	2	3	4	5	6	7	8



PE Link	1	2	3	4
USB	1	2	3	4
SATA	4	3	2	1
GbE	1	2	3	4

CompactPCI® Serial Connectors • Slot Types

System Slot J1-6 • Fat Pipe Slots J1-2, Option J6 • Peripheral Slots J1, Option J6
Positions not filled: RIO Option



CompactPCI® Serial CPU Card

CPU (SystemBoard) • SC2-PRESTO • 4th Generation Intel® Core™ Processor
General Usage



CompactPCI® Serial CPU Card

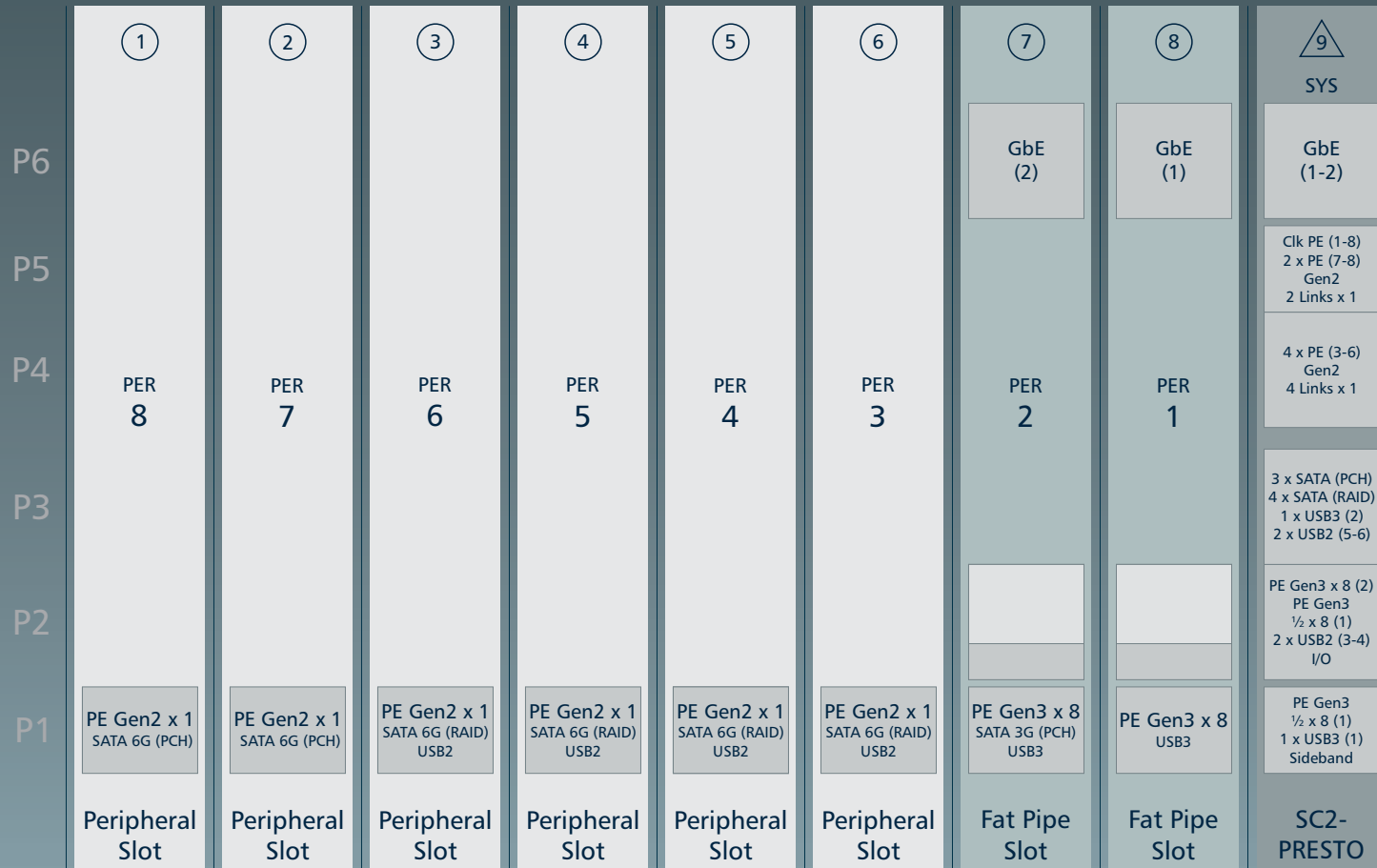
CPU (SystemBoard) • SC3-LARGO • 5th Generation Intel® Core™ Processor
High Performance



www.ekf.com/s/sc3/sc3.html

CompactPCI® Serial CPU Card

SC2-PRESTO R.1 • Resources w. 1+8 Slots Backplane (System Slot Right)



www.ekf.com/s/sc2/sc2.html

CompactPCI® Serial CPU Card

CPU Mezzanine Side Card • SCS-TRUMPET • Storage & I/O Local Expansion (8HP or 12HP front panel assembly)

typical usage with system slot right aligned backplane

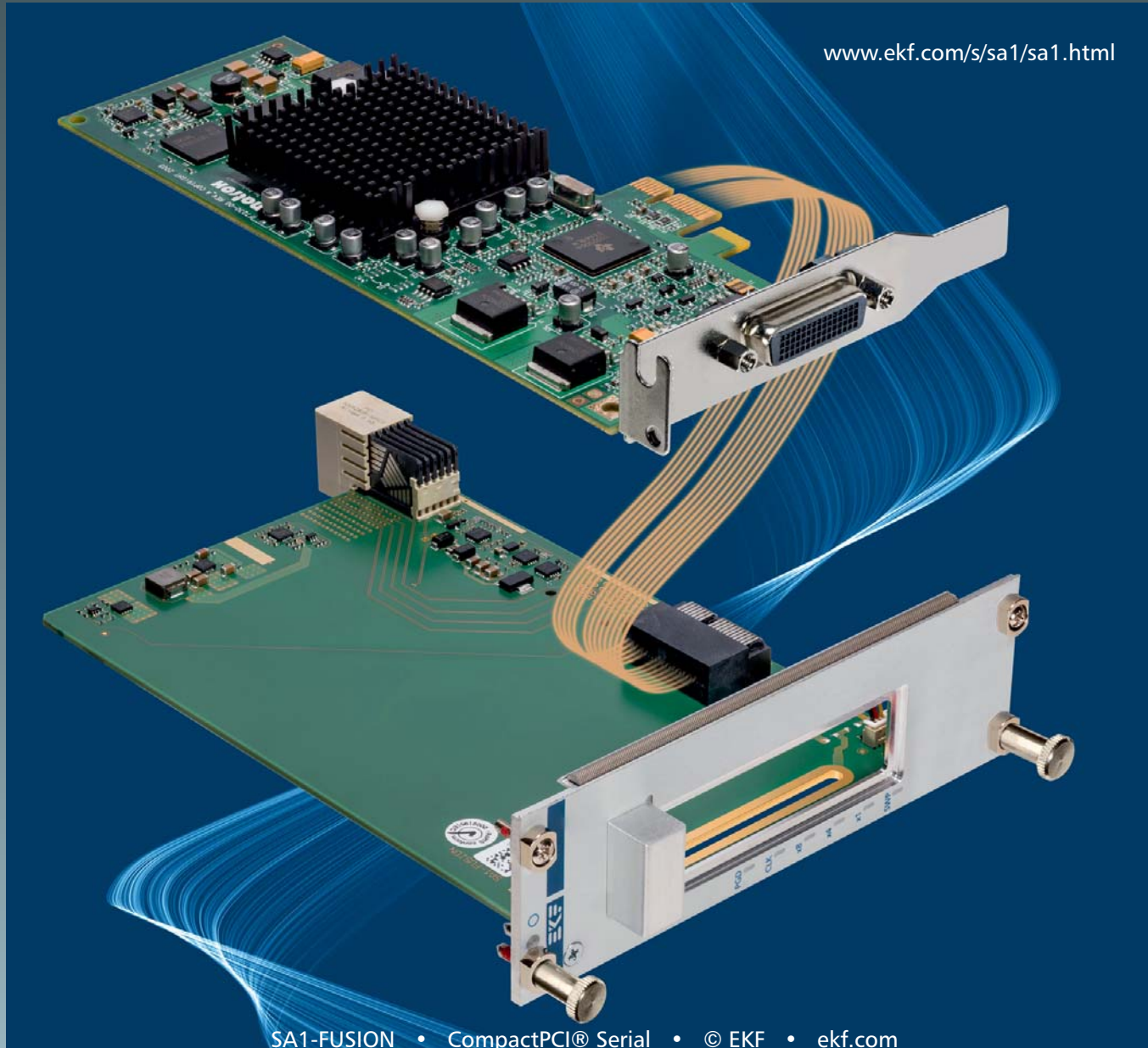


www.ekf.com/s/scs/scs.html

CompactPCI® Serial Peripheral Card

Adapter Solutions • PCIe Card Carrier

www.ekf.com/s/sa1/sa1.html



SA1-FUSION • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

Standard I/O Ports • USB 3.0 & SATA combo connectors



SB1-OBOE • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

Standard I/O Ports • USB 3.0



www.ekf.com/s/sb3/sb3.html

SB3-TONE • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

Standard I/O Ports • USB 3.0 • Front I/O & Rear I/O



SBX-DUB • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Rear I/O Module

Standard I/O Ports • USB 3.0 • Front I/O & Rear I/O



SBR-RIO • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

Storage Solutions • SATA SSD



SD1-DISCO • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

Storage Solutions • mSATA RAID



www.ekf.com/s/sd3/sd3.html

SD3-GLISS Quad mSATA 6G RAID • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

