



Product Information

SU3-ENSEMBLE • CompactPCI® Serial Isolated RS-485 & RS-232 I/F Eight Port UART • Modular Design



Short Description

The SU3-ENSEMBLE is a peripheral slot card for CompactPCI® Serial systems, based on a PCI Express® octal UART. The board can be individually populated with up to eight isolated transceivers, either RS-485 or RS-232, in any order. The transceiver modules are optionally available with RJ45, Micro-D or D-Sub I/O connectors.

A 4HP front panel is sufficient for up to four transceiver modules with RJ45 and/or Micro-D connectors. For up to eight modules the SU3-ENSEMBLE is available with an 8HP F/P. Transceiver modules with a D-Sub connector may require up to 12HP front panel width, dependent on the total number of ports, and are typically attached via flat cables.



SU3-ENSEMBLE • 8-Port 8HP Assembly RJ45

Feature Summary

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CompactPCI® Serial

- ▶ PICMG® CompactPCI® Serial (CPCI-S.0) standard
- ▶ Single size Eurocard 3U 4HP 100x160mm²
- ▶ Suitable for CompactPCI® Serial peripheral slot (PCI Express® enabled)
- ▶ CompactPCI® Serial backplane connector P1 for PCI Express®, single lane link
- ▶ Option CompactPCI® Serial backplane connector P4 for rear I/O
- ▶ Option CompactPCI® Serial backplane connector P6 for even more mechanical ruggedness

UART

- ▶ Pericom® PCI Express® octal UART PI7C9X7958
- ▶ High performance 950-class UARTs
- ▶ 16C550 software compatible
- ▶ 128-Byte FIFO for each transmitter/receiver
- ▶ Baud rate up to 15Mbps
- ▶ XON/XOFF in-band flow control
- ▶ CTS/RTS out-of-band control
- ▶ Driver enable signal for PartyLine operation
- ▶ Data frame 5, 6, 7, 8 and 9 bits
- ▶ Clock prescaling 4 to 46
- ▶ 14.4756MHz UART clock
- ▶ 58.9824MHz clock option for highest RS-485 data rates available (SU5-ENSEMBLE)
- ▶ Windows® WHQL device driver support
- ▶ QNX driver support

Feature Summary

RS-485 Transceiver Modules

- ▶ Choice of three front panel connector types
- ▶ SUF-RS485 - Micro-D (20mm width module)
- ▶ SUH-RS485 - RJ45 (20mm width module)
- ▶ SUJ-RS485 - D-Sub 9-pos. (31mm width module)
- ▶ 5kV rms isolation barrier RS-485/RS-422 transceivers (Analog Devices ADM2682)
- ▶ Configurable as half- or full-duplex
- ▶ ± 15 kV ESD protection on RS-485 input/output pins
- ▶ Transceiver data rate 16Mbps max.
- ▶ Connect up to 256 nodes on one PartyLine bus (driver enable control via dedicated UART mode select outputs)
- ▶ Open- and short-circuit, fail-safe receiver inputs
- ▶ High common-mode transient immunity >25 kV/ μ s
- ▶ Thermal shutdown protection
- ▶ Suitable e.g. for industrial fieldbus applications

RS-232 Transceiver Modules

- ▶ Choice of three front panel connector types
- ▶ SUE-RS232 - Micro-D (20mm width module)
- ▶ SUG-RS232 - RJ45 (20mm width module)
- ▶ SUI-RS232 - D-Sub 9-pos. (31mm width module)
- ▶ 2.5kV Isolation barrier RS-232 transceivers (Analog Devices *isoPower*)
- ▶ Transceivers meet EIA/TIA-232-E specifications
- ▶ High data rate > 460 kbps (each board tested @921.6kbps)
- ▶ ± 8 kV/ ± 15 kV ESD protection on transceiver input/output pins
- ▶ High common-mode transient immunity >25 kV/ μ s
- ▶ Suitable for high noise data communications and diagnostic ports

Front Panel I/O

- ▶ Up to 4 transceiver modules RJ45 and/or Micro-D within 4HP front panel width
- ▶ Up to 8 transceiver modules RJ45 and/or Micro-D within 8HP front panel width
- ▶ Up to 6 transceiver modules D-Sub within 8HP front panel width (flat cable attachment, front handle replaced by screw lock)
- ▶ Any mix of transceiver modules together with custom specific front panel design, up to 12HP width

Feature Summary

Rear I/O (Option)

- ▶ 4 x Rear I/O UART ports (TTL Level), wired to P4 for optional usage with RIO module
- ▶ Each rear I/O UART port suitable for versatile use with an appropriate transceiver on a RIO module, e.g. RS-232 or RS-485, isolated or non-isolated
- ▶ Standard rear I/O modules available (SUA-RIO for 4 x RS-232 isolated, SUB-RIO for 4 x RS-485 isolated)
- ▶ Option all 8 ports available for rear I/O (SUC-RIO)
- ▶ EKF offers also custom specific rear I/O module design

