



CompactPCI[®] Serial

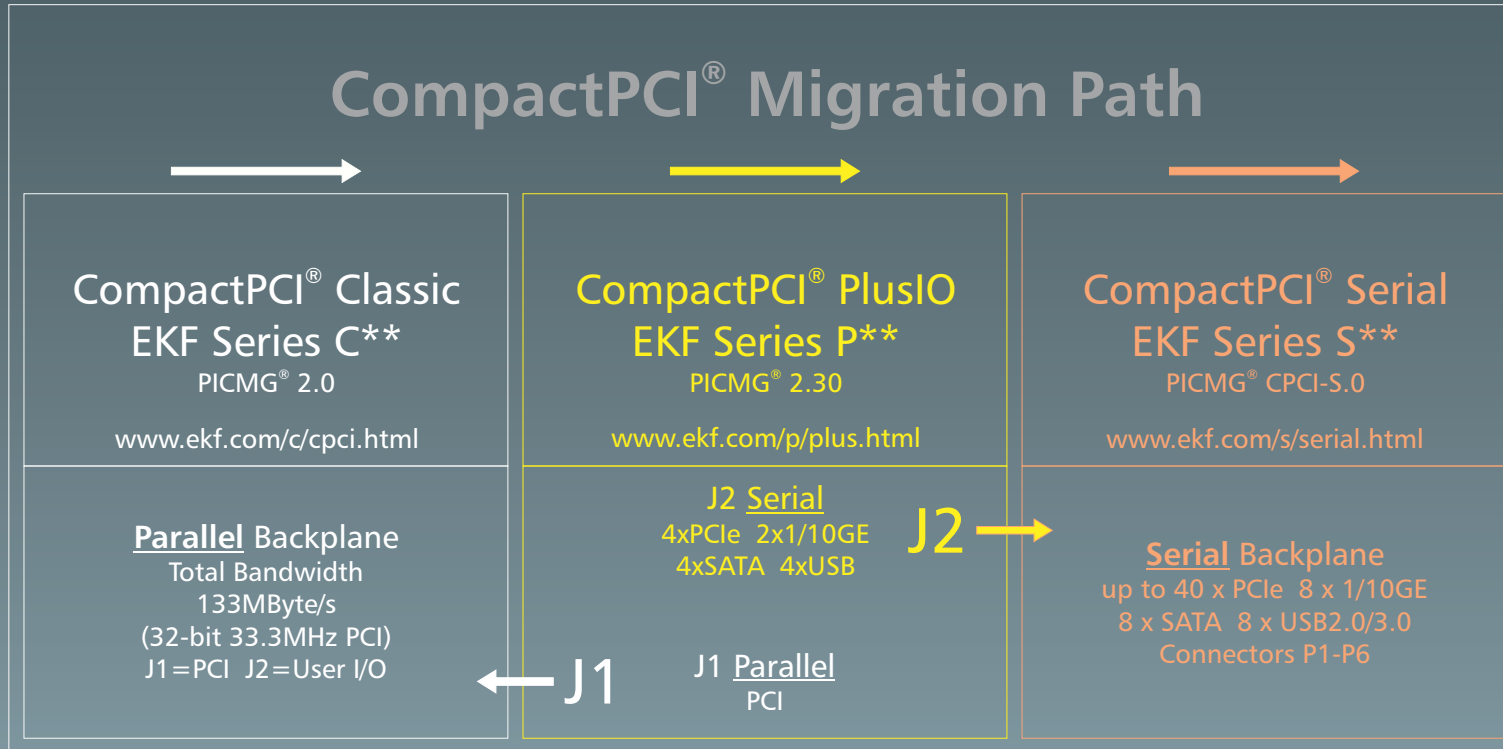
CompactPCI[®] PlusIO (PICMG[®] 2.30) • CompactPCI[®] Serial (PICMG[®] CPCI-S.0)

Conceptual Overview

2012-04-16
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CompactPCI® Goes Serial

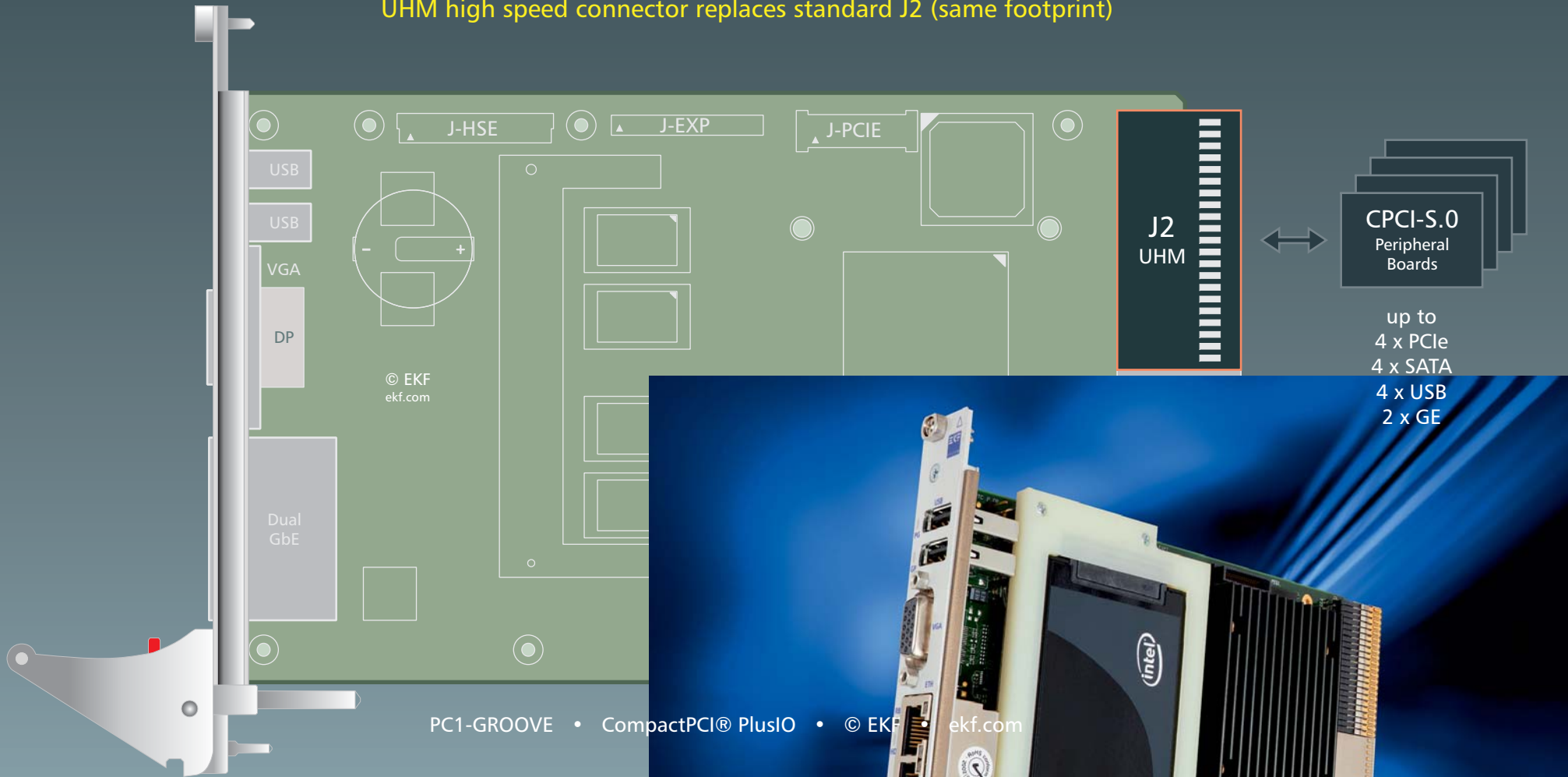
For a transitional period, we will see heterogeneous (hybrid) systems with a CompactPCI® PlusIO CPU card in the middle, which allows employment of both - CompactPCI® Classic and CompactPCI® Serial peripheral boards - on a hybrid backplane.