Storage Solutions • M.2 SATA RAID



www.ekf.com/s/sd4/sd4.html

SD4-SWEEP Quad M.2 SATA 6G RAID • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

Storage Solutions • Removable 2.5-inch SATA SSD



www.ekf.com/s/sd8/sd8.html

SD8-STEEL • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

Storage Solutions • 6G SAS Controller

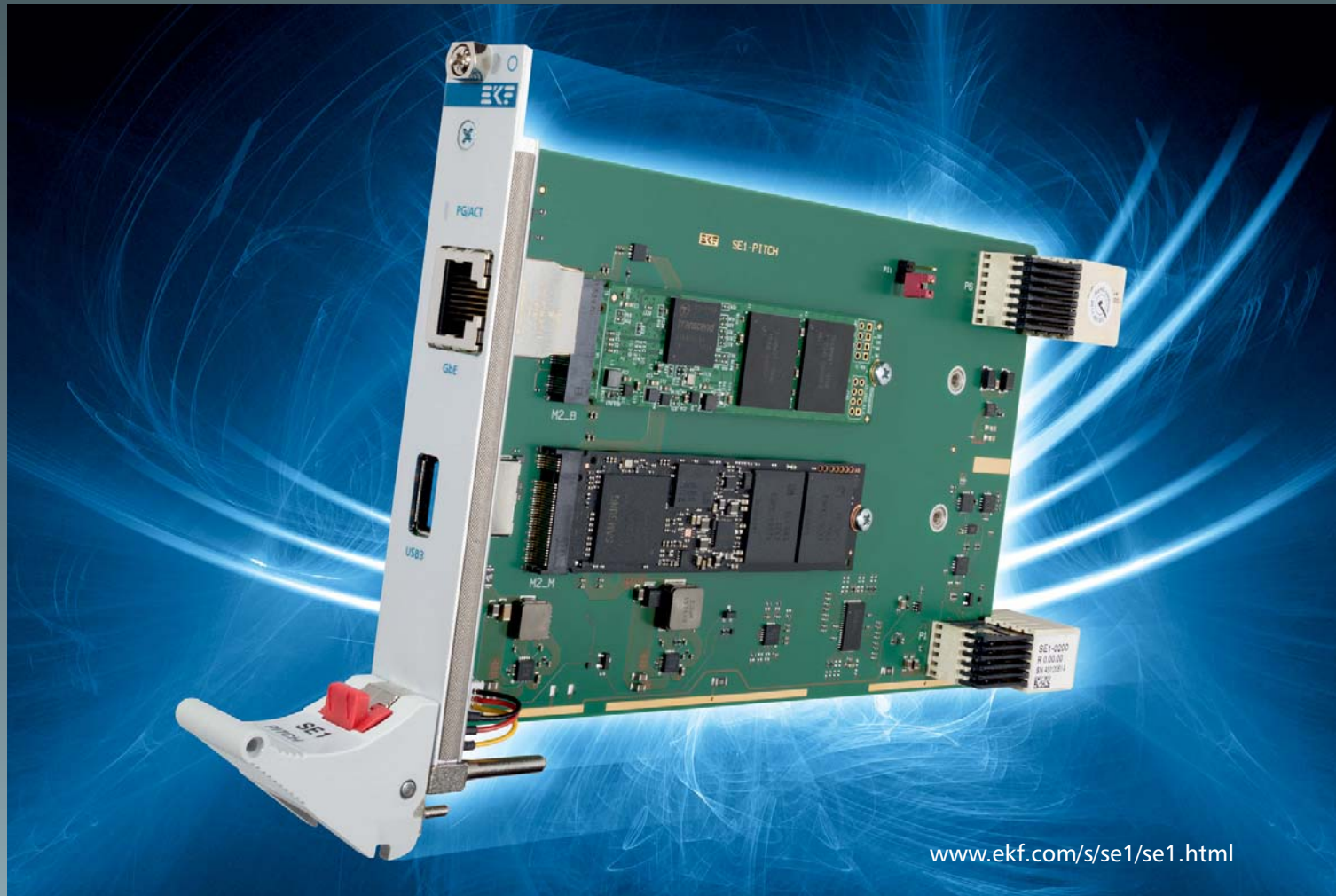


www.ekf.com/s/ss9/ss9.html

SS9-RAI • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

Storage Solutions • M.2 NVMe (PCIe)