Environment, Regulatory

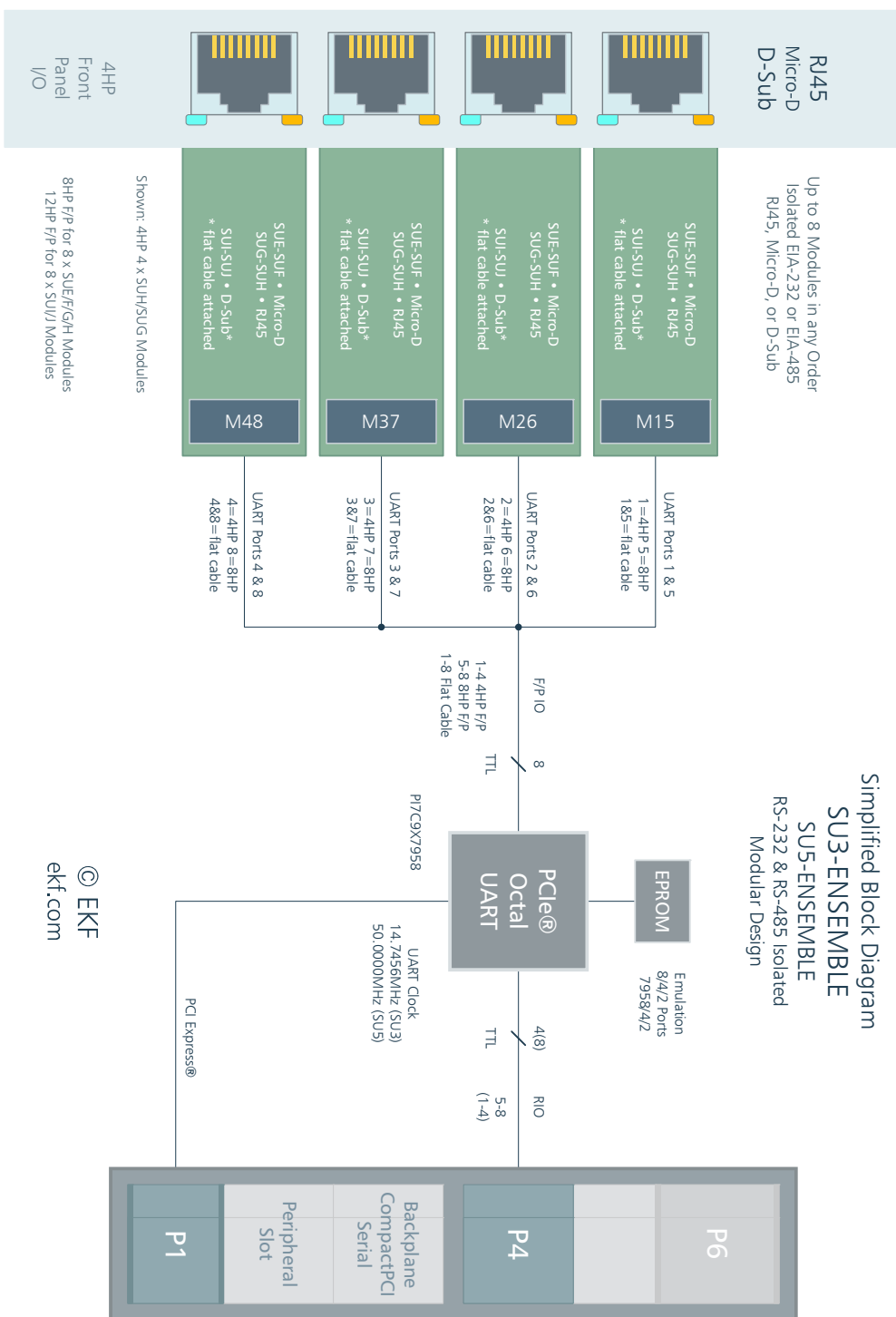
- ▶ Designed & manufactured in Germany
- ▶ Certified quality management according to ISO 9001
- ▶ Long term availability
- ▶ Rugged solution (coating, sealing, underfilling on request)
- ▶ Custom specific modifications on request
- ▶ RoHS compliant
- ▶ Operation temperature -40°C to +85°C (industrial 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
- ▶ MTBF 53.1 years (SU3 board w/o transceiver modules)
- ▶ EC Regulatory EN55035, EN55032, EN62368-1 (CE)

items are subject to changes w/o further notice



SU3-ENSEMBLE w. 6 x D-Sub Transceiver Modules (8HP Front Panel)

Block Diagram



www.ekf.com/s/su3/img/su3_blk.pdf

Theory of Operation

The SU3-ENSEMBLE is equipped with the Pericom PI7C9X7958 PCI Express® octal UART, which is suitable for asynchronous baud rates up to 15Mbps. All TTL level UART channels are wired to four 2.0mm pitch 2x10 position sockets, each capable to carry one or two transceiver modules by means of a suitable board-to-board stacker or micro ribbon flat cable assembly.

Up to four transceiver modules 1-4 can be populated on a SU3-ENSEMBLE which is provided with a 4HP front panel. These modules must be mounted with their component side down (towards the carrier card PCB).

For up to eight transceiver modules, the SU3-ENSEMBLE must be equipped with an 8HP front panel. The additional transceiver modules 5-8 must be mounted congruent on top of the modules 1-4, however with their component side up (modules back-to-back). This method is suitable for 20mm width transceiver module, provided with an RJ45 or Micro-D front panel connector.

Transceiver modules with D-Sub front panel connector however exhibit a width of 31mm, due to the D-Sub connector dimensions. Hence, a flat cable assembly will be in use for attachment of D-Sub modules.

The SU3-ENSEMBLE can be configured also for rear I/O usage. Four UART ports are wired as TTL level signals to the optional backplane connector P4, for use with a suitable RIO PHY module, typically configured as either RS-232 or RS-485. Hence, with both front and rear I/O capabilities utilised, the SU3-ENSEMBLE is a true 4HP 8-port isolated asynchronous serial interface solution.

