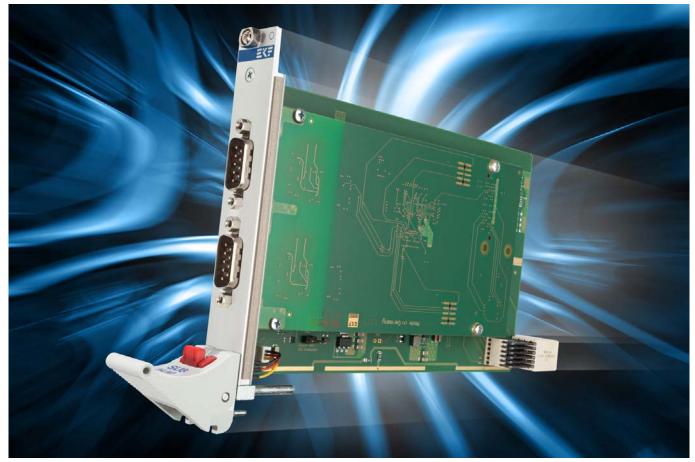# EKF

SYSTEM

Product Information

SU8-HUM

CompactPCI ® *Serial* • Dual-Port Isolated RS-485 Interface

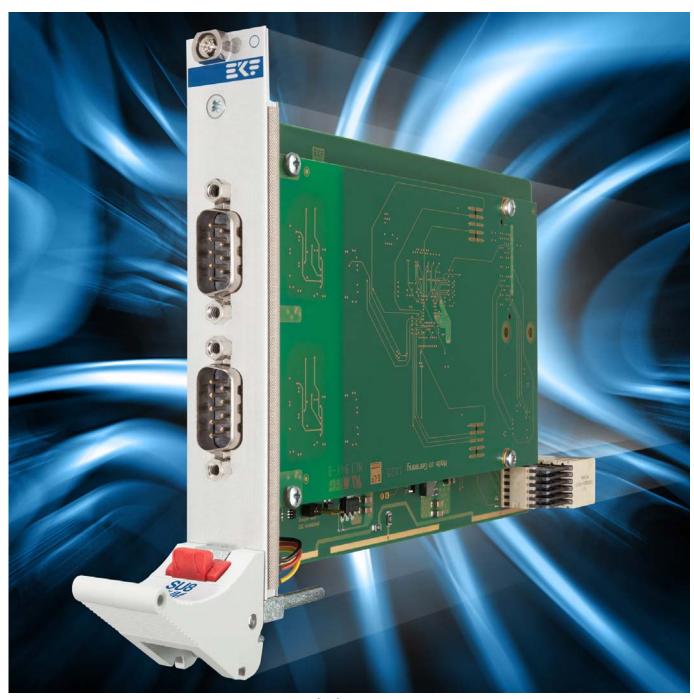Document No. 6848 • 28 November 2012

General

The SU8-HUM is a dual-port isolated RS-485 Interface for PICMG® CompactPCI® Serial systems. It is an assembly unit, comprised of the SK2-SESSION XMC module carrier card, and the DU1-MUSTANG RS-485 XMC mezzanine module.

Both D-Sub front panel connectors are isolated against the board circuitry and withstand up to 250VAC. The 16Mbps EIA/TIA-485 transceivers can be configured for full- or half-duplex operation, either point-to-point or multipoint applications.

SU8-HUM

SU8-HUM

Theory of Operation

The SU8-HUM requires a single PCI Express® lane from the CompactPCI® Serial backplane, passed through from the backplane connector P1 via an on-board PCIe redriver circuit to the XMC module connector J15.

The on-board XMC module is equipped with a PCI Express® to UART bridge, which is suitable for asynchronous baud rates up to 15Mbps. Two isolated transceivers are provided to meet the RS-485 physical layer specifications.

Summary of Features

▸ PICMG® CompactPCI® Serial standard (CPCI-S.0), peripheral slot card
▸ Assembly unit comprising carrier board SK2-SESSION & XMC module DU1-MUSTANG
▸ Single size Eurocard 3U 4HP 100x160mm^2
▸ CPCI-S backplane connector P1
▸ XMC module carrier board, equipped with XMC connector J15
▸ PCI Express® Gen1 (2.5Gbps) or Gen2 (5.0Gbps) supported
▸ Bidirectional PCIe redriver/repeater for optimum signal integrity
▸ PCI Express® clock buffer for optimum signal integrity

▸ XMC Module single-width mezzanine card 139mm x 74mm, stack height 10mm
▸ Equipped with dual-port UART
▸ PLX Oxford 950 UART w. 128-byte transmit/receive FIFO
▸ Asynchronous baud rates up to 15Mbps
▸ Windows® & Linux device driver support
▸ 5kV rms isolation barrier RS-485/RS-422 transceivers (Analog Devices)
▸ Configurable as half- or full-duplex
▸ ±15 kV ESD protection on RS-485 input/output pins
▸ Data rate 16 Mbps
▸ Connect up to 256 nodes on one bus (driver enable control via DTR)
▸ Open- and short-circuit, fail-safe receiver inputs
▸ High common-mode transient immunity >25 kV/μs
▸ Thermal shutdown protection
▸ Two front bezel male 9-pin D-Sub connectors
▸ RS-485 ports isolated against each other and board circuitry 250VAC
▸ On-board DIP-switches for full/half-duplex setting, and line termination on/off

▸ Commercial and industrial temperature range
▸ Long term availability
▸ Rugged solution (coating/sealing available on request)
▸ RoHS compliant

System Integration Options

The SU8-HUM 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.

SU8-HUM Assembly Unit

Detailed Information

The SU8-HUM is an assembly unit, which is comprised of a XMC module carrier card, and the XMC module itself. For more detailed information on these components please refer to the table below:

SU8-HUM Elements		
SK2-SESSION	XMC Carrier	www.ekf.com/s/sk2/sk2.html
DU1-MUSTANG	XMC Module	www.ekf.com/d/dcom/du1/du1.html

Ordering Information

Ordering Information
For popular SU8-HUM SKUs please refer to www.ekf.com/liste/liste_21.html#SU8

Industrial Computers Made in Germany
boards.   systems.   solutions.