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

CompactPCI® PlusIO 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)

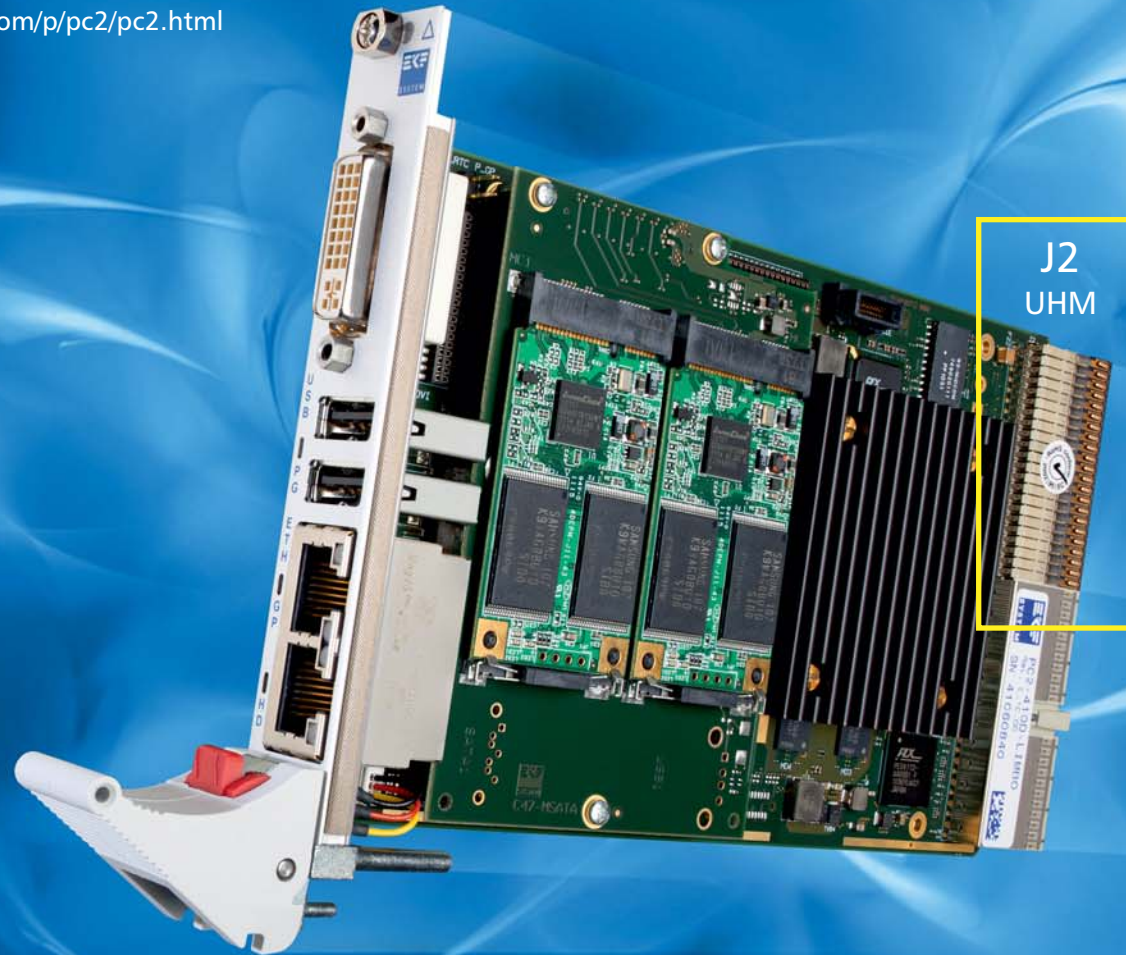


www.ekf.com/p/pc1/pc1.html

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

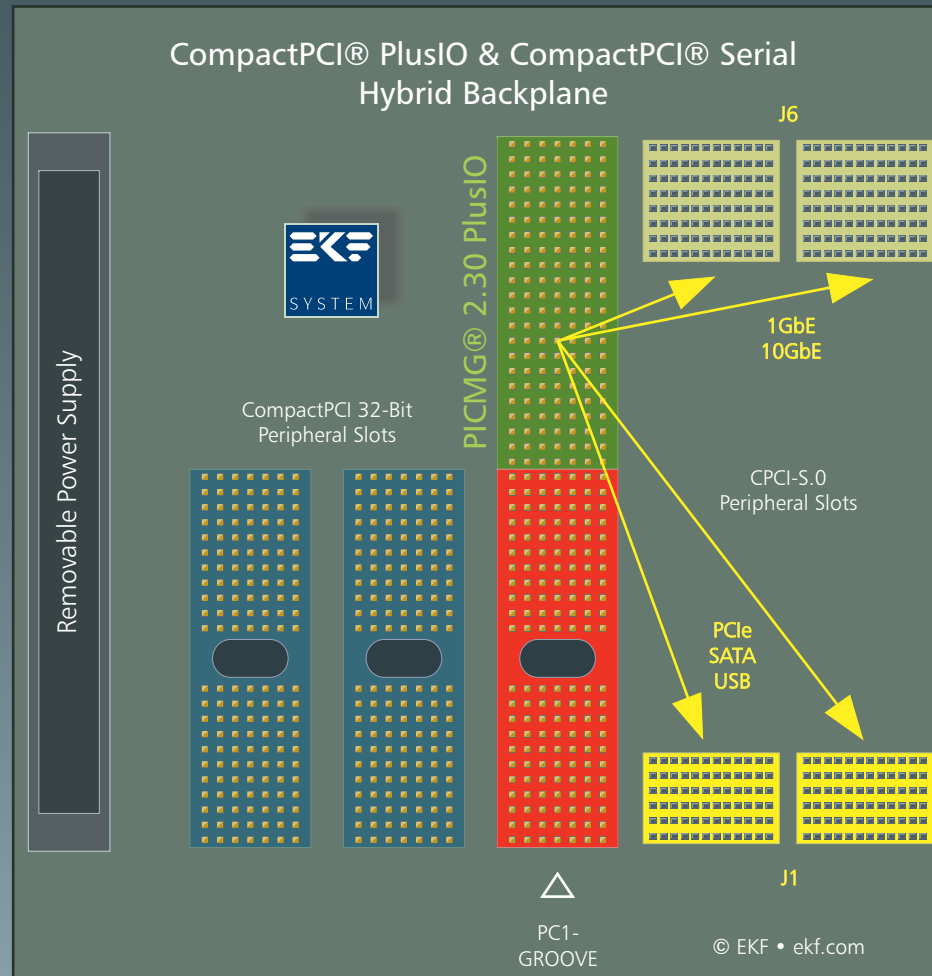
CompactPCI® PlusIO Rear I/O Transition Module