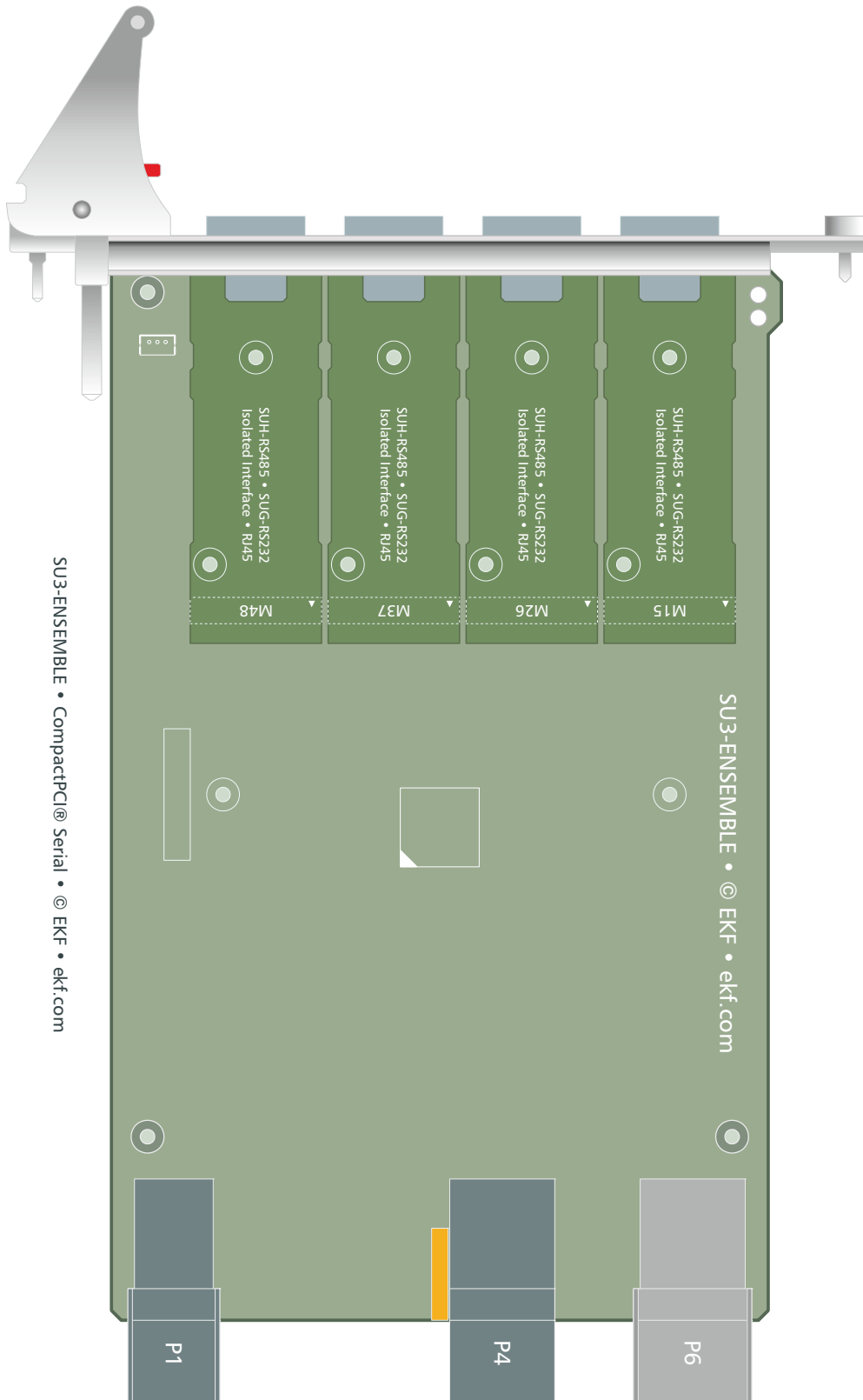
The SUC-RIO is recommended for use together with SU3-ENSEMBLE, since this rear I/O carrier card allows also individual configuration with any of the SUE to SUJ PHY modules.



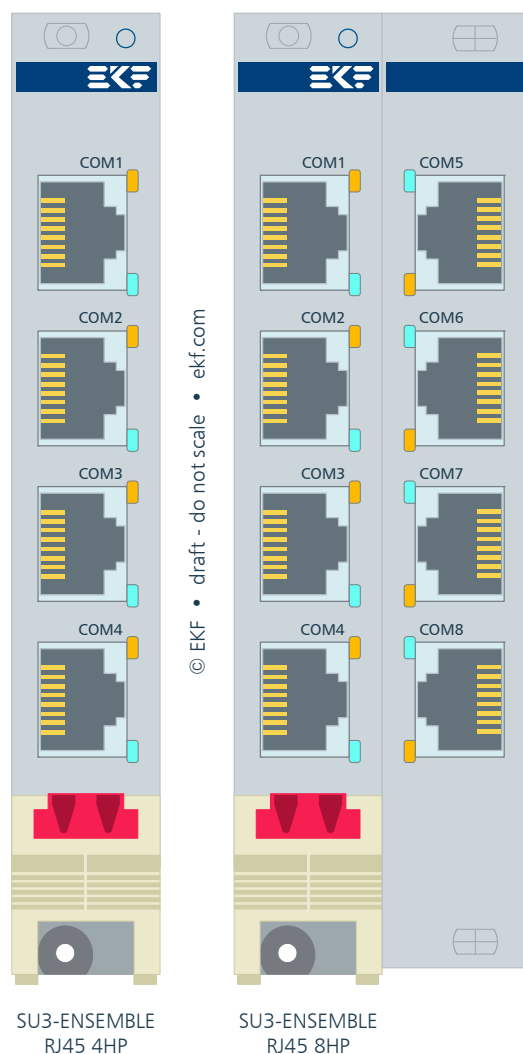
SU3-ENSEMBLE (D-Sub) SKU

Front Connector	Card FF	Isolated I/F	Ordering No.
6 x D-Sub 9-pos	8HP	6 x EIA-232	SU3-0630-ENSEMBLE
6 x D-Sub 9-pos	8HP	1 x EIA-485 • 5 x EIA-232	SU3-0631-ENSEMBLE
6 x D-Sub 9-pos	8HP	2 x EIA-485 • 4 x EIA-232	SU3-0632-ENSEMBLE
6 x D-Sub 9-pos	8HP	3 x EIA-485 • 3 x EIA-232	SU3-0633-ENSEMBLE
6 x D-Sub 9-pos	8HP	4 x EIA-485 • 2 x EIA-232	SU3-0634-ENSEMBLE
6 x D-Sub 9-pos	8HP	5 x EIA-485 • 1 x EIA-232	SU3-0635-ENSEMBLE
6 x D-Sub 9-pos	8HP	6 x EIA-485	SU3-0636-ENSEMBLE