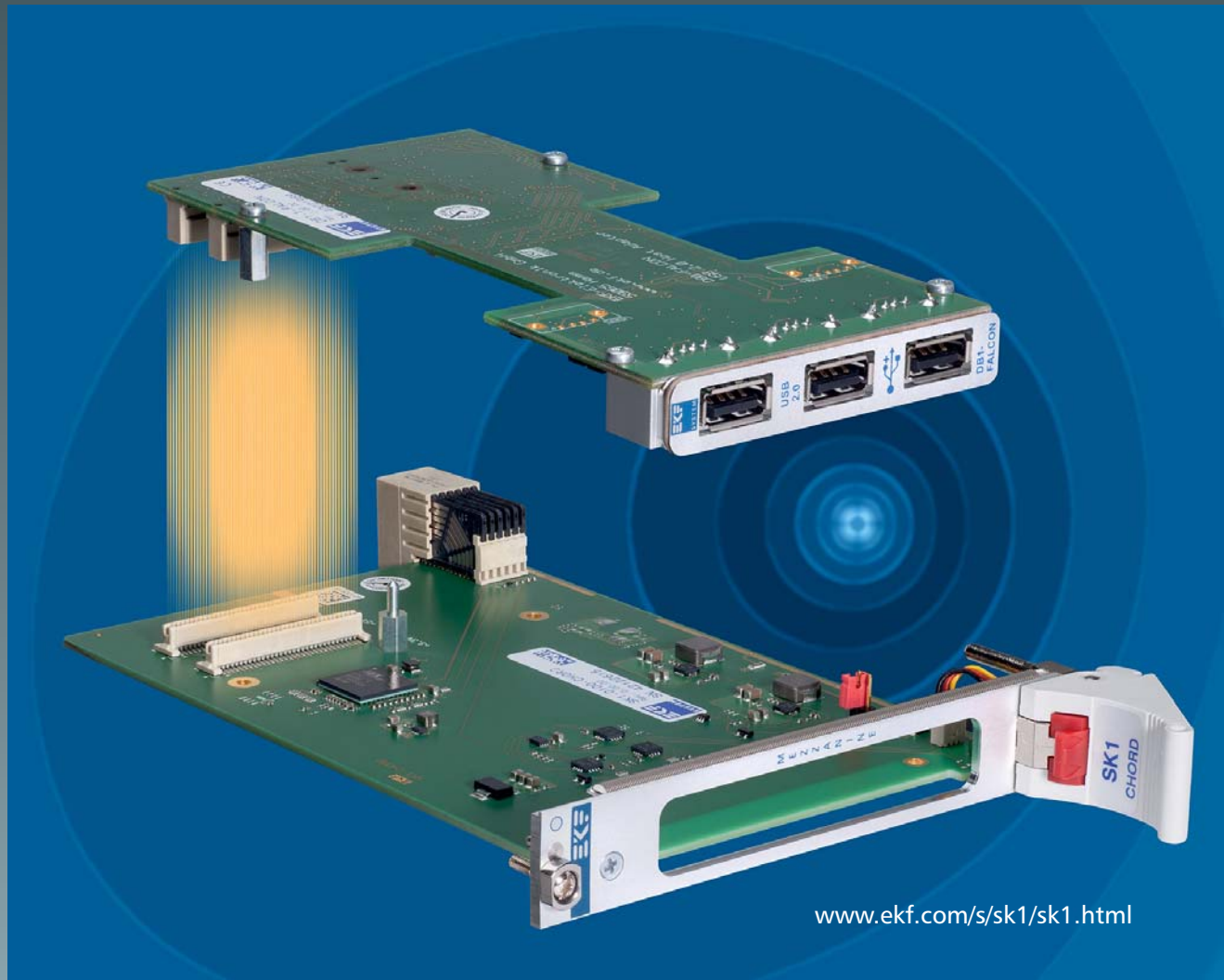


www.ekf.com/s/se1/se1.html

SE1-PITCH • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

PMC/XMC Carrier • PMC Module



SK1-CHORD • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

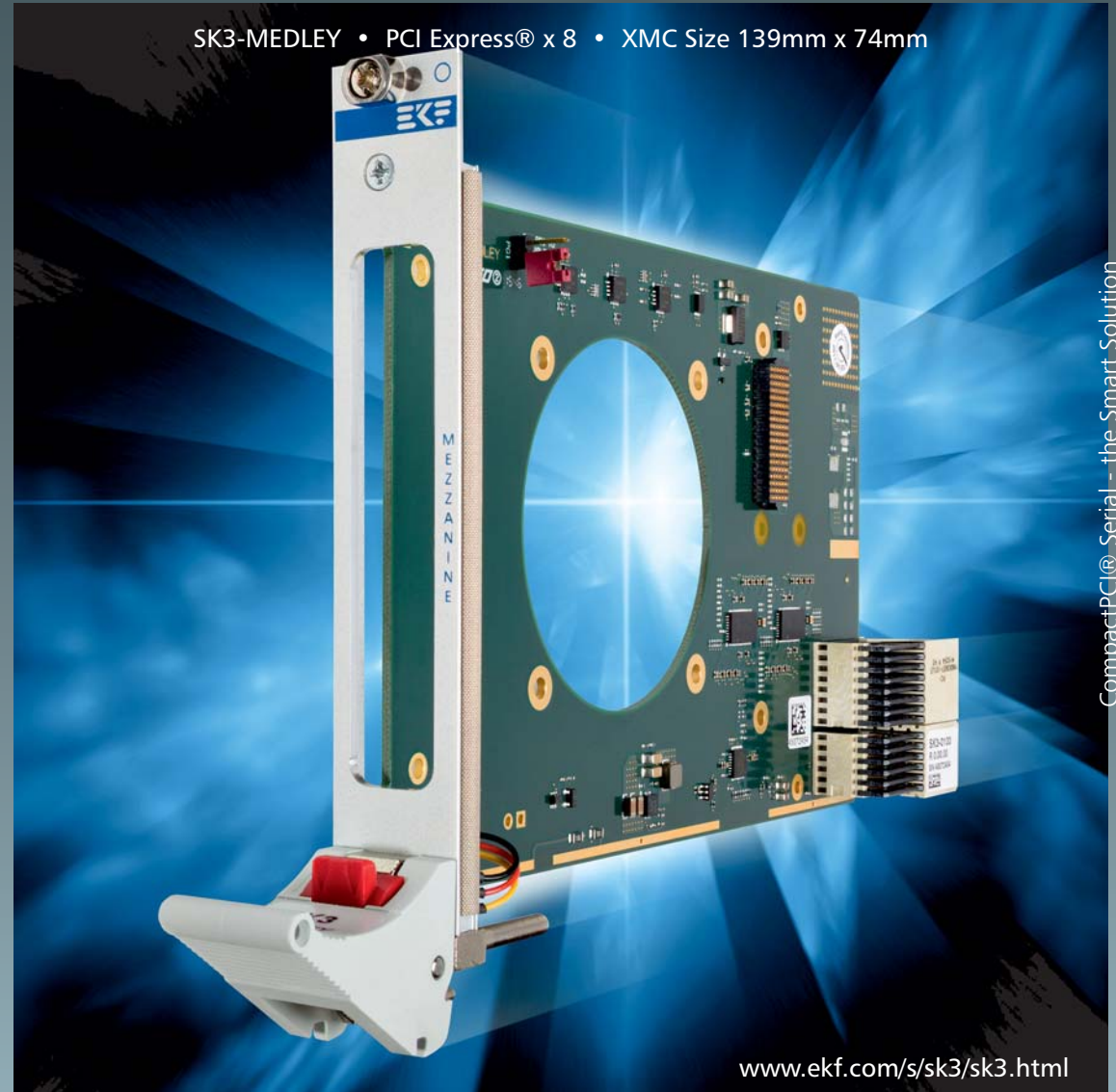
PMC/XMC Carrier • XMC Module

SK2-SESSION • PCI Express® x 4 • XMC Size 139/149mm x 74mm



www.ekf.com/s/sk2/sk2.html

SK3-MEDLEY • PCI Express® x 8 • XMC Size 139mm x 74mm



www.ekf.com/s/sk3/sk3.html

CompactPCI® Serial - the Smart Solution

CompactPCI® Serial Peripheral Card

Networking (NIC) • 5-Port Gigabit Ethernet controller



SN1-REVERB • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

Networking (NIC) • 5-Port Gigabit Ethernet controller w. M12 connectors



www.ekf.com/s/sn2/sn2.html

SN2-VIBRATO • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

Networking (NIC) • Dual-Port 10 Gigabit Ethernet controller w. RJ45 jacks

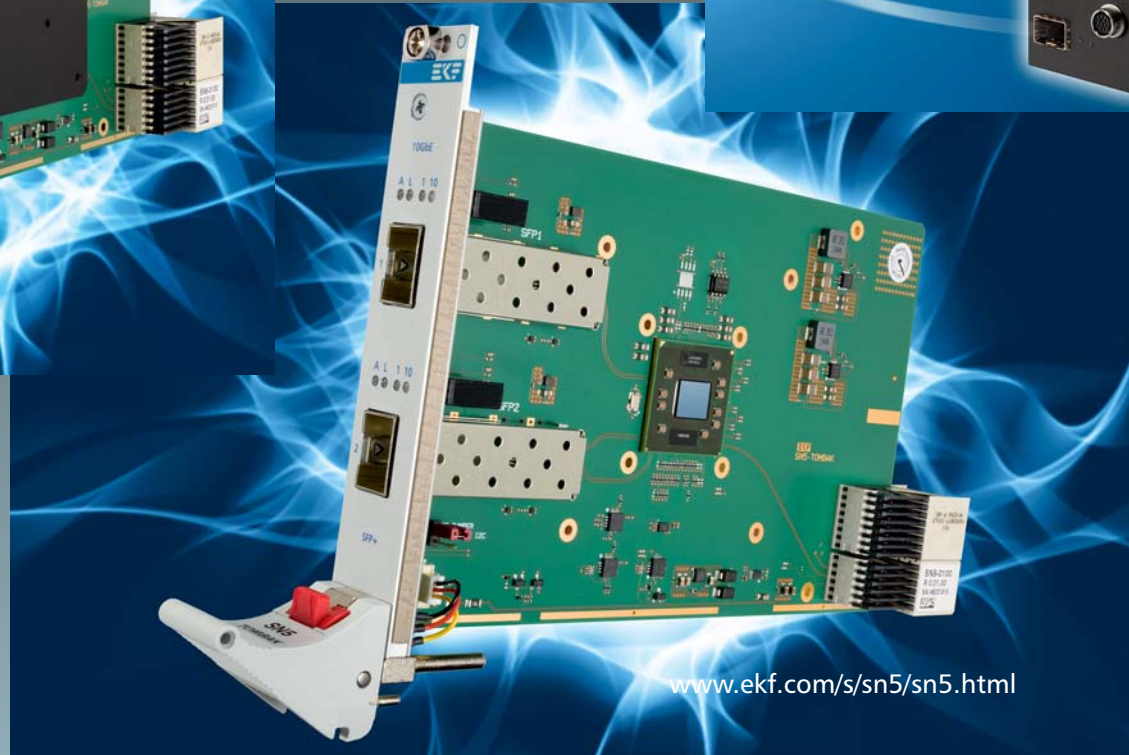


www.ekf.com/s/sn3/sn3.html

SN3-GONG • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

Networking (NIC) • Dual-Port 10 Gigabit Ethernet controller w. SFP+ cages



www.ekf.com/s/sn5/sn5.html

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CompactPCI® Serial Peripheral Card

Networking (Switching) • 7-Port Gigabit Ethernet unmanaged switch



www.ekf.com/s/sl1/sl1.html

SL1-COMBO • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

Networking (Switching) • 9-Port Gigabit Ethernet switch w. GbE controller • M12-X F/P and RIO (option) • in-band management



SL2-BRASS • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

Networking (Switching) • 20-Port Gigabit Ethernet unmanaged switch



SL4-TUBA • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

Networking (Real-Time) • Industrial Ethernet & Fieldbus module carrier (Hilscher)



SF1-STUDIO • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

Adapter Solutions • ExpressCard™ and 1.8-Inch SATA SSD



SP1-BANJO • CompactPCI® Serial • © EKF • ekf.com

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CompactPCI® Serial Peripheral Card

Wireless Technologies • PCI Express Mini Card & μ SATA SSD



SP2-LUTE • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

Wireless Technologies • 4 x PE Mini Card & 1 x mSATA • custom F/P design for I/O modules e.g. CAN 2.0B