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



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

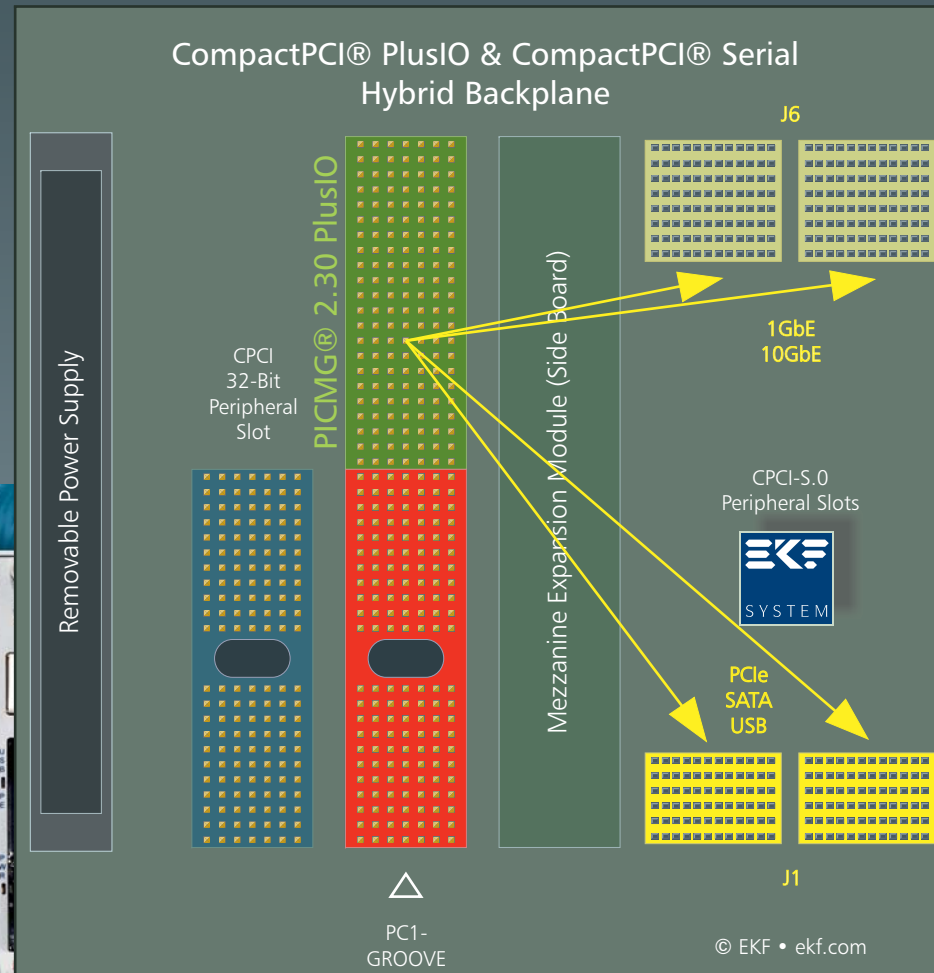


BlueLine Hybrid System



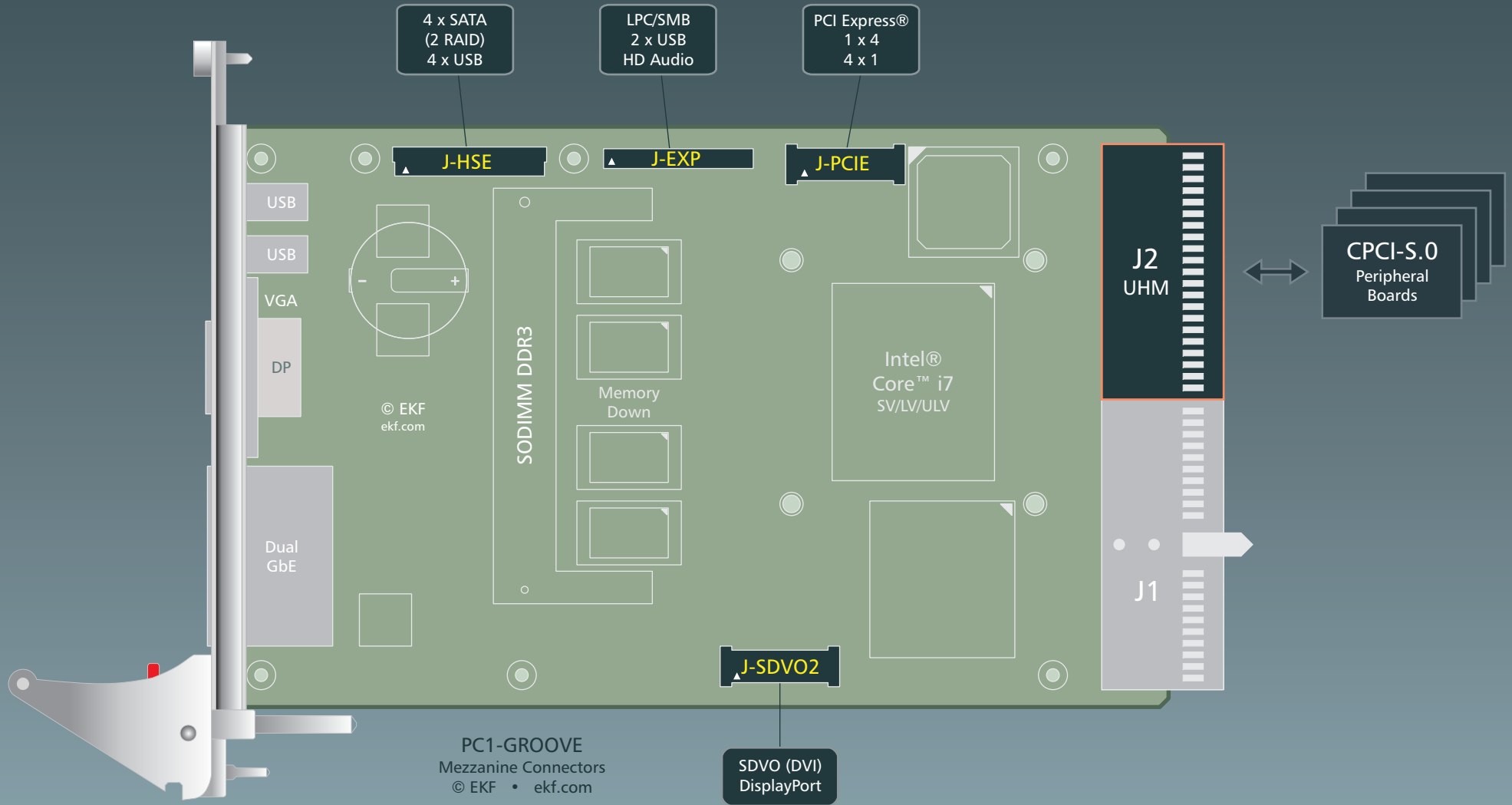
CompactPCI® PlusIO & CompactPCI® Serial Hybrid Backplane

This backplane version offers empty space right to the CPU board for a mezzanine side card



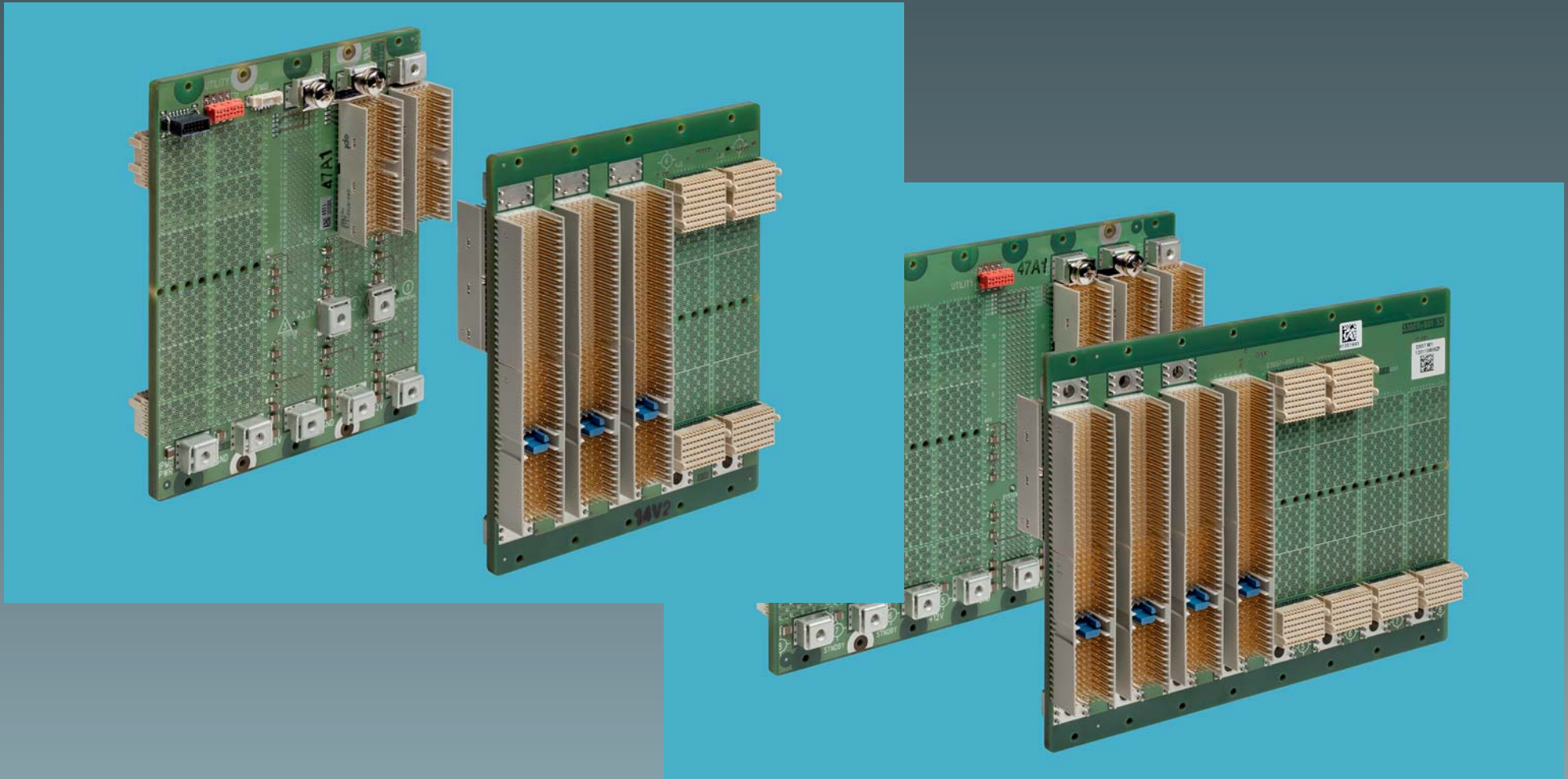
BlueLine Hybrid System (with CPU Side Board Spare Slot)

Side board I/O is maintained in addition to CompactPCI® PlusIO with a suitable backplane



CompactPCI® Classic & CompactPCI® Serial Dual-Backplanes

Thanks to PlusIO, hybrid backplanes allow concurrent usage of CPCI Classic cards and CPCI Serial boards

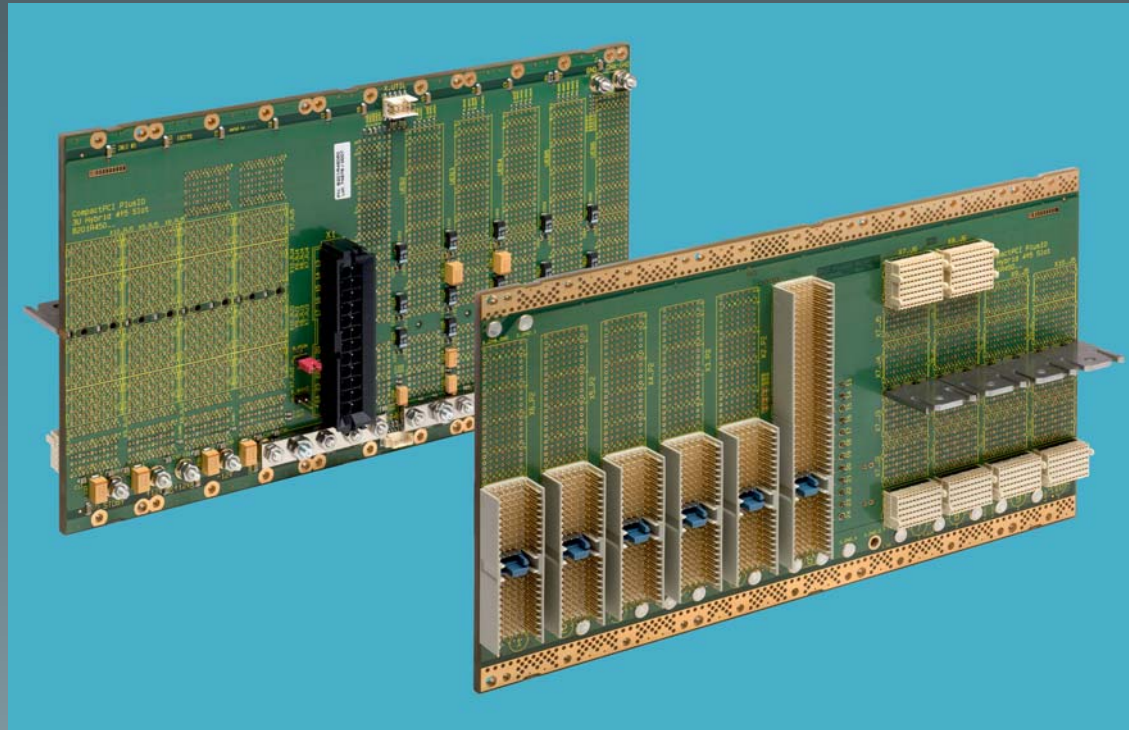


Sample Hybrid Backplanes CompactPCI® Classic & CompactPCI® Serial

The CompactPCI® PlusIO system slot is located in the middle

CompactPCI® Classic & CompactPCI® Serial Dual-Backplanes

Hybrid backplanes are available with an empty slot for 8HP PlusIO CPU board & mezzanine side card assembly