Component Orientation

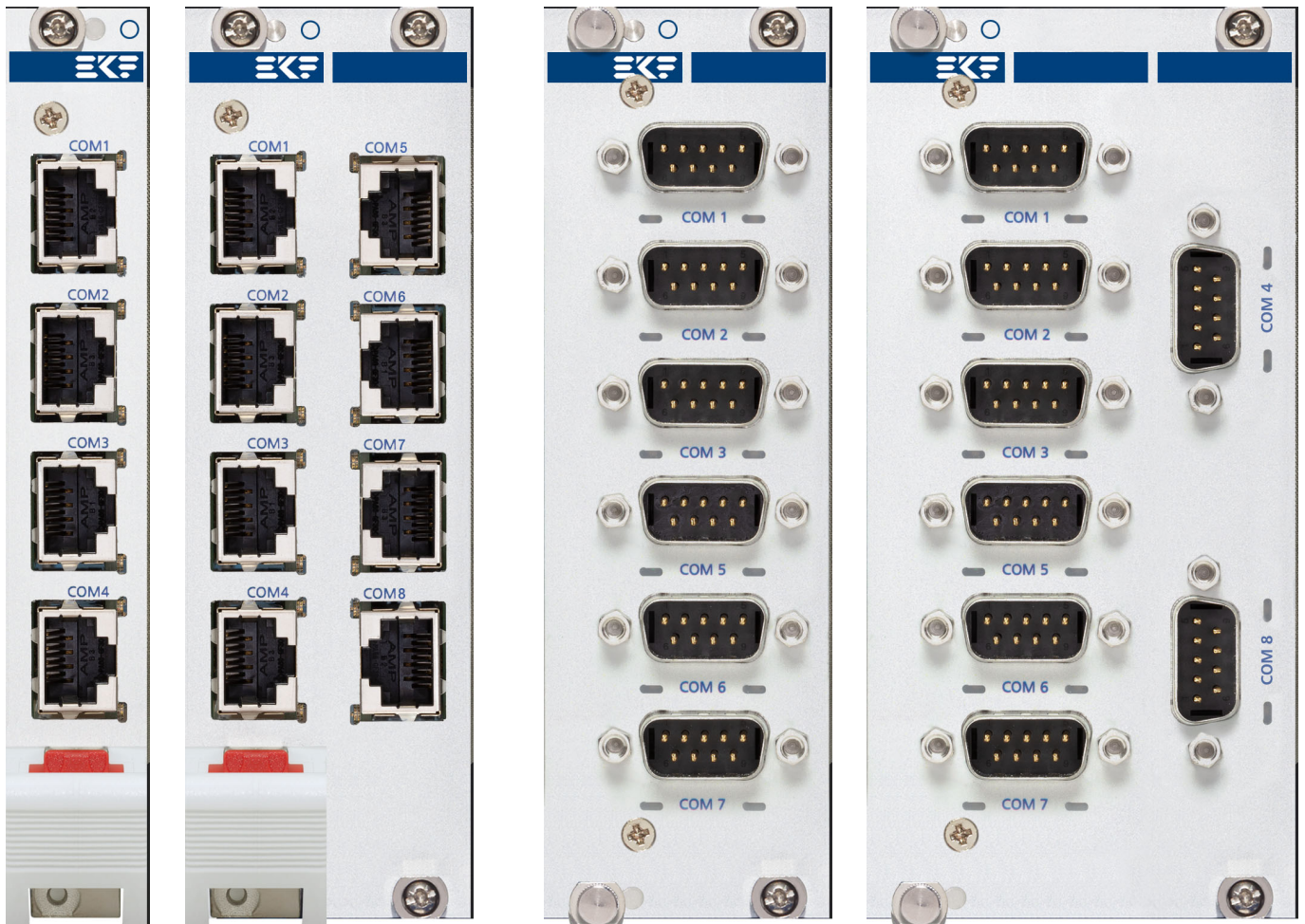


Front Panel



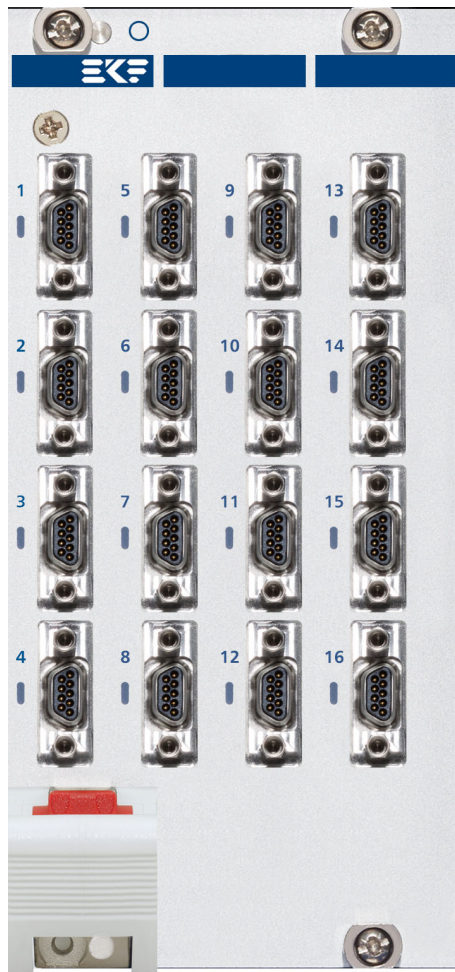
F/P shown for 4x/8x modules w. RJ45 connector

triple color LEDs assigned to each connector/port
for detailed description please refer to the SUE-SUJ module documentation



Typical front front panels 4/8/12HP

Any combination and count up to eight of SUE - SUJ modules can be realized on customers request



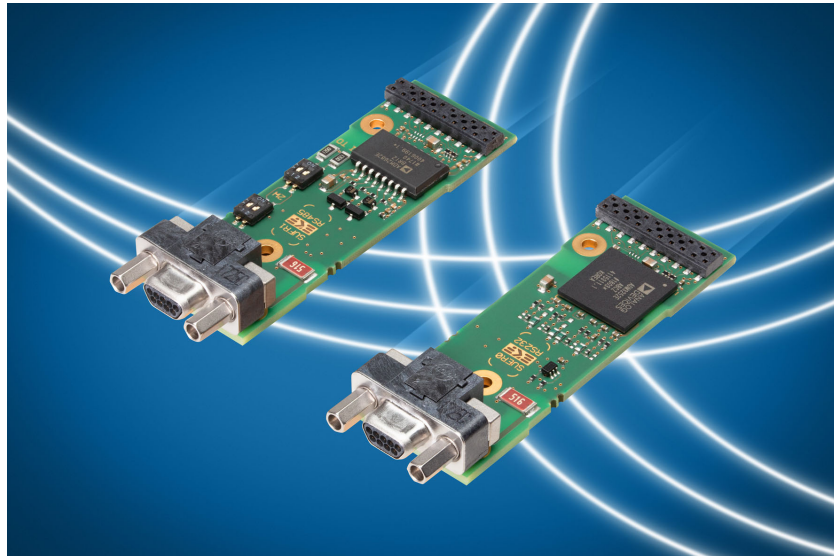
12HP Front Panel w. 16 x Micro-D (Assembly w. 2 x SU3-ENSEMBLE)

Module Overview

Transceiver Modules Available			
Front Connector	Isolated I/F	Module Width	Ordering No.
D-Sub 9-pos.	EIA-232	31mm	SUI-xxxx-RS232
D-Sub 9-pos.	EIA-485	31mm	SUJ-xxxx-RS485
Micro-D 9-pos.	EIA-232	20mm	SUE-xxxx-RS232
Micro-D 9-pos.	EIA-485	20mm	SUF-xxxx-RS485
RJ45 8-pos.	EIA-232	20mm	SUG-xxxx-RS232
RJ45 8-pos.	EIA-485	20mm	SUH-xxxx-RS485

Modules with 20mm front width will be attached directly to the SU3-ENSEMBLE, which allows up to 4 front panel connectors vertically assigned for a 4HP front panel (8 connectors with 8HP front panel width). D-Sub modules (31mm width) typically require a flat cable attachment, and can be mounted to the front panel either horizontally or vertically grouped.