SP4-MAMBO • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

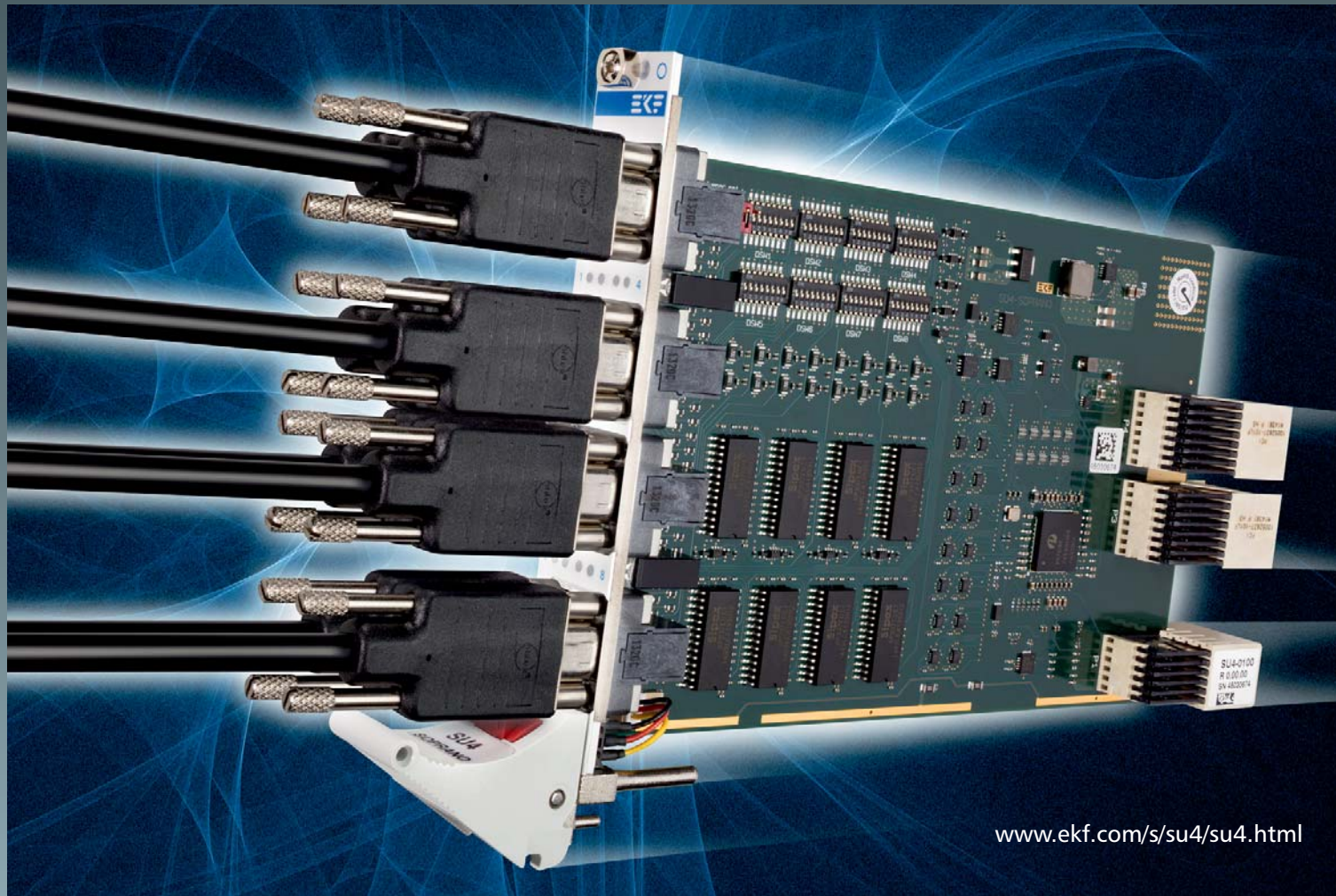
Wireless Technologies • 4 x M.2 LTE



CompactPCI® Serial - the Smart Solution

CompactPCI® Serial Peripheral Card

8-Port UART • RS-485 & RS-232 Configurable • RIO Option



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SU4-SOPRANO • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

UART • RS-485 & RS-232 Isolated I/O



SU8-HUM (RS-485) SU9-RATTLE (RS-232) • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

DisplayPort • MXM 3.0 Type A graphics module carrier (low power)



SV1-CLIP • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

DisplayPort • MXM 3.0 Type B graphics module carrier (performance & CUDA)



SV2-MOVIE • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial System Expansion

PCI Express® External Cabling • Host System Adapter
Dual 4-Lane Gen2 (2 x 20Gbps) • 7m Copper Cable - 300m AOC (Optical)

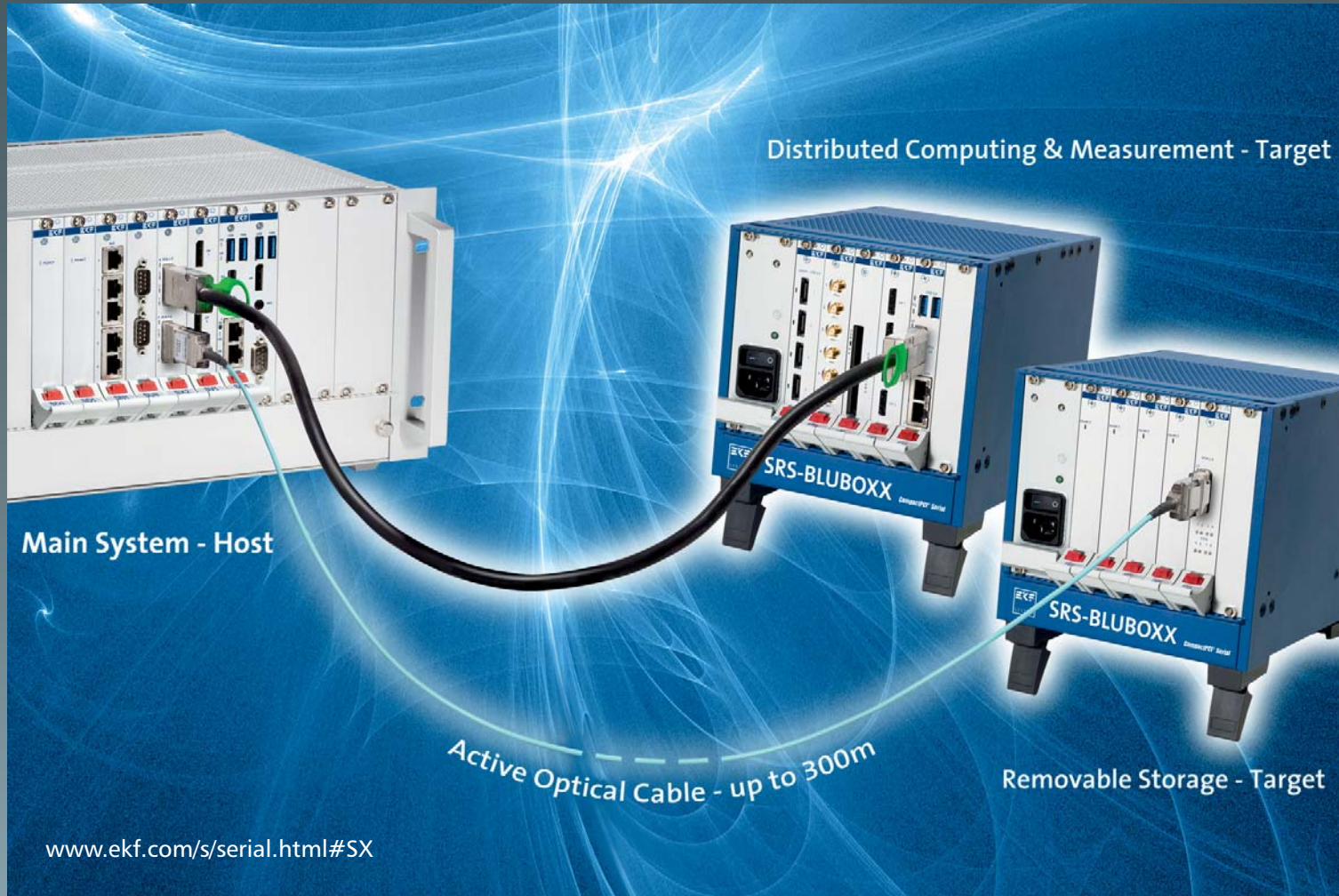


www.ekf.com/s/sx2/sx2.html

SX2-SLIDE • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial System Expansion

PCI Express® External Cabling • Typical Application



www.ekf.com/s/serial.html#SX

CompactPCI® Serial - the Smart Solution

CompactPCI® Serial System Expansion

PCI Express® External Cabling • Target System Adapter
System Slot Controller 8 x PCIe • F/P I/O

www.ekf.com/s/sx9/sx9.html



SX9-HOWL • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Serial System Expansion

PCI Express® External Cabling • Target System Adapter
System Slot Controller 8 x SATA 6G RAID