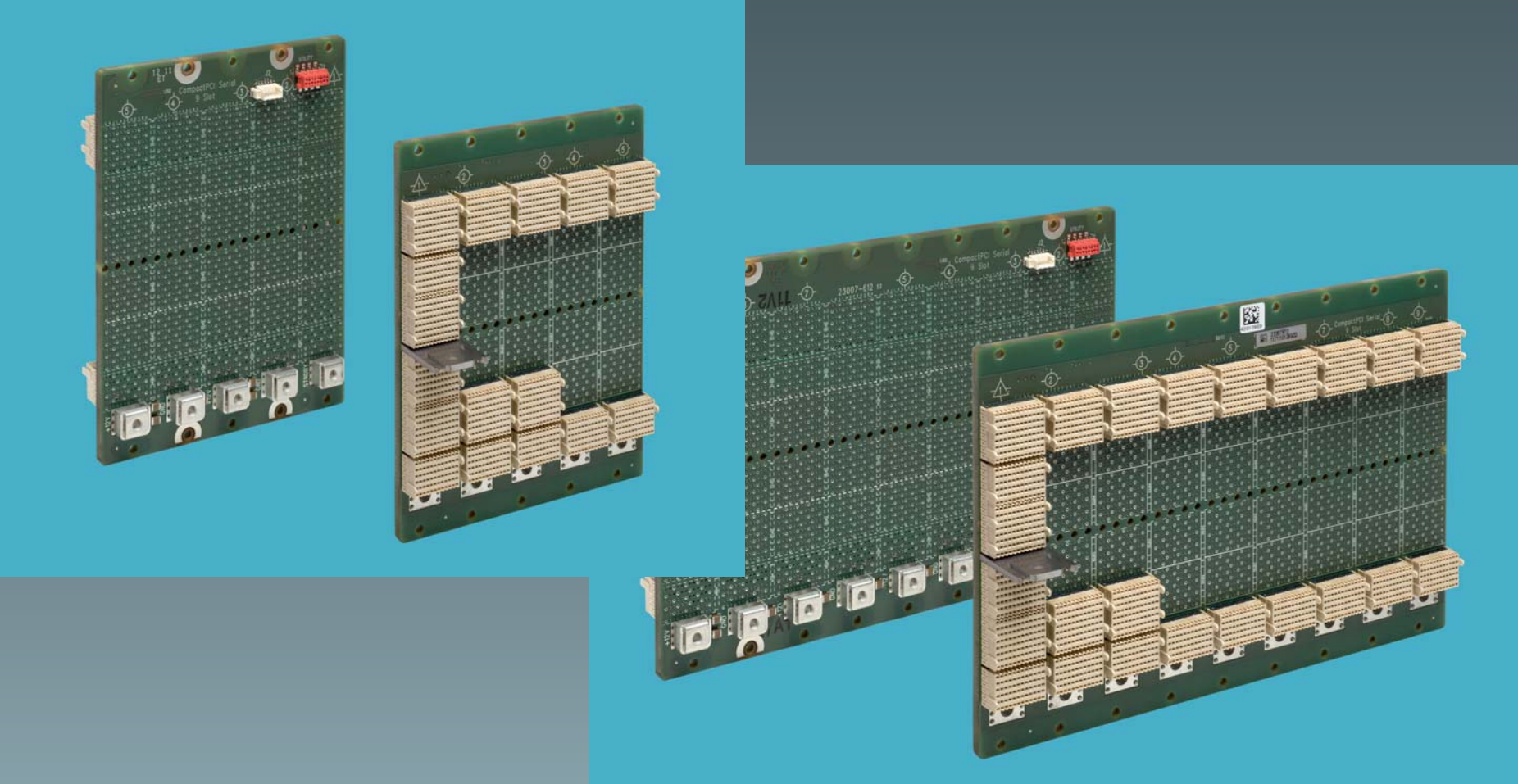


Hybrid Backplane CompactPCI® Classic & CompactPCI® Serial for 8HP CPU & Side Card Assembly

The CompactPCI® PlusIO system slot is located in the middle

CompactPCI® Serial Native Backplanes

CPCI Serial native backplanes for optimum performance with a CPU card such as the SC1-ALLEGRO



Sample Native Backplanes CompactPCI® Serial

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

CompactPCI® Classic & CompactPCI® Serial Dual-Systems

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



Sample Hybrid System

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



Sample Hybrid System

The CompactPCI® PlusIO system slot is located in the middle

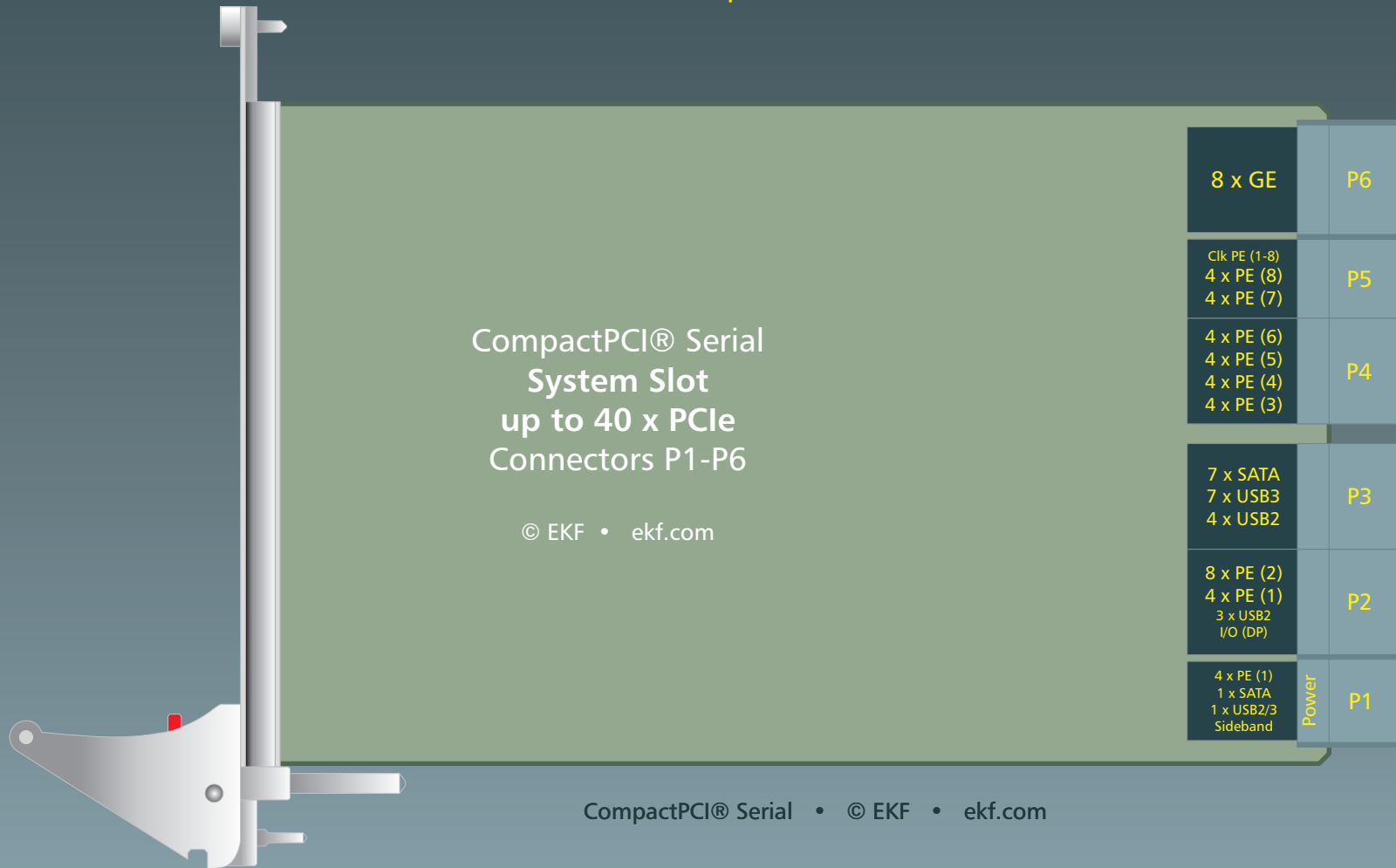
CompactPCI® Classic & CompactPCI® Serial Hybrid Systems