SUF-RS485 • SUE-RS232 • Micro-D Connector



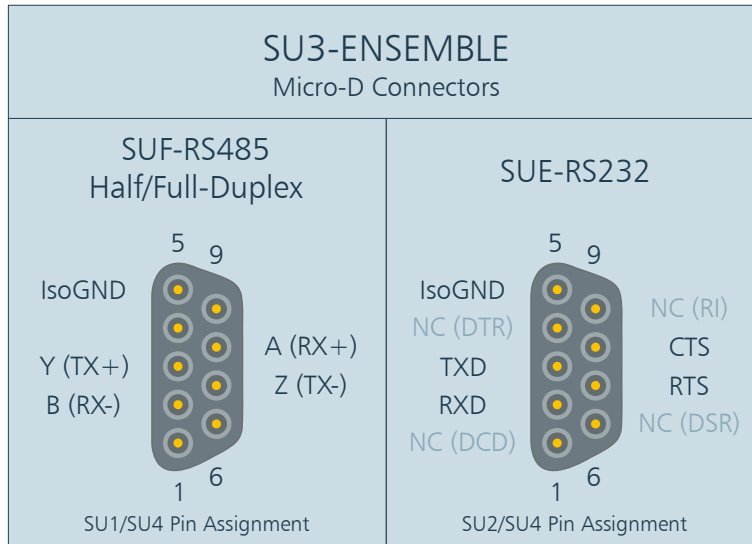
SUH-RS485 • SUG-RS232 • RJ45 Connector



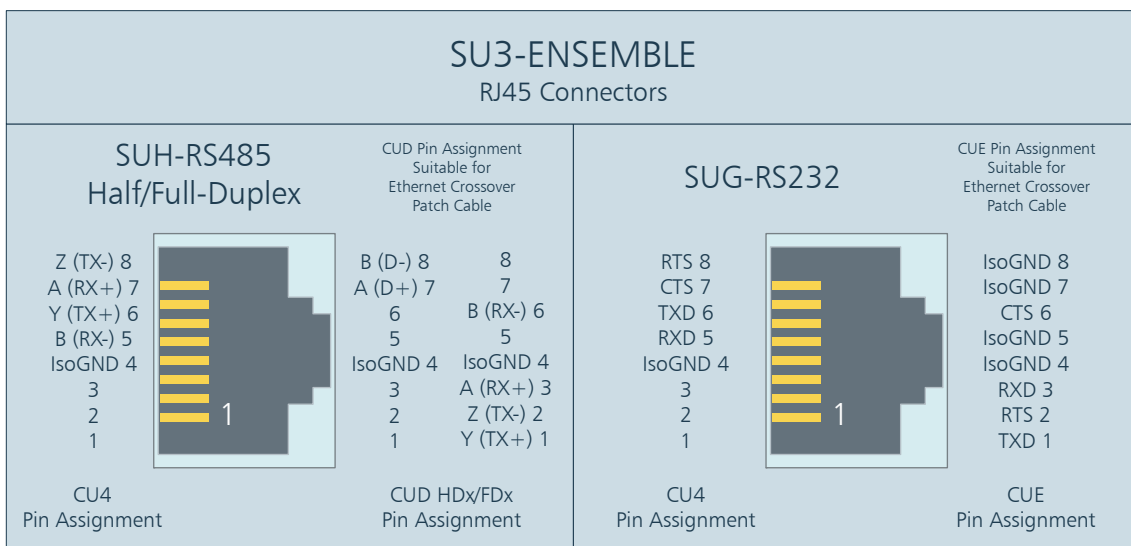
SUJ-RS485 • SUI-RS232 • D-Sub Connector

Front Panel Connectors

The SU3-ENSEMBLE can be populated with up to 8 transceiver modules with RJ45 and/or Micro-D I/O connectors, for a front panel width of 4HP or 8HP. These modules can be mixed at customers discretion, however not all front panel versions may be available from stock.

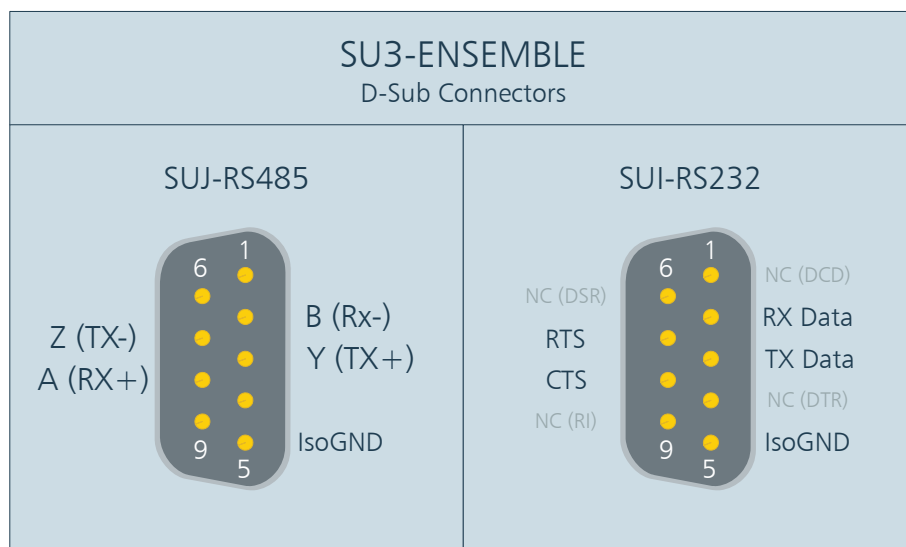


IsoGND is the reference ground for all signals of a particular I/O connector, isolated from the board and system logic GND, and from Shield (panel/chassis), and also from other transceiver modules.



Special versions of the SU3-ENSEMBLE use the CU4/SU4 RJ45 pin assignment to provide an easy migration path for CU4/SU4 users. Regular RJ45 pin assignments should be chosen for new applications with popular Ethernet crossover patch cables.

