



Product Information

SN9-CAPO

Quad 2.5GBASE-T Ethernet NIC (NBASE-T 2.5GE)

CompactPCI® Serial Peripheral Card



General

The SN9-CAPO is a peripheral card for CompactPCI® Serial systems, equipped with 2.5Gbps Ethernet ports for universal networking. Four Intel® I226-IT networking controllers are wired to RJ45 front panel connectors. The NICs can be operated individually at 10BASE-T, 100BASE-TX, 1000BASE-T and 2.5GBASE-T speed.

An on-board PCI Express® packet switch connects each I226-IT controller with the CompactPCI® Serial backplane connector P1.

The SN9-CAPO fits into any peripheral slot which is PCI Express® enabled. For best performance a link width x4 slot is recommended (e.g. fat pipe slot).



Features

Feature Summary

General

- ▶ Peripheral board for PICMG® CompactPCI® Serial (CPCI-S.0) systems
- ▶ Form factor single size Eurocard (board dimensions 100x160mm²)
- ▶ Mounting height 3U
- ▶ Front panel width 4HP
- ▶ Provides 2.5Gbps Ethernet front panel I/O (4 x RJ45)
- ▶ Backplane communication via PCI Express® x4 or x1 enabled slot

Front Panel I/O

- ▶ 4 x RJ45 front panel receptacles
- ▶ 2.5GBASE-T, 1000BASE-T, 100BASE-TX, 10BASE-T compliant data transfer rate (NBASE-T 2.5GE)
- ▶ IEEE 802.3bz - Cat 5e 100m

Networking

- ▶ Four individual Intel® I225/226-IT networking interface controllers (NIC)
- ▶ 2.5GBASE-T, 1000BASE-T, 100BASE-TX, 10BASE-T 802.3 specifications
- ▶ -40°C to +85°C operating temperature 10M/100M/1G
- ▶ -40°C to +70°C operating temperature 2.5G (I225)
- ▶ -40°C to +85°C operating temperature 2.5G (I226)
- ▶ UDP, TCP and IP checksum offload
- ▶ 9KB Jumbo Frame support
- ▶ Four transmit and four receive queues
- ▶ IEEE 802.3az Energy Efficient Ethernet
- ▶ Ultra-low power at cable disconnect (5mW)
- ▶ Time Sensitive Networking (TSN)
- ▶ IEEE 1588 - Basic time-sync (Precision Time Protocol)
- ▶ IEEE 802.1AS-Rev - Higher precision time synchronization with multiple (dual) clock masters
- ▶ IEEE 802.1Qav - Credit Based Shaping and Basic scheduling
- ▶ IEEE 802.1Qbu - Frame Preemption
- ▶ IEEE 802.1Qbv - Time Aware Shaper
- ▶ IEEE 802.3br - Interspersing Express Traffic
- ▶ PCIe® PTM for synchronization between the NIC and Host timers

Feature Summary

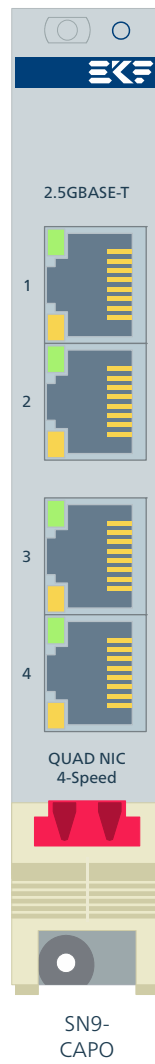
Applications

- ▶ Industrial networks - IIoT - TSN
- ▶ Router and gateway
- ▶ Data acquisition
- ▶ Edge computing
- ▶ Upgrade for 1000BASE-T solutions