Hybrid systems comprise the best of both worlds



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

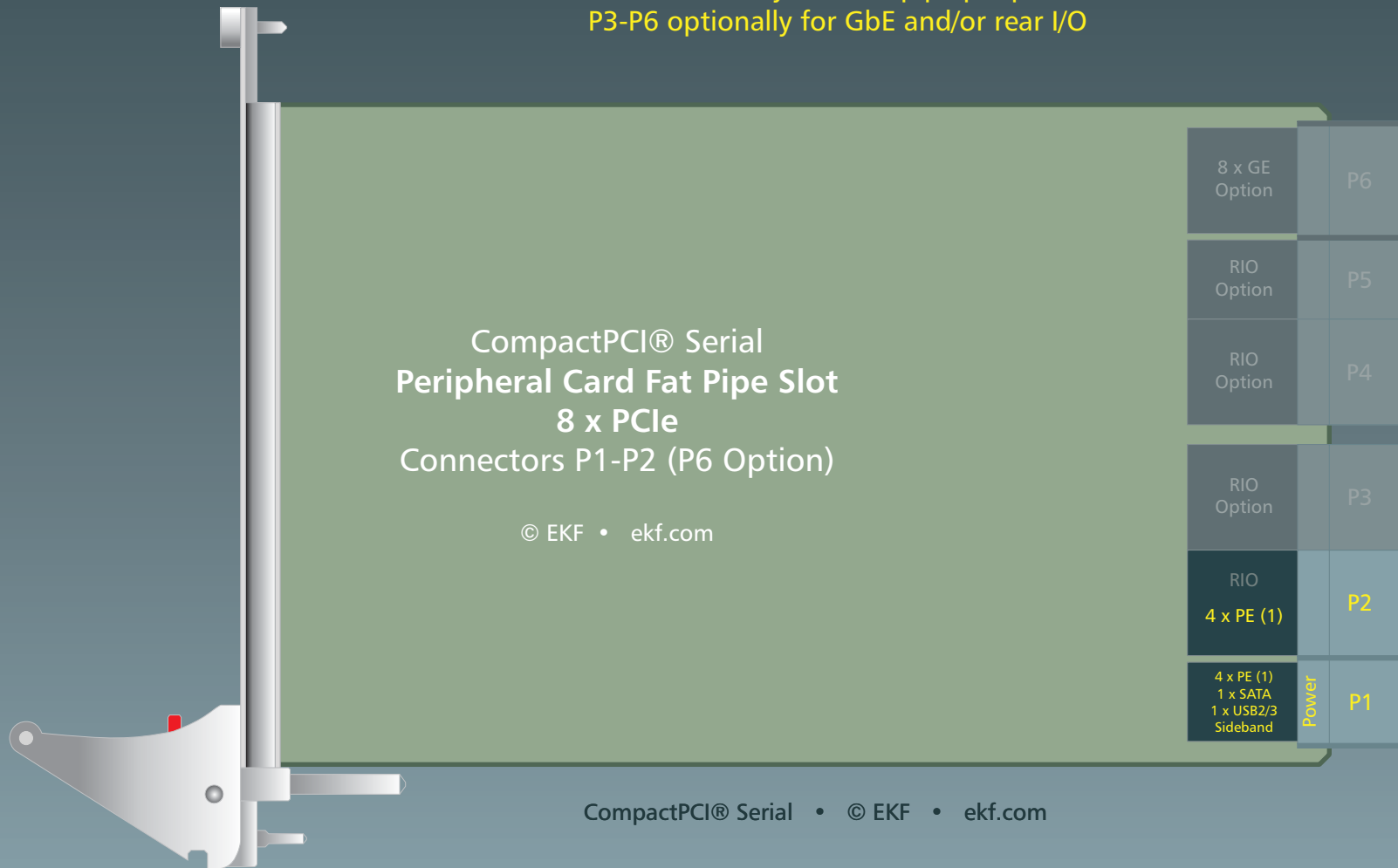


Gigabit Ethernet
 star architecture
 or full mesh

In a native 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)