The SU3-ENSEMBLE can be also used with transceiver modules equipped with the popular D-Sub I/O connector. This may require a front panel width of 8HP or 12HP.




Standard versions of the SU3-ENSEMBLE use the CU4 pin assignment to provide an easy migration path for CU4/SU4 users. SUJ was designed to allow any pinout (available on customer request only).

Sockets M15 - M48

The SU3-ENSEMBLE is equipped with four pass-through sockets, each wired to 2 UART channels, suitable for attachment of up to eight EKF SU*-series transceiver modules.

A mezzanine transceiver module connects to the the SU3-ENSEMBLE sockets M15-M48 via pin stackers. Two transceiver modules can be attached this way to any one socket. Transceiver modules 1-4 must be mounted with their component side down, facing towards the SU3-ENSEMBLE PCB. Optional transceiver modules 5-8 must be mounted on top of the modules 1-4, but with their component side up (transceiver modules back to back).

As an alternate, transceiver modules can be attached by a flat cable assembly to the sockets M15-M48. This is recommended for D-Sub connector transceiver modules with a width of 31mm.

M15 - M48 • TTL-Level Serial I/O					
2.00mm Socket Strip 2 x 10 (251.1.0210.10.09)					
© EKF 251.1.0210.10.09 ekf.com	 <p>2.00mm Socket</p>	+5V	1	2	GND
		RTS# (1-4)	3	4	RXD (1-4)
		TXD (1-4)	5	6	+3.3V
		DE (1-4)	7	8	CTS# (1-4)
		RE# (1-4)	9	10	GND
		RE# (5-8)	11	12	GND
		DE (5-8)	13	14	CTS# (5-8)
		TXD# (5-8)	15	16	+3.3V
		RTS# (5-8)	17	18	RXD (5-8)
			+5V	19	20

Driver enable (DE) and receiver enable (RE#) are required for RS-485 mezzanines configured for half-duplex (PartyLine) operation. The driver enable signal is generated by the on-board Pericom UART in conjunction with the Pericom driver software.

CompactPCI® Serial Backplane Connectors

CompactPCI® Serial Peripheral Slot Connector P1

The SU3-ENSEMBLE is equipped with a PCI Express® based UART (Gen1 single lane). The card can be inserted in any PCIe® enabled peripheral slot of the CompactPCI® Serial backplane for proper operation.

P1 CompactPCI® Serial Peripheral Slot Backplane Connector												
EKF Part #250.3.1206.20.02 • 72 pos. 12x6, 14mm Width												
P1	A	B	C	D	E	F	G	H	I	J	K	L
6	GND	PE TX02+	PE TX02-	GND	PE RX02+	PE RX02-	GND	PE TX03+	PE TX03-	GND	PE RX03+	PE RX03-
5	PE TX00+	PE TX00-	GND	PE RX00+	PE RX00-	GND	PE TX01+	PE TX01-	GND	PE RX01+	PE RX01-	GND
4	GND	USB2+	USB2-	GND	PE CLK+	PE CLK-	GND	SATA TX+	SATA TX-	GND	SATA RX+	SATA RX-
3	USB3 TX+	USB3 TX-	GA0	USB3 RX+	USB3 RX-	GA1	SATA SDI	SATA SDO	GA2	SATA SCL	SATA SL	GA3
2	GND	I2C SCL	I2C SDA	GND	RSV	RSV	GND	RST#	WAKE#	GND	PE EN#	SYS EN#
1	+12V	STBY	GND	+12V	+12V	GND	+12V	+12V	GND	+12V	+12V	GND

pin positions printed white/grey: not connected

Rear I/O Connector P4 (Option)

Four or even all eight SU3-ENSEMBLE UART ports (TTL level signals) can be used for rear I/O usage. In addition, a suitable rear I/O module would be required for rear I/O operation, which provides the physical transceivers and rear panel I/O connectors.

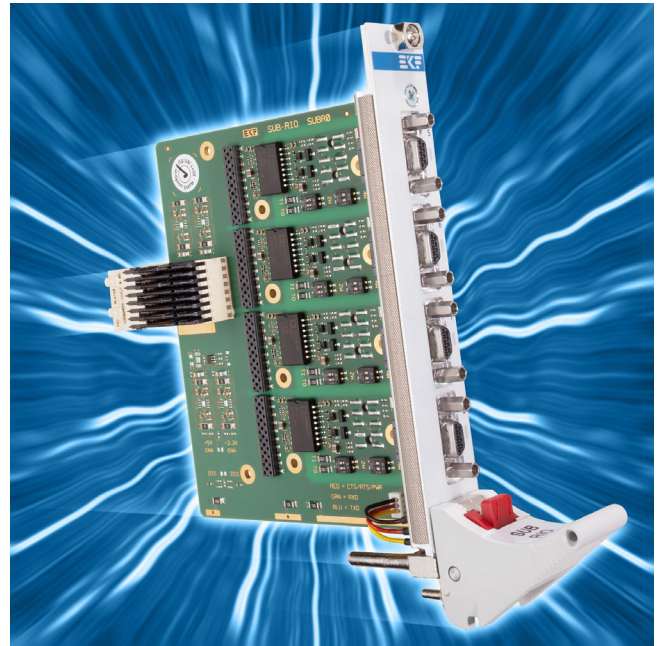
Population of P4 may be optional - please consider your requirements before ordering.