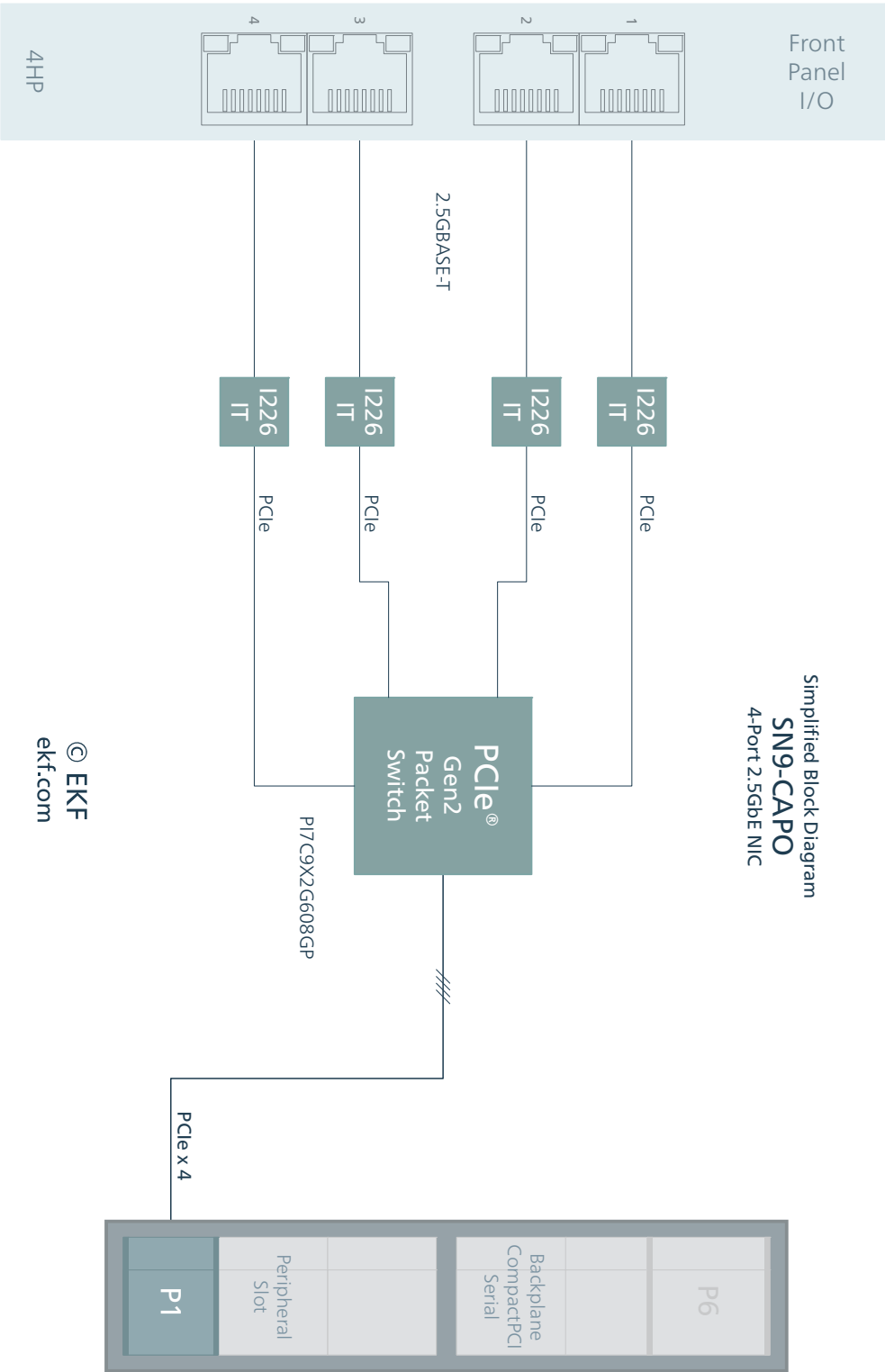
Environmental, Regulatory

- ▶ Designed & manufactured in Germany
- ▶ ISO 9001 certified quality management
- ▶ Custom specific development available on request
- ▶ Long term availability
- ▶ Rugged solution
- ▶ Coating, sealing, underfilling on request
- ▶ RoHS compliant
- ▶ Operating temperature -40°C to +85°C (industrial temperature range)
- ▶ Storage temperature -40°C to +85°C, max. gradient 5°C/min
- ▶ Humidity 5% ... 95% RH non condensing
- ▶ Altitude -300m ... +3000m
- ▶ Shock 15g 0.33ms, 6g 6ms
- ▶ Vibration 1g 5-2000Hz
- ▶ EC Regulatory EN55035, EN55032, EN62368-1
- ▶ MTBF 74.6 years (MIL-HDBK-217F, SN29500 @+40°C)