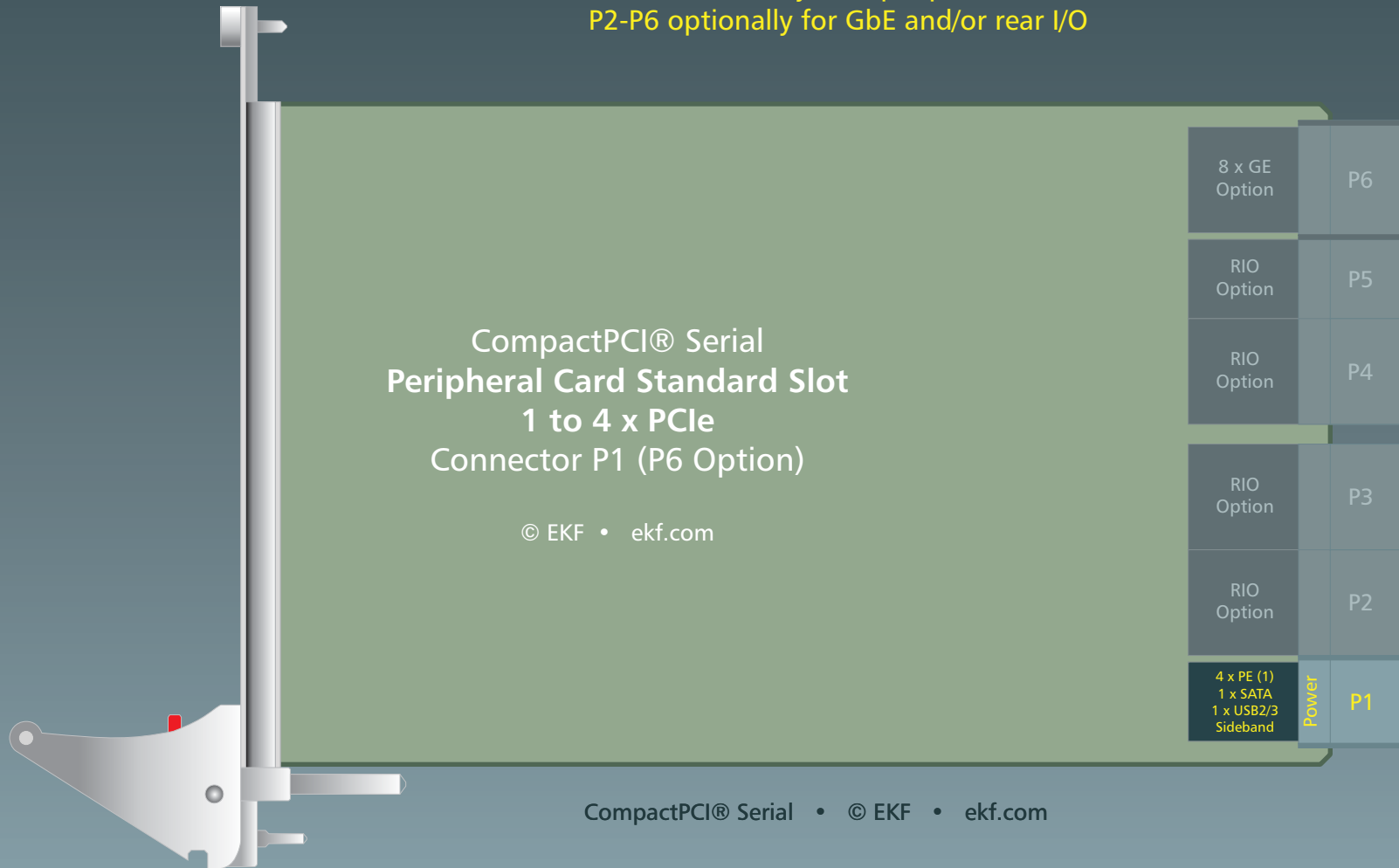
CompactPCI® Serial Connectors

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



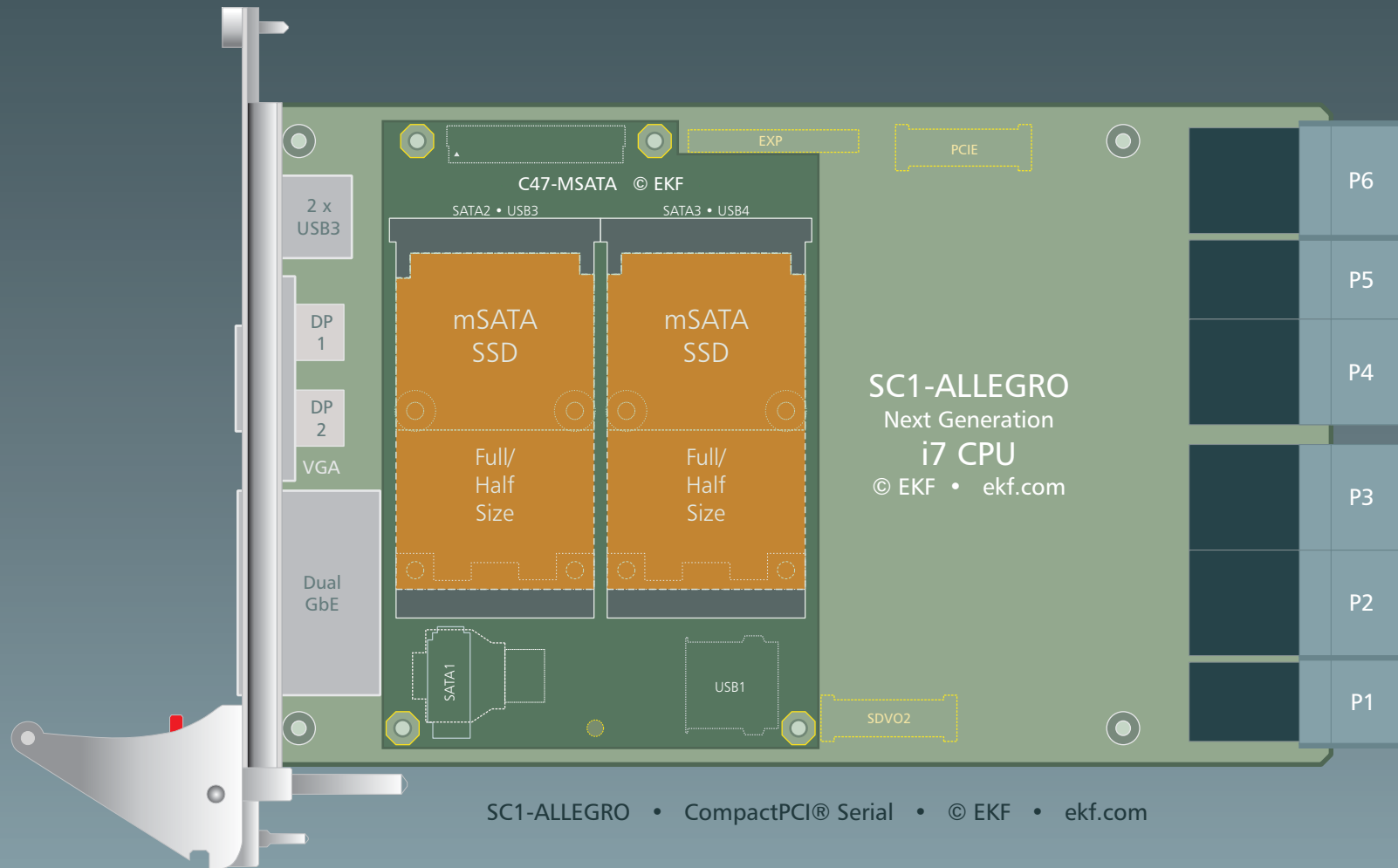
CompactPCI® Serial Connectors

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 Native CPU Card

Coming 2012 Q2



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

CompactPCI® Serial Peripheral Card

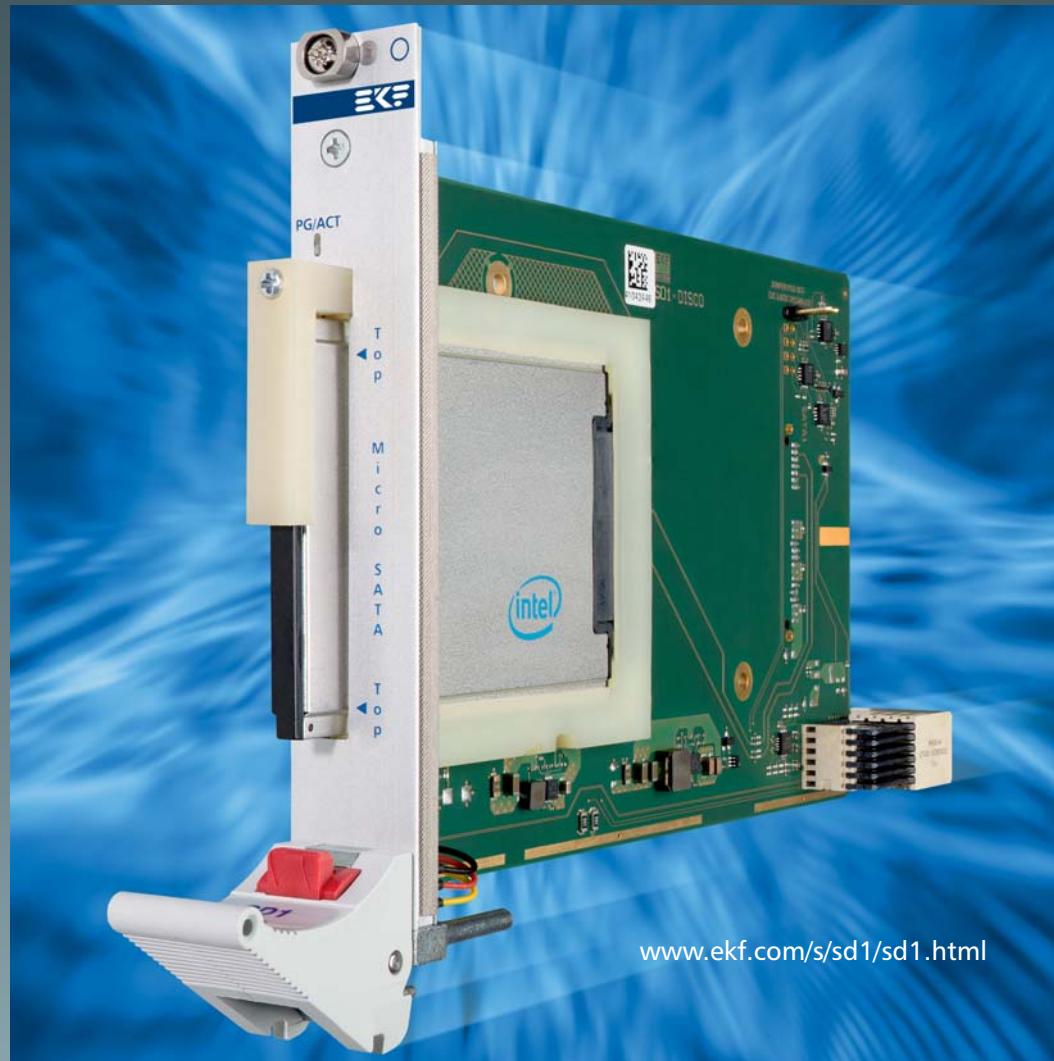
Sample application - simple SATA storage module - note that only P1 is required



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

CompactPCI® Serial Peripheral Card

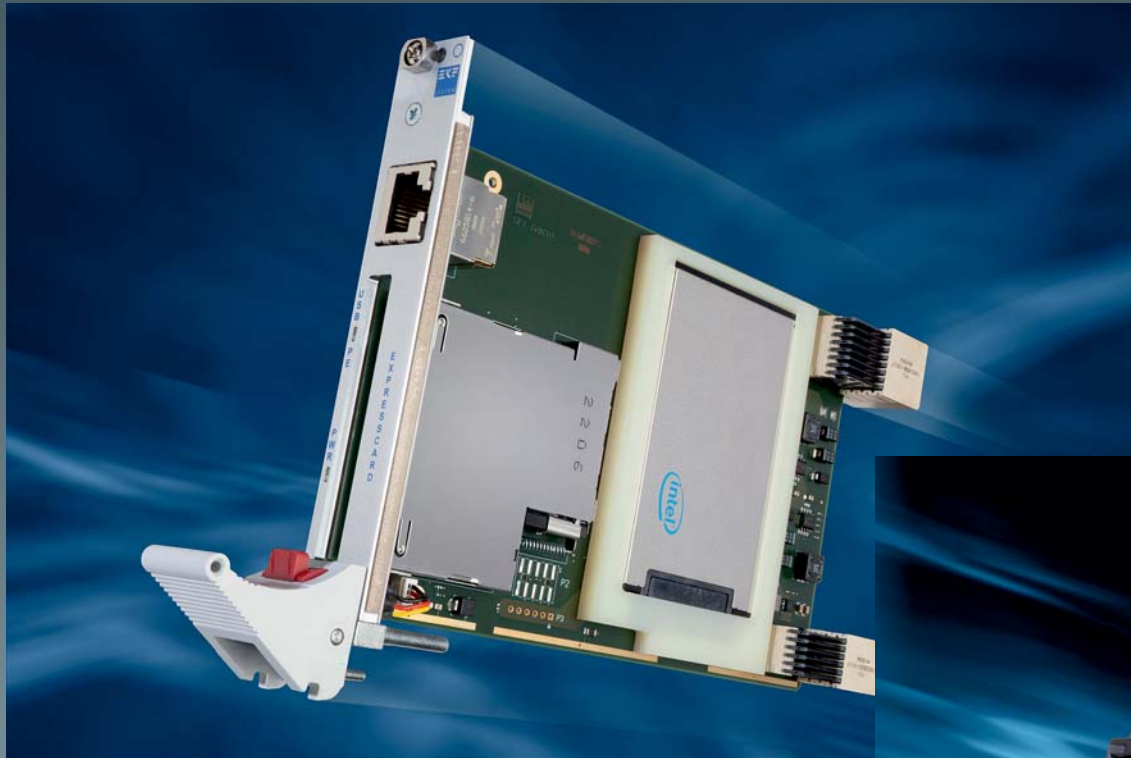
Sample application - removable 1.8-inch SATA SSD



