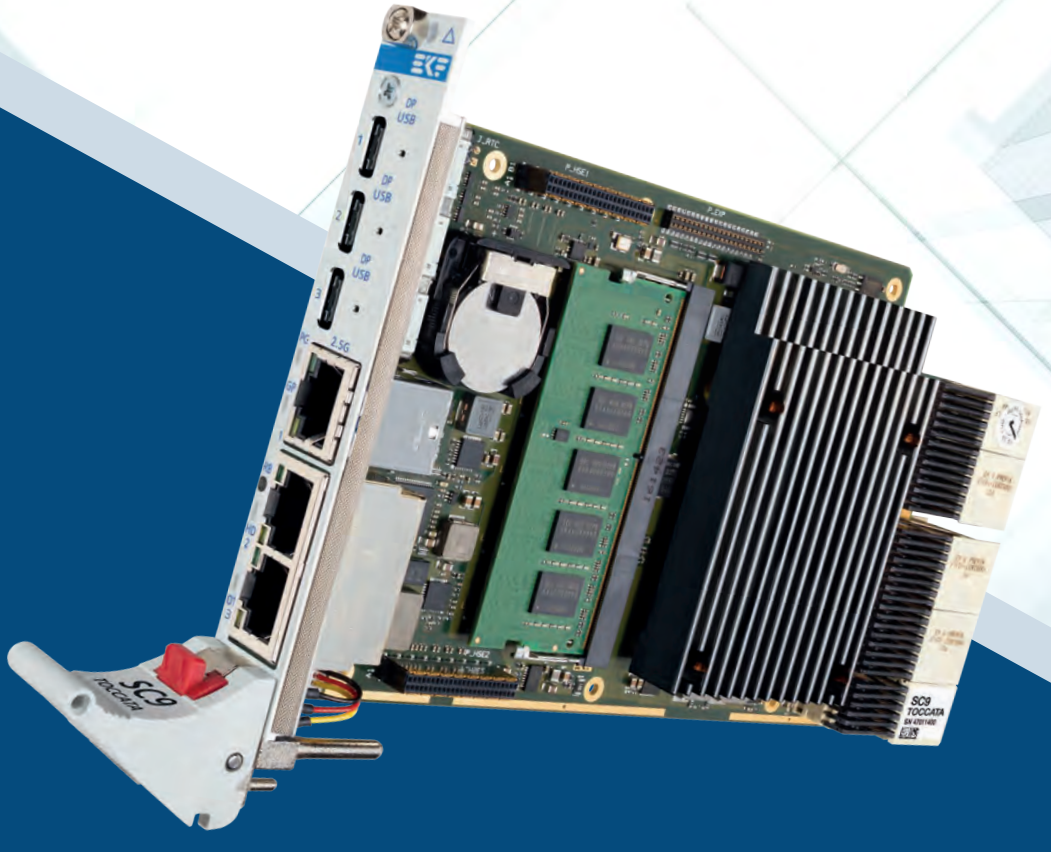
Modular Industrial Computing Solutions

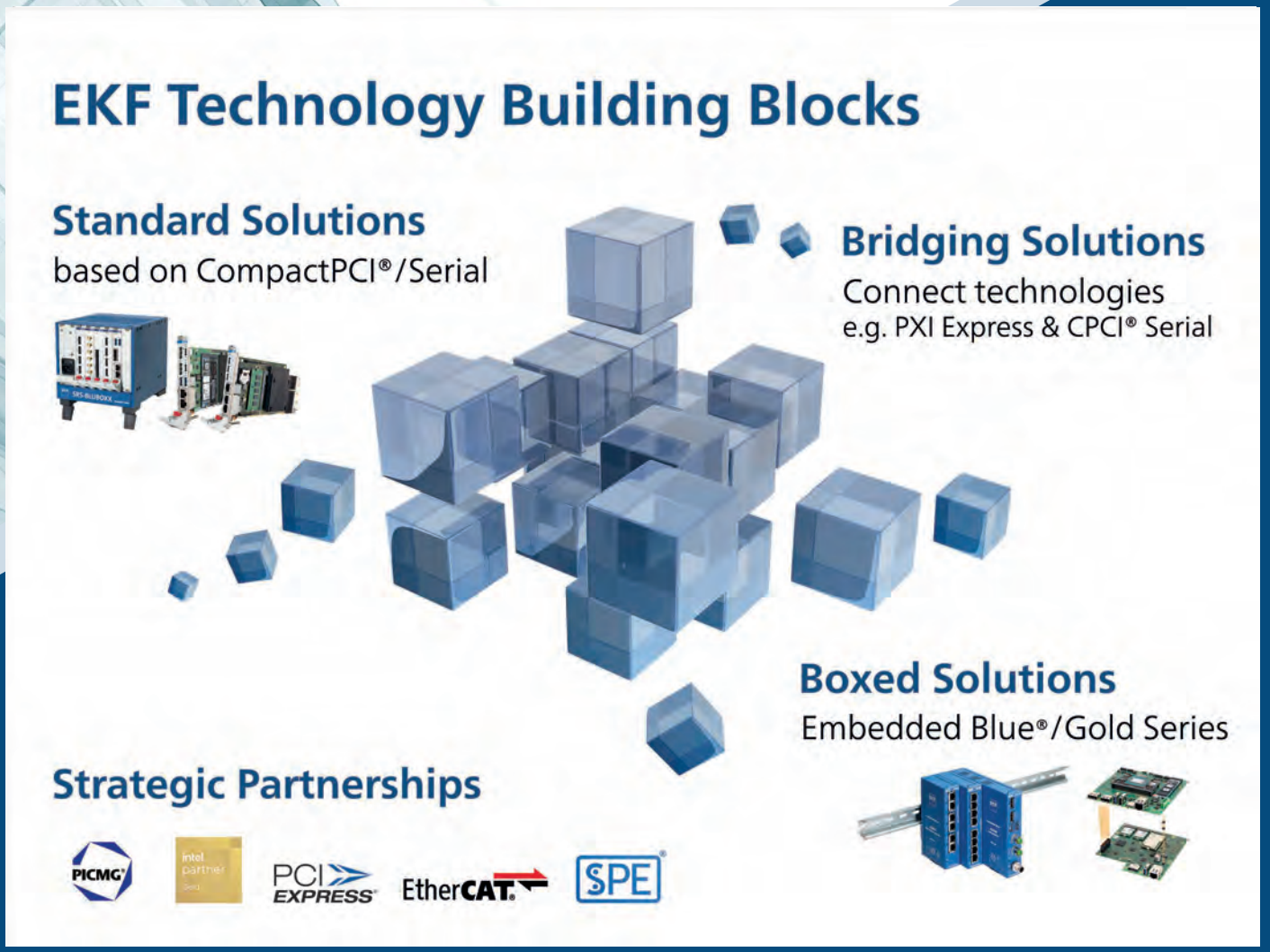
Reliable. Long-Term
Available. Cost-Effective.

50 Years
1972 - 2022
boards. systems. solutions.

SHORTFORM OVERVIEW 22



CompactPCI® / CompactPCI® Serial



Proven Standard - Endless Options

A modular system concept like CompactPCI Serial adapts flexibly to a variety of tasks and markets, integrating AI and Edge Computing functionality.
Due to its rugged characteristics it is not only the perfect fit for modular applications in industrial automation, but can be found more and more in several demanding applications in transportation, telecommunications, medical technology or even in heavy machines or agriculture.

Depending on the requirements of the project, e.g. I/O or memory options can be easily added, making system design flexible and cost-effective. If there are no high system requirements, the solution is already achievedwith a single board CPU and side unit in a compact box housing.

Today EKF Elektronik is a leading manufacturer of standardized CompactPCI Serial based solutions. As active member of the PICMG standardization group, EKF is driving new innovations and products, as well keeping an eye on long-term availability for its customers.

A wide range of CPU cards (from high performance to low power) together with an impressive portfolio of peripheral boards provides an answer for nearly all industrial applications. Bridging modules and carrier cards allow hybrid systems, mass storage arrays and much more. Besides boards, EKF offers a wide range of standard and customized housings, from full 19” racks to customized boxes.