P4 CompactPCI® Serial Peripheral Slot Backplane Connector Type B												
EKF Part #250.3.1208.20.00 • 96 pos. 12x8, 16mm Width												
P4	A	B	C	D	E	F	G	H	I	J	K	L
8	GND	+3.3V	+3.3V	GND	UART 1 RXD	UART 1 RTS#	GND	UART 1 RE#	UART 1 DE	GND	UART 1 TXD	UART 1 CTS#
7	+5V	I2C CLK	GND	UART 5 CTS#	UART 5 TXD	GND	UART 5 DE	UART 5 RE#	GND	UART 5 RTS#	UART 5 RXD	GND
6	GND	+3.3V	+3.3V	GND	UART 2 RXD	UART 2 RTS#	GND	UART 2 RE#	UART 2 DE	GND	UART 2 TXD	UART 2 CTS#
5	+5V	I2C DAT	GND	UART 6 CTS#	UART 6 TXD	GND	UART 6 DE	UART 6 RE#	GND	UART 6 RTS#	UART 6 RXD	GND
4	GND	+3.3V	+3.3V	GND	UART 3 RXD	UART 3 RTS#	GND	UART 3 RE#	UART 3 DE	GND	UART 3 TXD	UART 3 CTS#
3	+5V	I2C PWR	GND	UART 7 CTS#	UART 7 TXD	GND	UART 7 DE	UART 7 RE#	GND	UART 7 RTS#	UART 7 RXD	GND
2	GND	+3.3V	+3.3V	GND	UART 4 RXD	UART 4 RTS#	GND	UART 4 RE#	UART 4 DE	GND	UART 4 TXD	UART 4 CTS#
1	+5V	RIO ACT#	GND	UART 8 CTS#	UART 8 TXD	GND	UART 8 DE	UART 8 RE#	GND	UART 8 RTS#	UART 8 RXD	GND

all signals TTL level compliant, +3.45V maximum input voltage
 UART ports 1 - 4 normally in use for front I/O

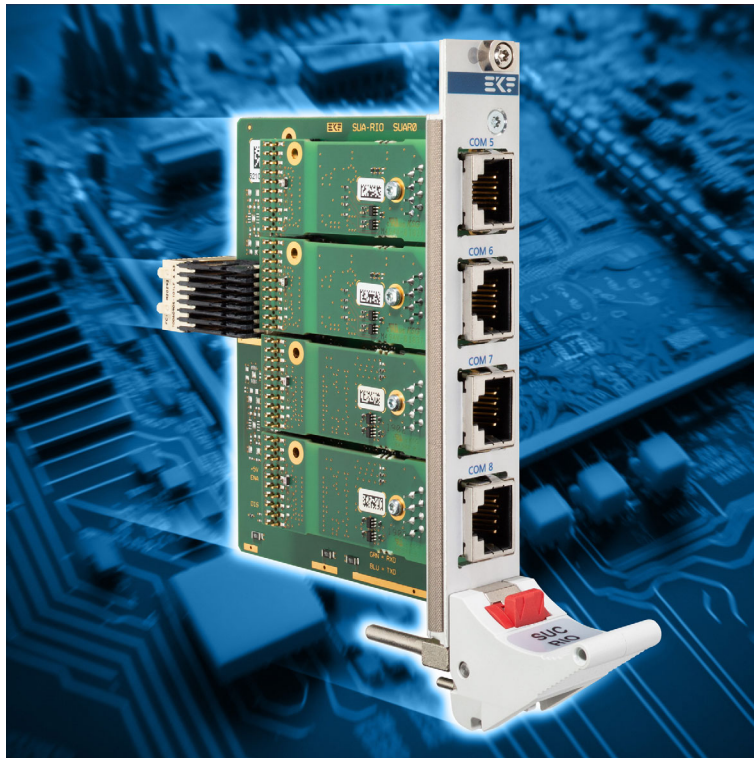


SUA-RIO (Isolated RS-232)



SUB-RIO (Isolated RS-485)

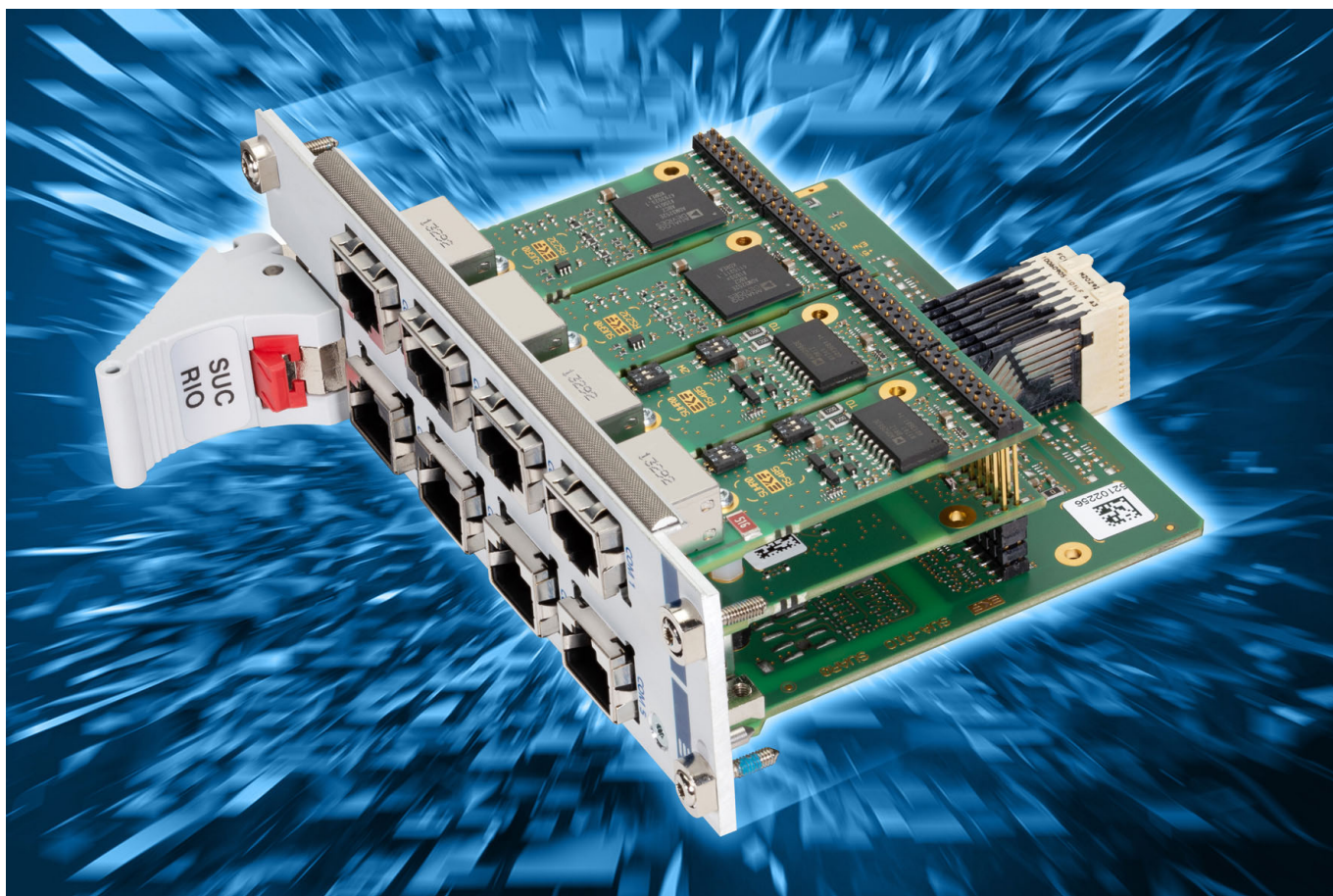




SUC-RIO 4HP (Individually Configurable Ports)



SUC-RIO 8HP (Individually Configurable RS-232/485 Ports)



SUC-RIO 8HP (8 Ports Individually Mixed RS-232 RS-485)

Driver Software

UART drivers are available for download from the EKF website e.g. at <https://www.ekf.com/s/su3/drv/>.