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CompactPCI® Serial Peripheral Card

Sample Application - ExpressCard™ and 1.8-Inch SATA SSD



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

www.ekf.com/s/sp1/sp1.html

CompactPCI® Serial Peripheral Card

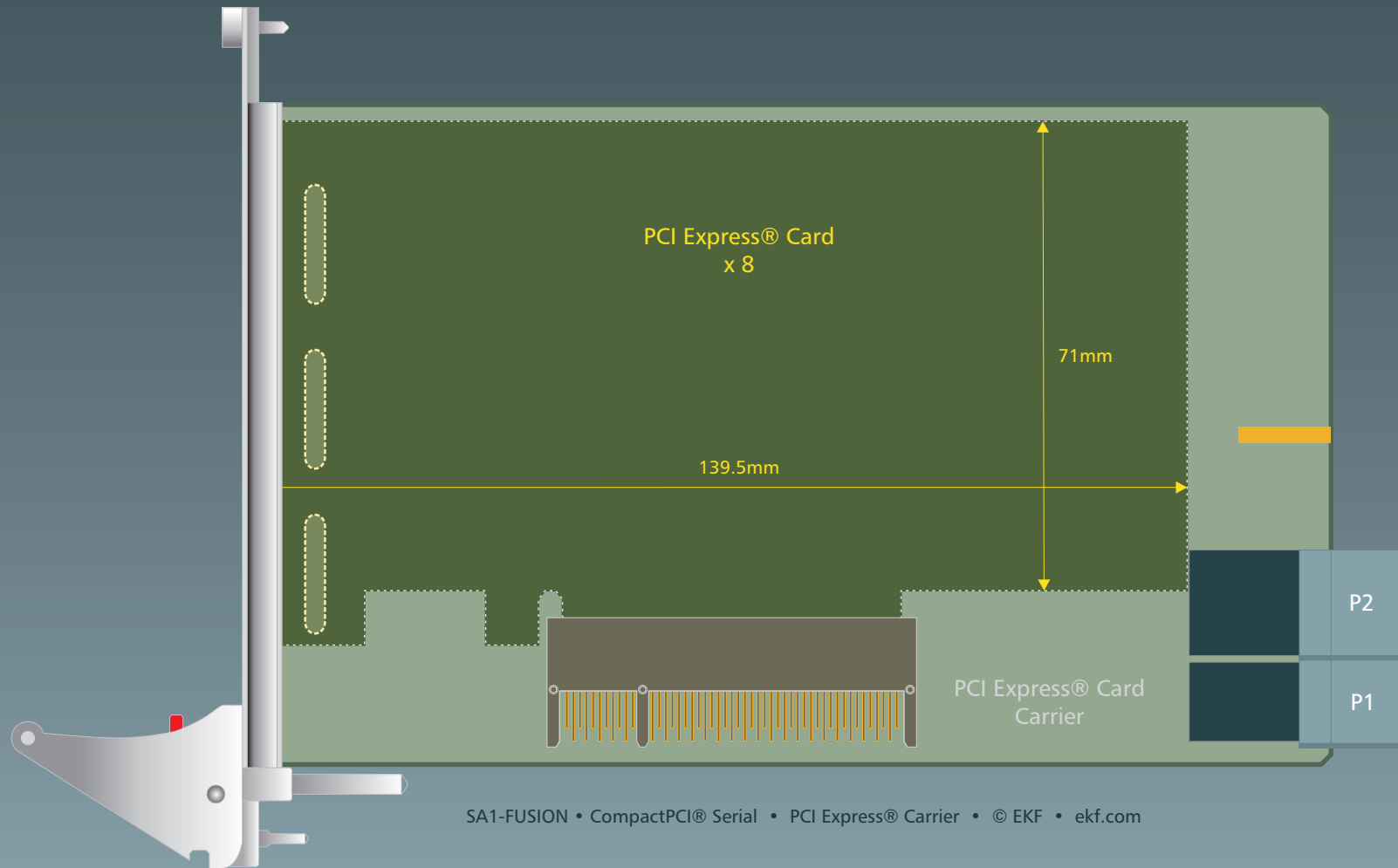
Sample application - PE Mini Card & μ SATA carrier board



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

CompactPCI® Serial Peripheral Card

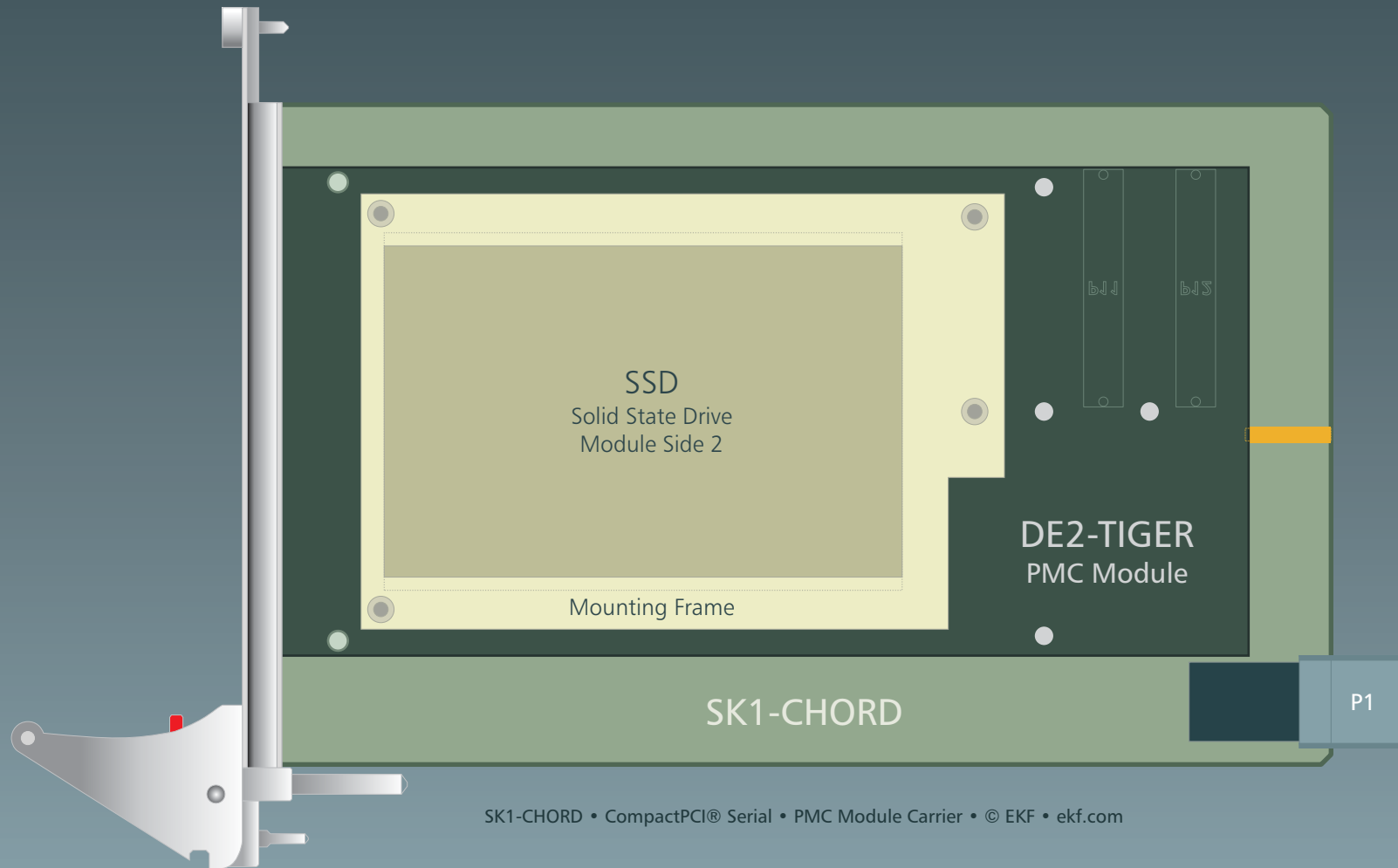
Sample application - PE Card carrier board