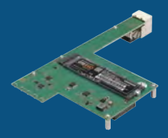
CPCI Serial CPU Boards

SC9-TOCCATA	Xeon 11th. Gen.,2.6/4.7GHz,45W, 64GB on-board DDR4+ECC, 3x 2.5 GbE, 3x DP/USB3, Type C alternate mode, Local exp. Options
SC8-FLUTE	Intel® Atom™ x6000RE (6-12W), 32GB RAM with IBECC, 3x 2.5 GbE, 3x DP/USB3 alt. Type C, 3x PCIe Gen3 x1 backpl., Local exp. Options
SC6-TANGO	Intel® ATOM™ E39XX, 8GB ECC RAM, 12W/6.5W TDP, F/P 2xDP, 2xUSB3, 2xGbE; Local Exp.: 2xUSB, 2xSATA6G, CFast, uSD-Card,eMMC, 4x PCIe Gen2 x1
SC5-FESTIVAL	Intel® 7th. Gen. Core™, Xeon® E3 v6, CM238, 45W TDP, 8/16/32GB ECC RAM, F/P 2xDP, 2xUSB3, 2xGbE; Local Exp.: 1xUSB 3.1, 1xUSB 2.0, 4 x SATA 6G or 4 x PCIe, 4xPCIe

CPCI PlusIO CPU Boards

PC9-TOCCATA	Xeon 11th. Gen.,2.6/4.7GHz,45W, 32GB on-board DDR4+ECC, 3x 2.5 GbE, 3x DP/USB3, Type C alternate mode , Local exp. Options, J2 PlusIO
PC8-FLUTE	Intel® Atom™ x6000RE (6-12W), 32GB RAM with IBECC, 3x 2.5 GbE, 3x DP/USB Type C alternate mode, local exp., J2 PlusIO
PC7- FESTIVAL	Intel® 7th. Gen. Core™, Xeon® E3 v6, CM238, 45W TDP, 8/16/32GB ECC RAM, F/P 2xDP, 2xUSB3, 2xGbE; Local Exp.: J2 PlusIO
PC6-TANGO	ATOM™ E39XX, 8GB ECC RAM, 12W/6.5W TDP, F/P 2xDP, 2xUSB3, 2xGbE; Local Exp.: 2xUSB, 2xSATA6G, CFast, uSD-Card, J2 PlusIO

Low Profile Mezzanine Modules



S48-SSD	Dual NVMe® SSD Storage, M.2 PCI Express® up to Gen4
S80 - P6	8x GbE, Marvell Switch, M.2 NVMe
S82 - P6	4x GbE NIC, M.2 NVMe

Sidecards +4HP

SCZ - NVME	2x M.2 NVMe slot, 2x (4x) RS232, DP, USB 3.1 Gen1 Typ A
SCL - RHYTHM	4 x M12 X-coded front panel GbE NIC (Intel i210), M.2 NVMe slot, PCIe Gen3 x4
PCU - UPTEMPO	2x M.2 SATA, 2x (4x) RS232, 2x USB 2.0 (opt. Audio I/O), Rear I/O opt. for COM (TTL), P/S, GPIO via J2

Bridging

SXC - PCIE	Secondary CPCI Serial system slot controller, expand cPCI-S backplane from 8 - 16 slots, F/P 3x USB 3.1 and 3x GbE NIC, onboard NVMe&SATA mass storage, CPU board side card.
EXC - PCIE	Secondary CPCI Express (PXIe) system slot controller, added 4x CompactPCI Express (PXIe) peripheral slots, F/P 3x USB3.1 and 3x GbE NIC, onboard NVMe&SATA mass storage, CPU board side card.
SXP - JAM	CPCI Serial to cPCI Classic coupler unit, added up to 8x cPCI Classic slots, F/P 3x USB 3.1 and 3x GbE NIC, onboard M.2 mass storage, dual board assembly unit.
SX6-FIREWORKS	PCIe Gen3 external optical cable host system adapter, dual F/P connectors MPO/MTP 12 fiber, dual PCIe x4, based on Samtec Firefly(TM) Flyover(TM) PCUO modules, enables links up to 100m, opposed connector
SXC - LOOP	PCIe Gen3 x8 target system adapter, F/P connectors PCIe x8 68-pos.