Front Panel

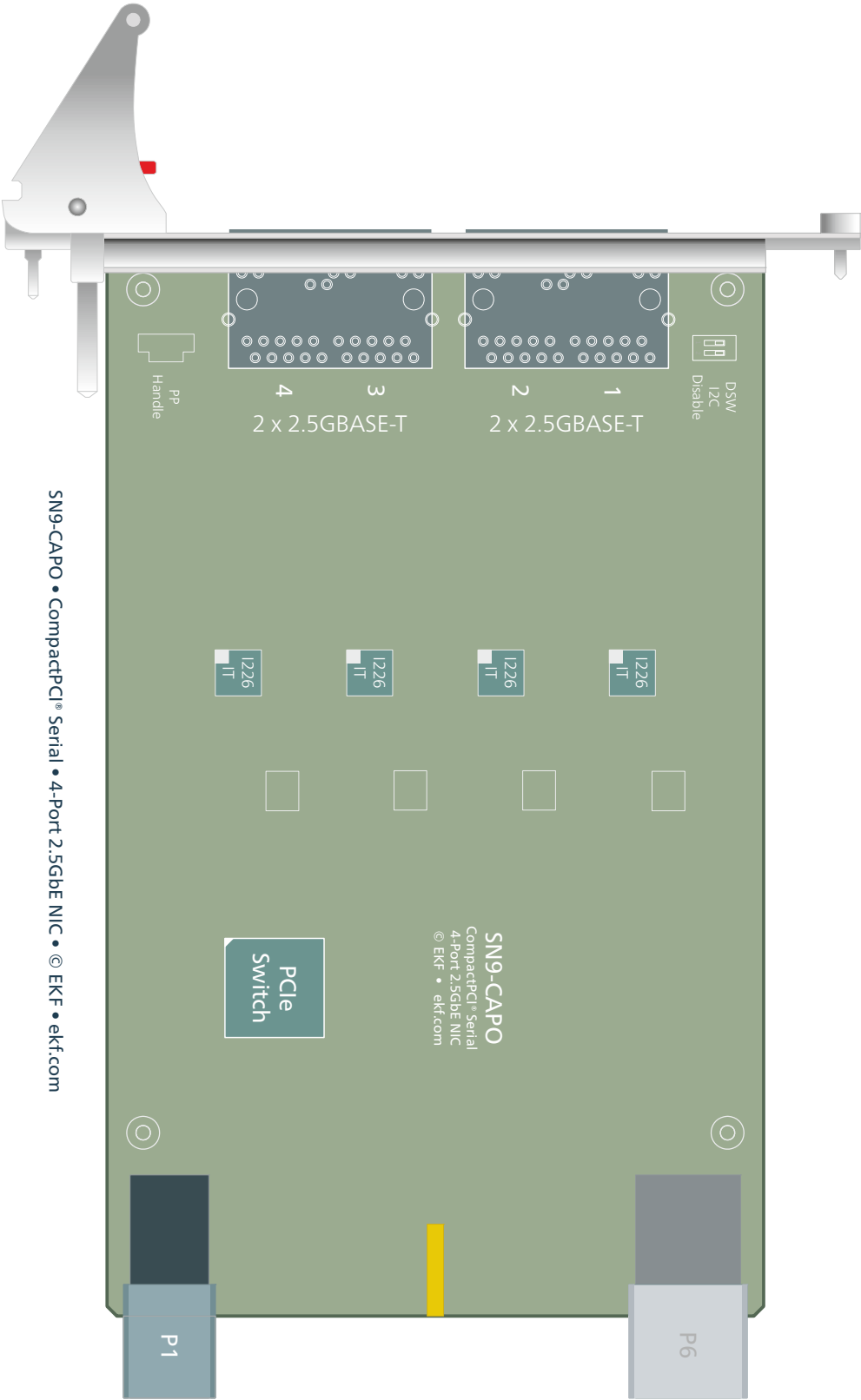


Block Diagram



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Component Orientation



SN9-CAPO • CompactPCI® Serial • 4-Port 2.5GBase-T NIC • © EKF • ekf.com

Ordering Information

For popular SN9-CAPO SKUs please refer to www.ekf.com/liste/liste_21.html#SN9

Related Documents CompactPCI® Serial

Basics / Overview CompactPCI® Serial	www.ekf.com/s/smart_solution.pdf
CompactPCI® Serial Home	www.ekf.com/s/serial.html

Beyond All Limits: EKF High Performance Embedded



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