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

CompactPCI® Serial Peripheral Card

Sample application - PMC carrier board



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

CompactPCI® Serial Peripheral Card

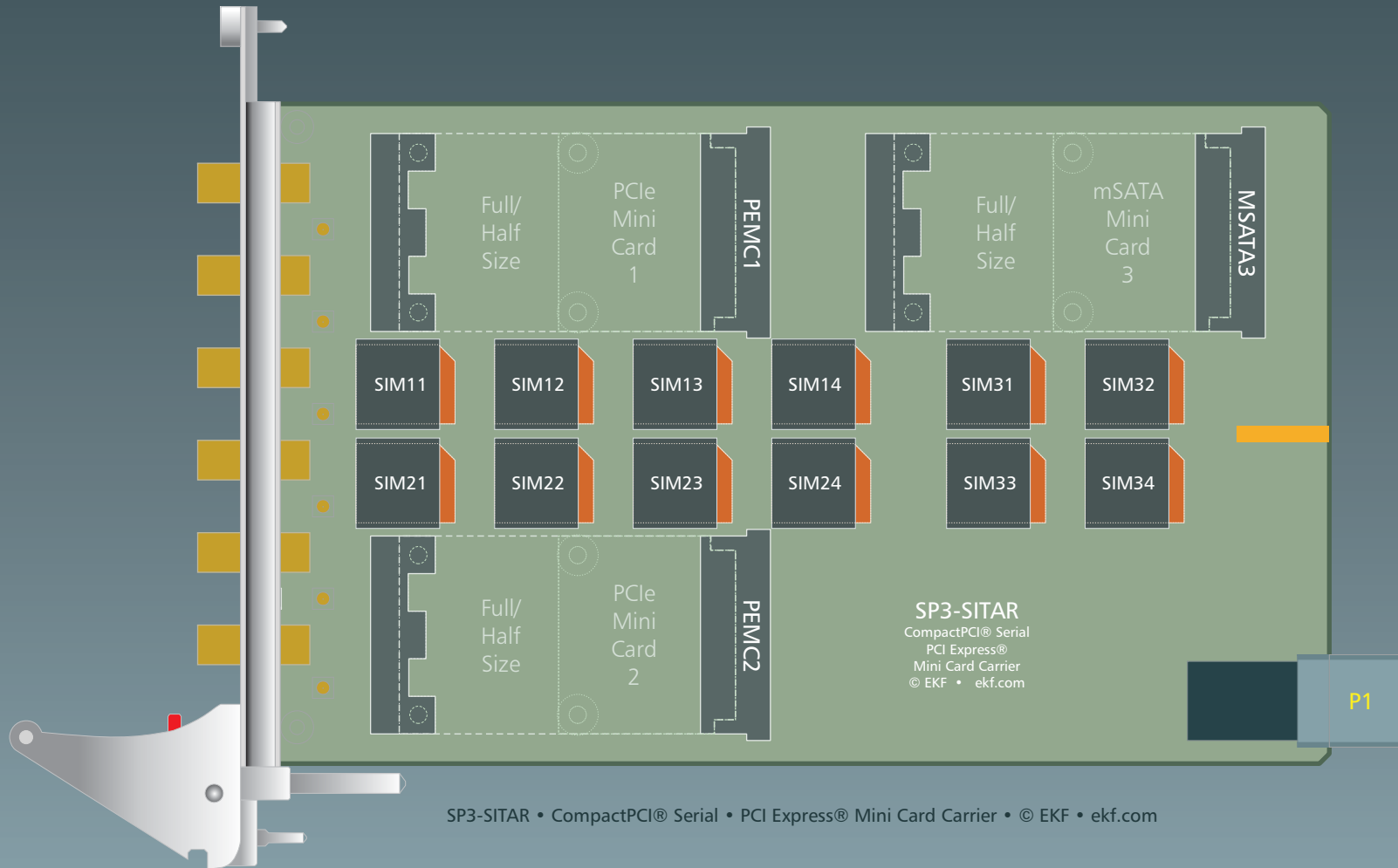
Sample application - XMC carrier board



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CompactPCI® Serial Peripheral Card

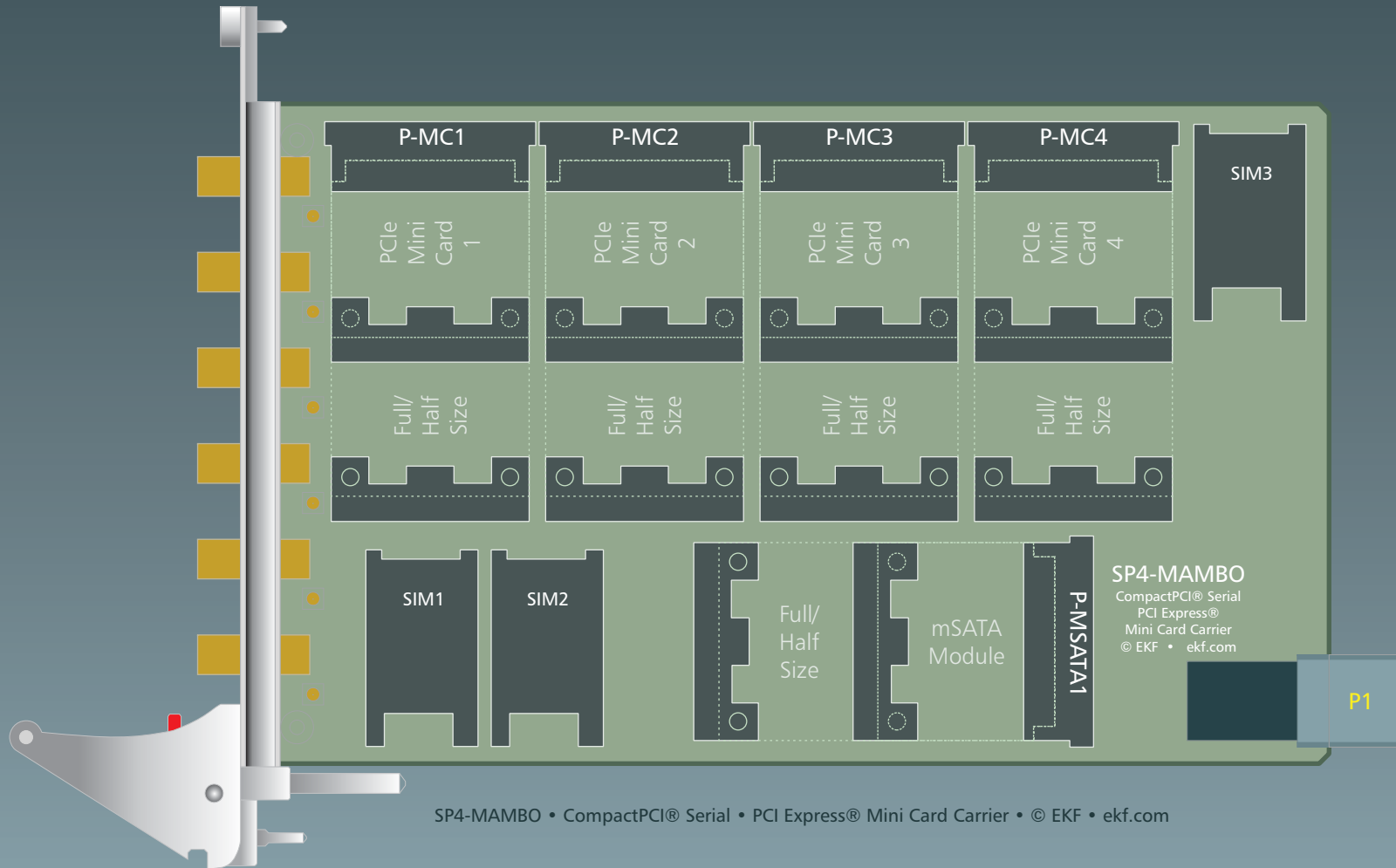
Sample application - Multi-SIM Mini Card carrier board



SP3-SITAR • CompactPCI® Serial • PCI Express® Mini Card Carrier • © EKF • ekf.com

CompactPCI® Serial Peripheral Card

Sample application - PE Mini Card & mSATA carrier board



SP4-MAMBO • CompactPCI® Serial • PCI Express® Mini Card Carrier • © EKF • ekf.com

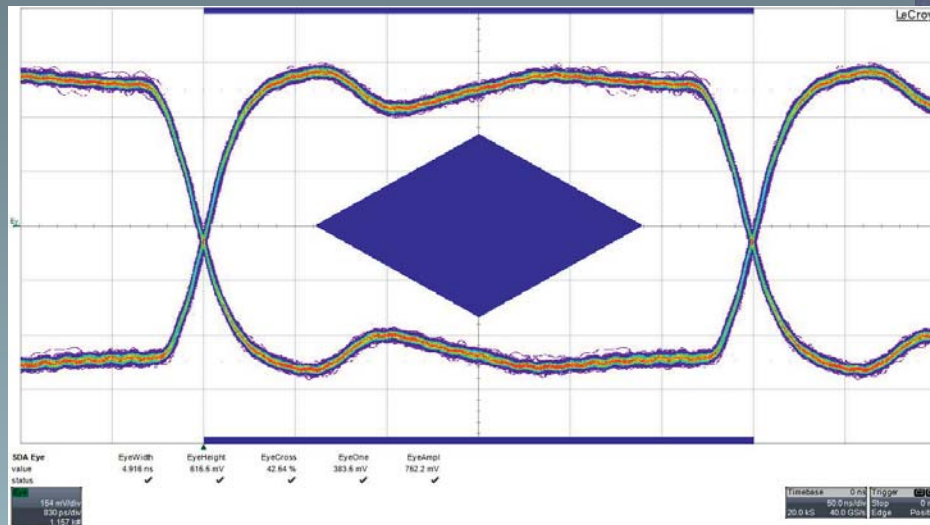
CompactPCI® PlusIO Rear I/O

Profit from standardized high speed rear I/O



www.ekf.com/p/pr1/pr1.html

High Speed Design by Competence: EKF



Embedded Computers Made in Germany



The EKF CompactPCI® Serial Concept

Custom Specific Systems

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



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Embedded Computers Made in Germany

boards. systems. solutions.