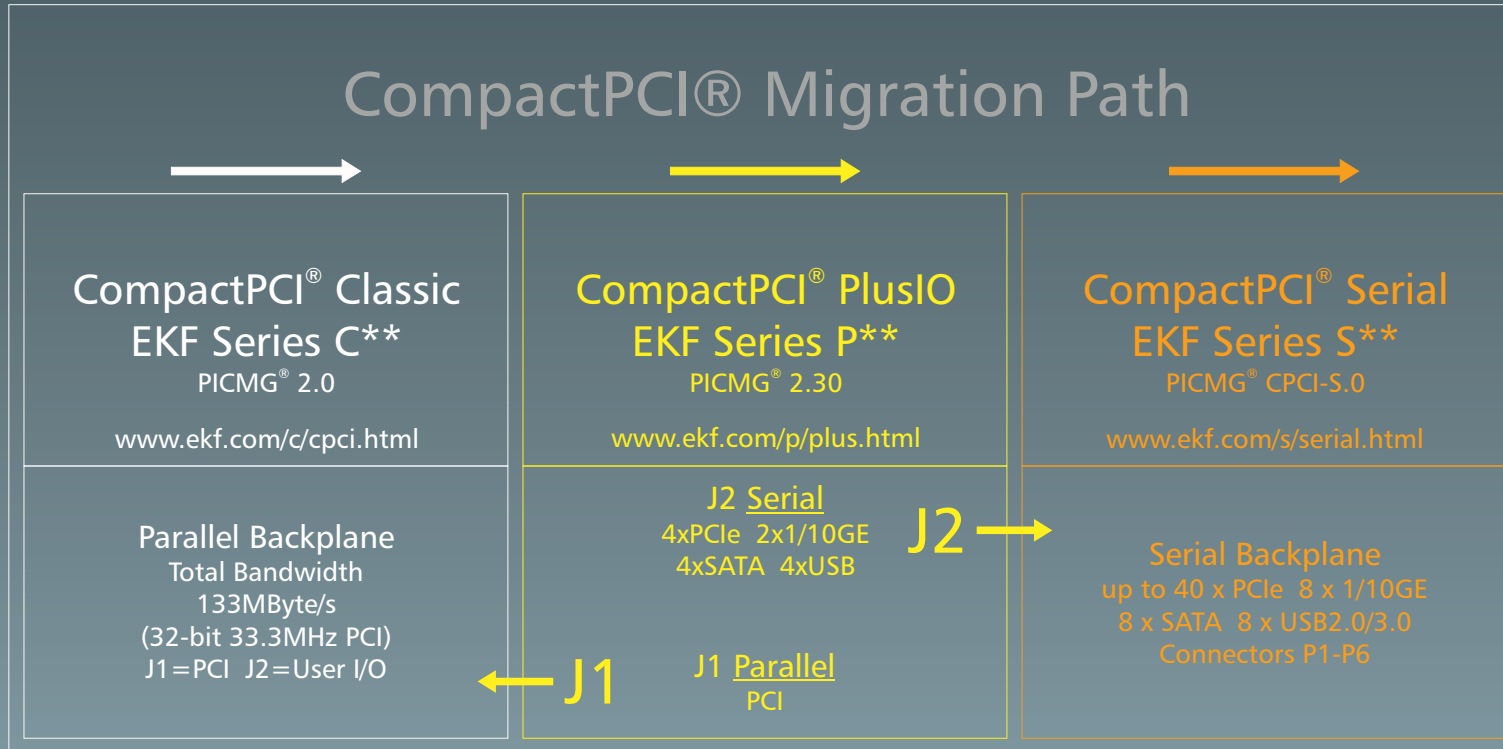


www.ekf.com/s/sxs/sxs.html

SXS-STRING • CompactPCI® Serial • © EKF • ekf.com

CompactPCI® Goes Serial

For a transitional period, we will see heterogeneous (hybrid) systems with a CompactPCI® PlusIO CPU card in the middle, which allows employment of both - CompactPCI® Classic and CompactPCI® Serial peripheral boards - on a hybrid backplane.

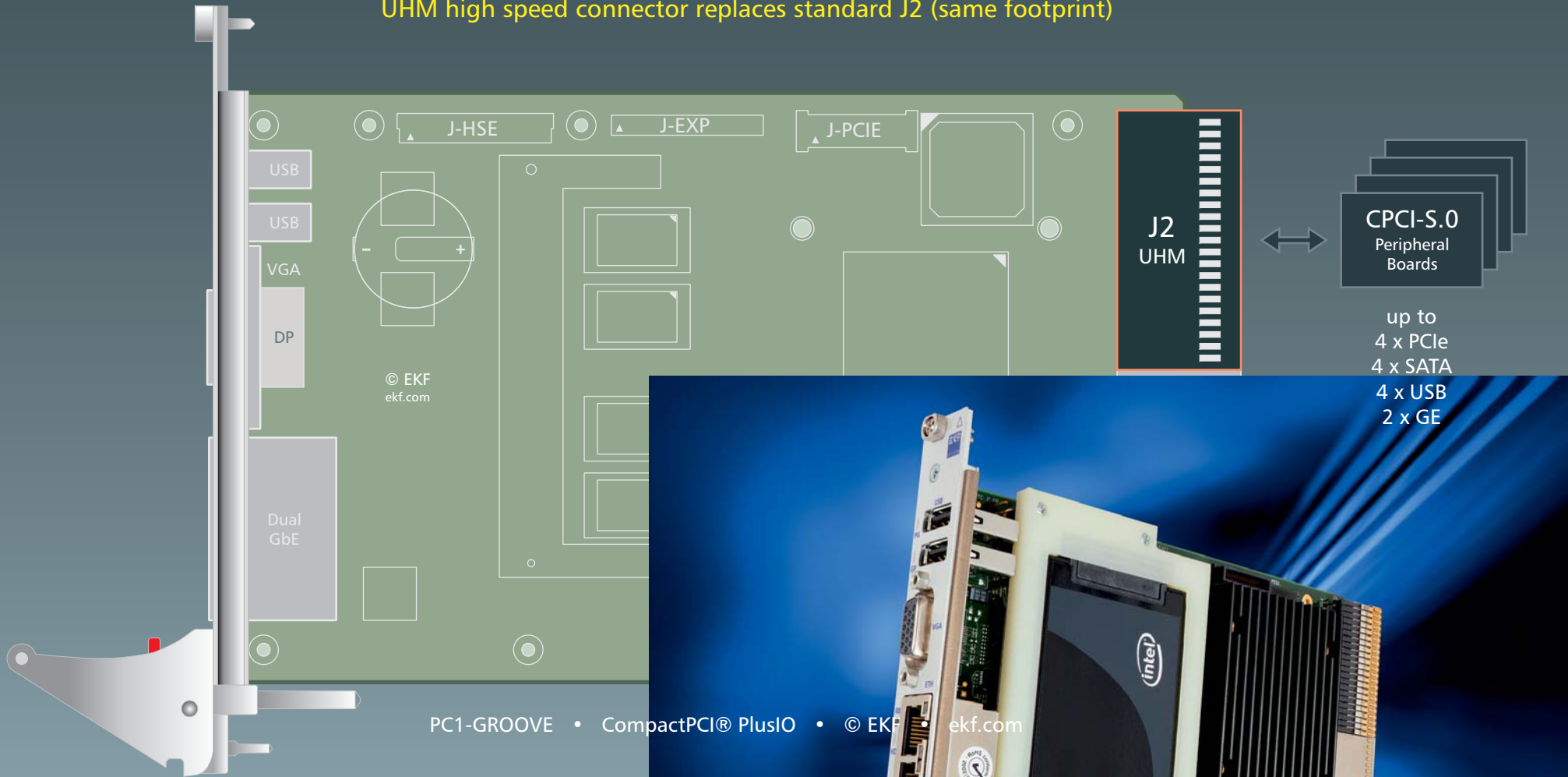


J2 is a High Speed Signal UHM Connector
Usage for RIO or CPCI Serial Backplane

CompactPCI® PlusIO (PICMG® 2.30) • CompactPCI® Serial (PICMG® CPCI-S.0)

CompactPCI® PlusIO CPU Card

A CompactPCI® PlusIO CPU card opens the migration path to CompactPCI® Serial while maintaining compatibility to 32-bit CPCI classic systems
UHM high speed connector replaces standard J2 (same footprint)