Carrier

SF1- STUDIO	2x PCIe Minicard slot dedicated for industrial I/O modules, optimized for Hilscher real-time ethernet & fieldbus and ESD CAN modules
SK5-BALL	XMC module carrier up to PCIe x8, suitable for 74x149mm industrial I/O modules, RIO opt.
SPX - PHASE	Quad carrier for M.2 3042 style WWAN modules, e.g. 3G, 4G or 5G (LTE) modems and beyond, quad-port USB 3.0 controller, antenna combiner 4:1
SV2 - MOVIE	Carrier for MXM 3.0 Type B graphics module, 4 x DisplayPort front panel connectors, installed module e. g. Nvidia GTX 1060, PNY P3000/P5000 MXM 3.1 type B module

USB

SBX - DUB	4x USB 3.1 Gen 1 controller with 16 ports, 4 ports with full speed each port via F/P receptacle (switchable to rear I/O), 12 ports via rear I/O, PCIe Gen2 x4 backplane interface
SBF-CROSSOVER	Multifunction peripheral card, F/P 4x USB 3.1, 2x GbE NIC, Quad UART 2x RS232, 2xRS232/RS485 isolated, PCIe Minicard for dual CAN FD etc.

CompactPCI® Express (PXI Express™)

EA4 - COUNTRY	PCI Express card carrier for PCIe card x8 (x4, x1), maximum card dimensions 176.0mm x 68.9mm
EB3 -TONE	Quad port USB 3.1 Gen 1 host controller, 4x USB connectors type A via frontpanel
EK4 - WALTZ	XMC module carrier up to PCIe x8, suitable for 74x149mm size XMC modules

Network

SN1- REVERB	5-port GbE controller, RJ45 F/P jacks, 5 x I210-IT
SN5 -TOMBAK 2	2-port 10-GbE controller, GEN2*8 P1/P2 2 x SFP+ module cages
SL4 -TUBA	20-port GbE switch, 5 x RJ45 front panel jacks, 8 x GbE via P6 backplane connector, 6x GbE via P5, 1x via P1

UART

SU1-TWIST	Octal UART, 4x isolated RS-485 on front panel via Micro-D connector (optional RJ45 or 3x DSUB 9), 4x rear I/O UART ports (TTL) via P3
SU2-BALLAD	Octal UART, 4x isolated RS-232 on front panel via Micro-D connector (optional RJ45 or 3x DSUB 9), 4x rear I/O UART ports (TTL) via P3

XMC Mezzanine Cards

DB4 - EAGLE	QUAD USB 3.0 controller, 3 x F/P connector 1x port internal
DN1- PIKE	Quad Gigabit Ethernet NIC I210, 4 x RJ45
DN3 - SHARK	Dual-port 10 GbE NIC X520, 2 x SFP+, PCIe x 8 Gen2

cPCI Serial Systems

SRS-3201 BLUBOXX	4U/32HP cPCI Serial system rack, 1 + 4 slots cPCI Serial backplane, system slot right, bottom mounted fan 12V, PSU 8HP 150W
SRS-1201-BluBrick	Wall mount crate, passive cooling (opt. fan), 3/2 slot, power supply selectable for industrial, automotive or railway
SRS-8442-SERIAL	19-inch rack with CPCI Serial and CPCI Express (PXIe) backplanes, 1+ 6 CPCI Serial slots, 1 + 8 PXIe slots via bus coupler, 3x fans on bottom mount fan unit
SRS-8493-Cool Conduct	4U/84HP cPCI Serial rack, suitable for demanding industrial applications such as multiprocessing across several CPU cards or GPU boards (CUDA). A special technology was developed by EKF and partners for optimum cooling of each card slot.

About EKF

If you did not find what you are looking for or need diverse functionality combined on one board please don't hesitate to contact **sales@ekf.de** to start on the path to your perfect tailored solution!

Founded in 1972, EKF is one of today's leading manufacturers for modular industrial micro computers. For more than 40 years extremely robust boards and systems in Eurocard format have been the company's core competence. Based on CompactPCI® Serial technology, the product range now includes CPU boards with the latest Intel® IIOT processor technology as well as a wide range of peripheral boards.

Designed for applications in harsh environments, EKF products are also available in extended temperature range versions, including a protective coating.

The product range is rounded of by boxed CPU and networking solutions for the Internet of Things, and mezzanine modules such as M.2 and XMC. Furthermore custom board designs, based on customer's specifications, are done on a daily basis.

In-house SMT manufacturing guarantees highest quality as well as short lead times. EKF products carry 3 years of warranty and are available over a time frame of many years. The ISO-9001 certification, e ective since 1996, forms part of the high quality concept.