CompactPCI® Serial - the Smart Solution

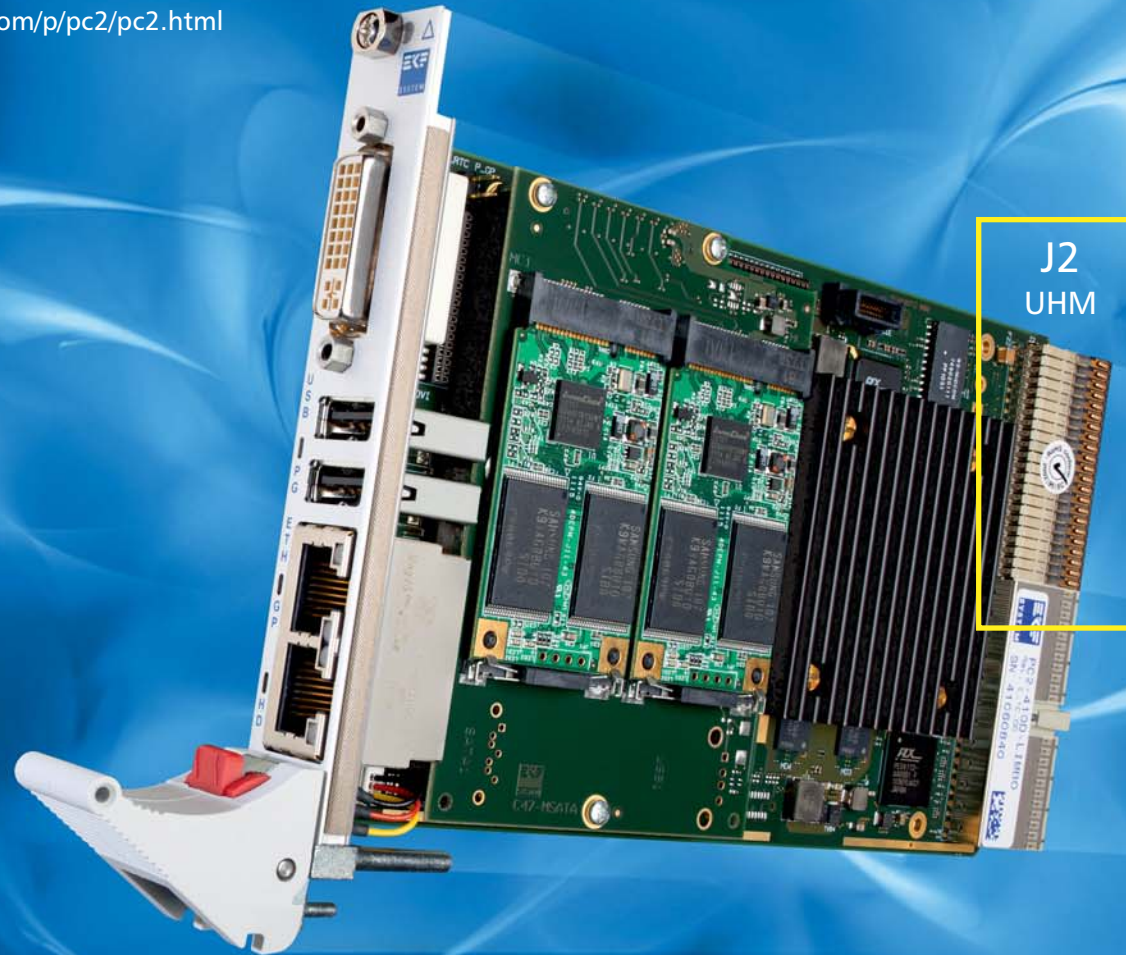
PC1-GROOVE • CompactPCI® PlusIO • © EKF • ekf.com



CompactPCI® PlusIO CPU Card

The CompactPCI® PlusIO connector J2 is a high speed signal receptacle (same dimensions as classic J2)

www.ekf.com/p/pc2/pc2.html



PC2-LIMBO • CompactPCI® PlusIO • © EKF • ekf.com

CompactPCI® PlusIO CPU Card

3rd Generation CompactPCI® PlusIO CPU card - PC3-ALLEGRO



CompactPCI® PlusIO Rear I/O Transition Module

The connector J2 allows for high speed rear I/O according to PICMG® CPCI 2.30 PlusIO

CompactPCI® Serial - the Smart Solution



PR1-RIO • CompactPCI® PlusIO • © EKF • ekf.com

CompactPCI® PlusIO Rear I/O

Profit from standardized high speed rear I/O



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CompactPCI® PlusIO CPU Side Cards

Mezzanine expansion modules available (8HP assembly)

CompactPCI® Serial - the Smart Solution



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CompactPCI® PlusIO CPU Side Cards

Mezzanine expansion modules available (8HP assembly)

www.ekf.com/p/pcs/pcs.html

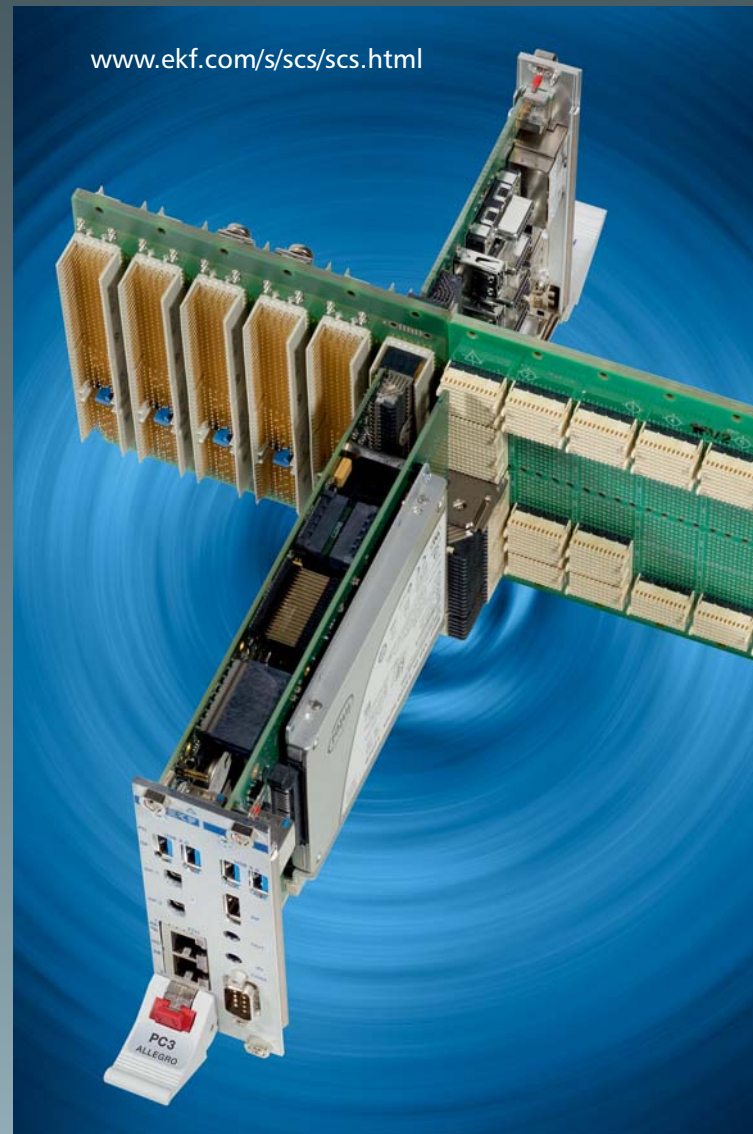
CompactPCI® Serial - the Smart Solution



PCS-BALLET • CompactPCI® PlusIO • © EKF • ekf.com

CompactPCI® PlusIO CPU Side Cards

SCS-TRUMPET Side Card w. USB Rear I/O distributed across CompactPCI® Serial secondary backplane



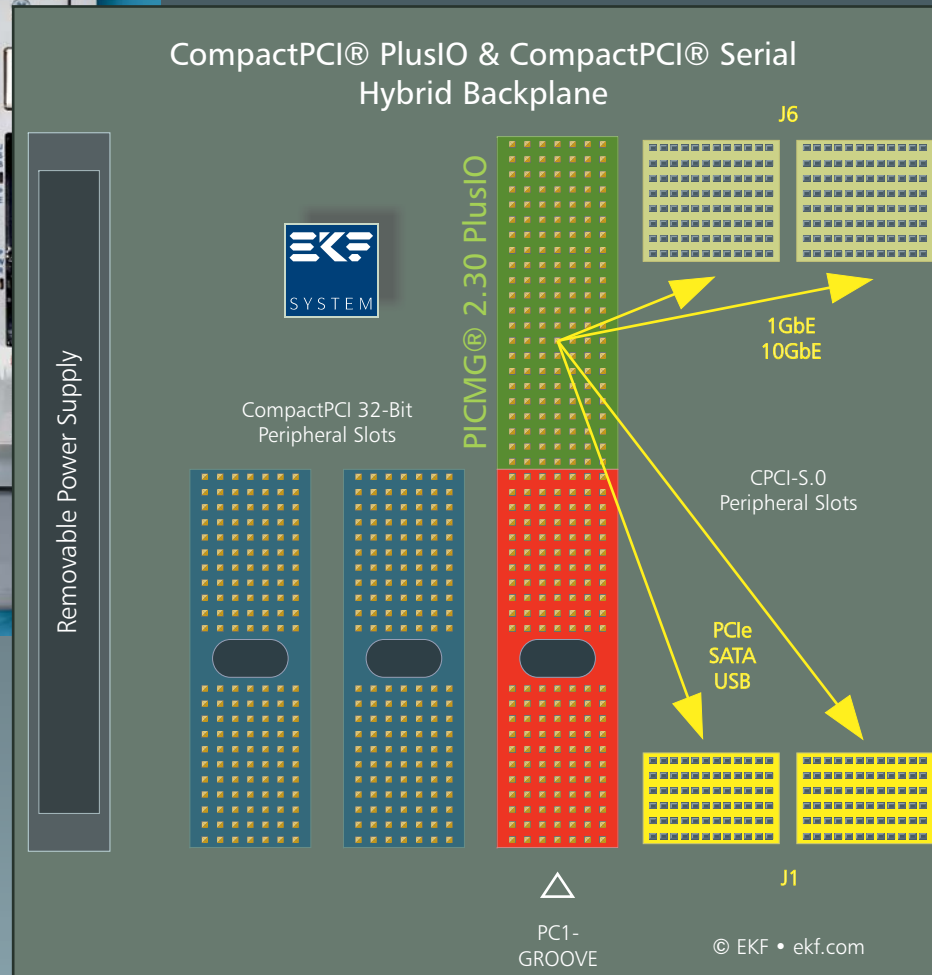
CompactPCI® PlusIO CPU Mezzanine Expansion

Side board I/O connectors for mezzanine expansion available on EKF CPU cards



CompactPCI® PlusIO & CompactPCI® Serial Hybrid Backplane

New defined CPCI PlusIO system slot J2/P2 delivers high speed serial I/O to CPCI Serial peripheral slots: PCIe SATA USB GbE



BlueLine Hybrid System



CompactPCI® Serial - the Smart Solution

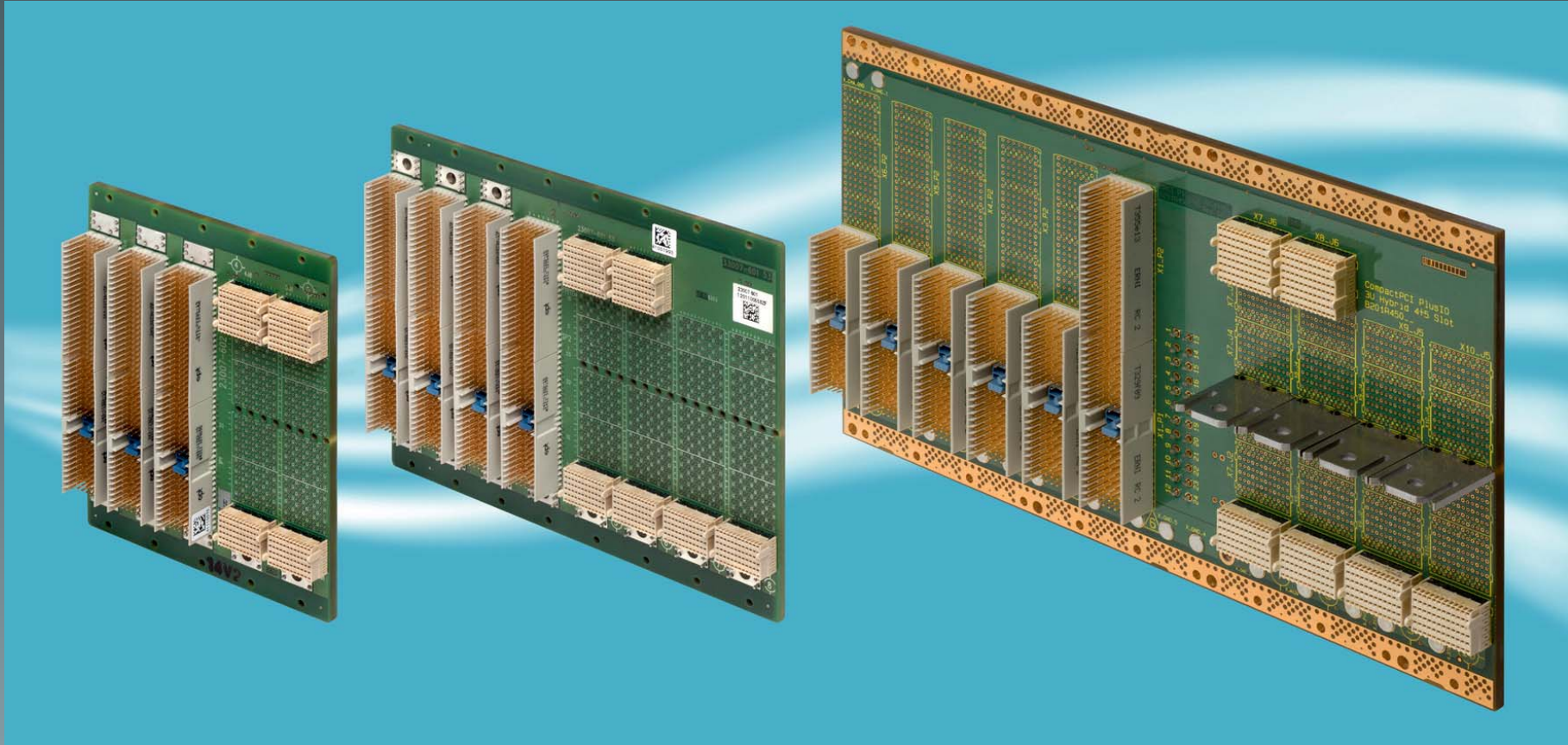
CompactPCI® Classic & CompactPCI® Serial Hybrid Systems

Hybrid systems comprise the best of both worlds



CompactPCI® Classic & CompactPCI® Serial Dual-Backplanes

Thanks to PlusIO, hybrid backplanes allow concurrent usage of CPCI Classic cards and CPCI Serial boards
Hybrid backplanes are available with an empty slot for 8HP PlusIO CPU board & mezzanine side card assembly



Sample Hybrid Backplanes CompactPCI® Classic & CompactPCI® Serial

The CompactPCI® PlusIO system slot is located in the middle

CompactPCI® Classic & CompactPCI® Serial Dual-Systems

Hybrid systems allow concurrent usage of CPCI Classic cards and CPCI Serial boards

www.ekf.com/s/srp/srp4401/srp4401.html



SRP-4401-PLUSIO

The CompactPCI® PlusIO system slot is located in the middle

CompactPCI® Classic & CompactPCI® Serial Dual-Systems

Hybrid systems allow concurrent usage of CPCI Classic cards and CPCI Serial boards

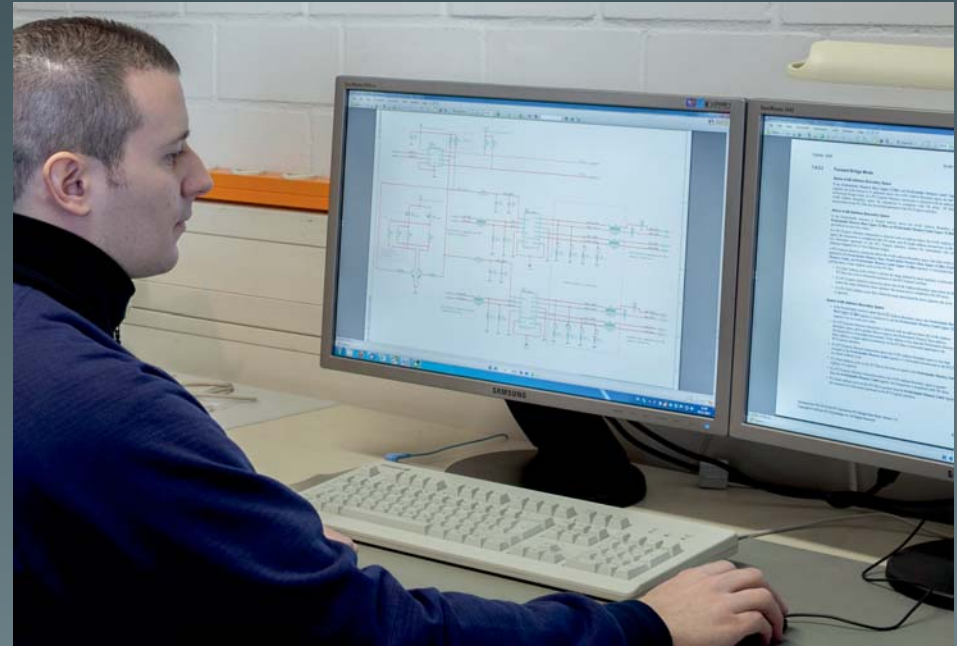
www.ekf.com/s/srp/srp4401/srp4401.html



SRP-4401-PLUSIO

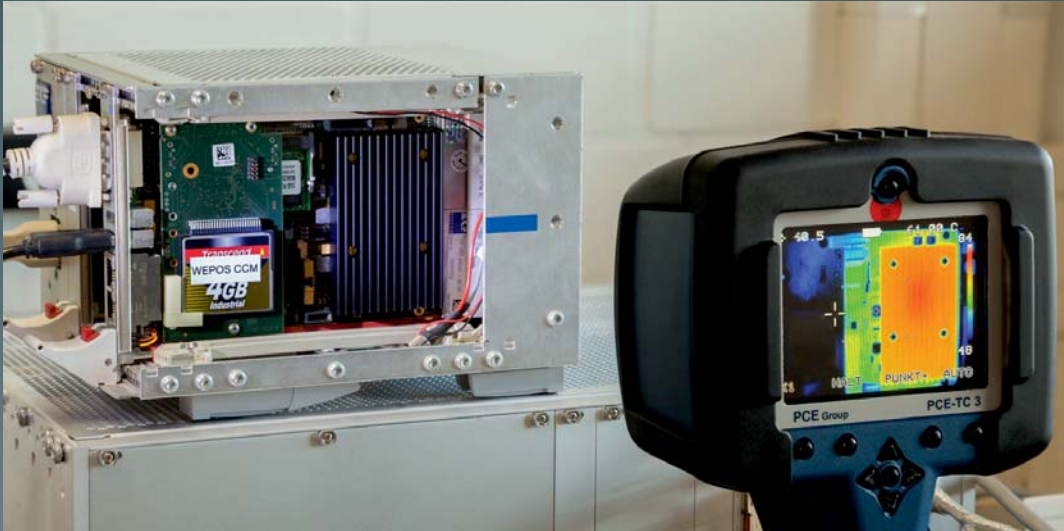
The CompactPCI® PlusIO system slot is located in the middle

High Speed Design by Competence: EKF



Built to Reliability and Ruggedness

Why choose EKF as your CompactPCI® Serial systems supplier?



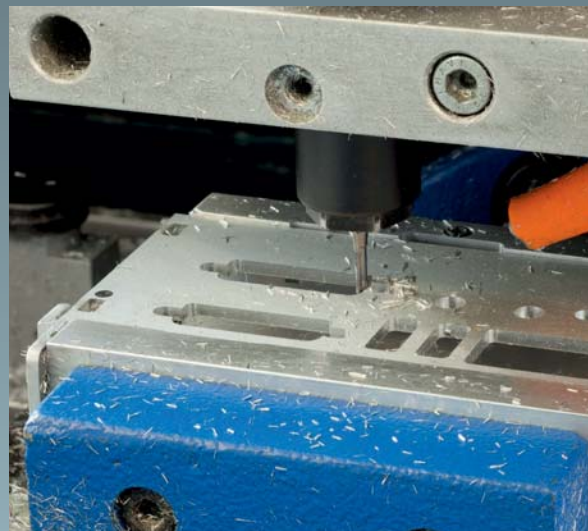
Thermal design & verification



AOI



X-Ray



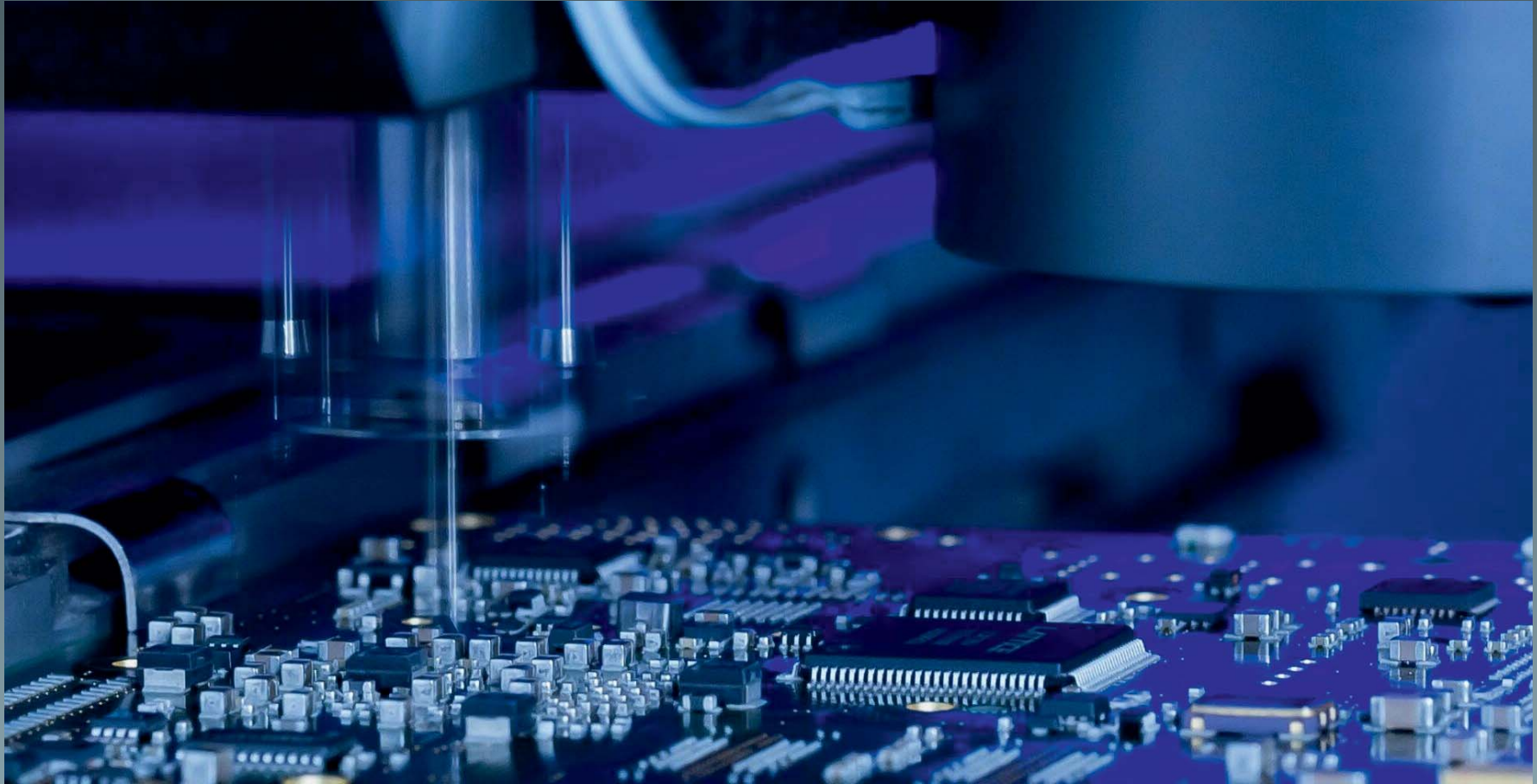
Custom specific manufacturing



ESD & regulatory verification

Built to Reliability and Ruggedness

Proven SMD technology from 0201 to large BGA components



Made in Germany by EKF

Impressions from our manufacture



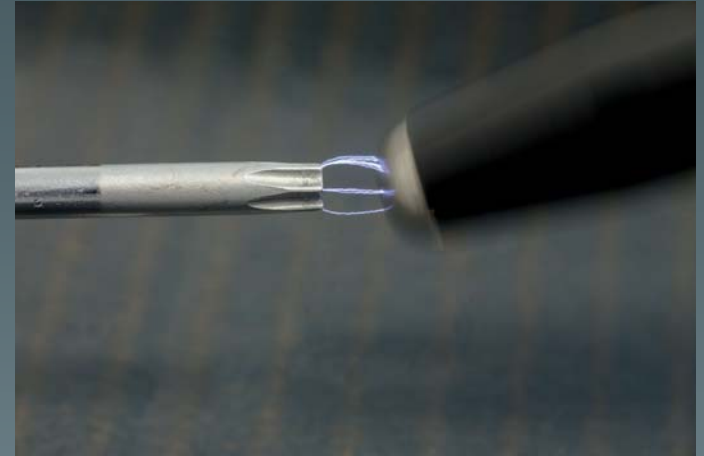
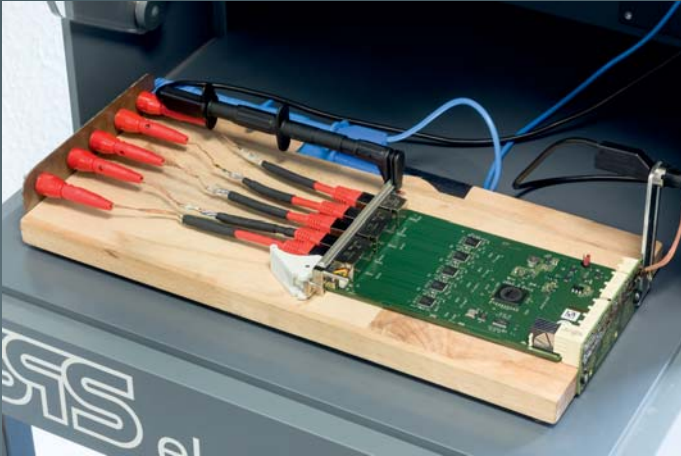
Made in Germany by EKF

More impressions from our manufacture



Made in Germany by EKF

Even more impressions from our manufacture



High Performance Embedded Made in Germany



Custom Specific Systems

Either hybrid or native - CompactPCI® and CompactPCI® Serial built to custom racks



CompactPCI® Serial - the Smart Solution

sales@ekf.com

High Performance Embedded Made in Germany

boards. systems. solutions.