Related Products



Related Links

SU1-TWIST (Isolated RS-485)	https://www.ekf.com/s/su1/su1.html
SU2-BALLAD (Isolated RS-232)	https://www.ekf.com/s/su2/su2.html
SU3-ENSEMBLE (Modular Isolated RS-232 RS-485)	https://www.ekf.com/s/su3/su3.html
SU4-SOPRANO (RS-232/232 Selectable)	https://www.ekf.com/s/su4/su4.html
SUA-RIO (Rear I/O Isolated RS-232)	https://www.ekf.com/s/sua/sua.html
SUB-RIO (Rear I/O Isolated RS-485)	https://www.ekf.com/s/sub/sub.html
SUC-RIO (Rear I/O Modular Isolated RS-232 RS-485) 4-Port 8-Port (4HP/8HP)	https://www.ekf.com/s/su3/su3.html
SUE-SUJ Isolated Transceiver Modules RS-232 & RS-485	https://www.ekf.com/s/sue-suj/sue-suj.html
CompactPCI® Serial UART Solutions	https://www.ekf.com/s/serial.html#SU
CompactPCI® Classic UART Solutions	https://www.ekf.com/c/ccom/ccom.html
XMC Module UART Solutions	https://www.ekf.com/d/dcom.html

Related Products		
Board	I/F	Use Case
SU1-TWIST	4 x isolated RS-485 Micro-D front 8 x isolated RS-485 Micro-D front 8 x isolated RS-485 Micro-D front & rear 4+4 6 x isolated RS-485 D-Sub front 8 x isolated RS-485 D-Sub front	4HP F/P, basic version 8HP F/P, w. SUB-RIO as mezzanine module 4HP F/P R/P, w. rear I/O module SUB-RIO 8HP F/P, w. IDC cable assemblies 12HP F/P, w. IDC cable assemblies
SU2-BALLAD	4 x isolated RS-232 Micro-D front 8 x isolated RS-232 Micro-D front 8 x isolated RS-232 Micro-D front & rear 4+4 2 x isolated RS-232 D-Sub front 3 x isolated RS-232 D-Sub front 4 x isolated RS-232 D-Sub front	4HP F/P, basic version 8HP F/P, w. SUA-RIO as mezzanine module 4HP F/P R/P, w. rear I/O module SUA-RIO 4HP F/P, w. IDC cable assemblies 4HP F/P, w. IDC cable assemblies 8HP F/P, w. IDC cable assemblies
SU3-ENSEMBLE	8/16 x configurable isolated RS-232 RS-485 ports, carrier card for up to 8 modules, connector styles RJ45/Micro-D/D-Sub, rear I/O capable 4+4, to be combined with single port modules SUE - SUJ	4HP/8HP/12HP F/P, for rear I/O to be combined with SUC-RIO as rear I/O carrier card for single port modules SUE - SUJ, 16 ports as dual SU3-ENSEMBLE with a common front panel 12HP
SU4-SOPRANO	8 x RS-232/485 selectable, non isolated, Micro-D	4HP F/P, each port user configurable, rear I/O capable
SU5-ENSEMBLE	same as SU3 but 58.9824MHz UART clock option for highest RS-485 data rates available	same as SU3, except baud rates (refer to table on previous page)
SUA-RIO	4 x isolated RS-232, Micro-D	4HP R/P rear I/O card for SU1/SU2 8HP F/P when used as SU1/SU2 mezzanine
SUB-RIO	4 x isolated RS-485, Micro-D	4HP R/P rear I/O card for SU1/SU2 8HP F/P when used as SU1/SU2 mezzanine
SUC-RIO	4 x configurable isolated RS-232 RS-485 ports, carrier for up to 4 transceiver modules SUE - SUJ, connector styles RJ45/Micro-D/D-Sub	4HP R/P rear I/O card for SU3 8HP F/P when used as SU3 mezzanine to be combined with single port modules SUE - SUJ
SUE-RS232	1 x RS-232 isolated transceiver module Micro-D	for SU3, SU5, SUC
SUF-RS485	1 x RS-485 isolated transceiver module Micro-D	for SU3, SU5, SUC
SUG-RS232	1 x RS-232 isolated transceiver module RJ45	for SU3, SU5, SUC
SUH-RS485	1 x RS-485 isolated transceiver module RJ45	for SU3, SU5, SUC
SUI-RS232	1 x RS-232 isolated transceiver module D-Sub	for SU3, SU5, SUC
SUJ-RS485	1 x RS-485 isolated transceiver module D-Sub	for SU3, SU5, SUC

Ordering Information

Ordering Information

For popular SU3-ENSEMBLE SKUs please refer to www.ekf.com/liste/liste_21.html#SU3



SU3-047x-ENSEMBLE w. 4 x RJ45 Transceiver Modules (4HP Front Panel)

Ordering Number Key

SU3-abcd-ENSEMBLE (Availability on Request)

a	0	EKF standard product
bc	47/48	4HP front panel for 4 x RJ45
	63	8HP front panel for 6 x D-Sub
	83	12HP front panel for 8 x D-Sub
	87/88	8HP front panel for 8 x RJ45
d	0-4 (6/8)	assembly configuration (number of RS-485 ports, others RS-232)

SU3-ENSEMBLE (RJ45 Crossover Patch Cable Pinout) SKU			
Front Connector	Card FF	Isolated I/F	Ordering No.
4 x RJ45 8-pos	4HP	4 x EIA-232	SU3-0470-ENSEMBLE
4 x RJ45 8-pos	4HP	1 x EIA-485/2-Wire • 3 x EIA-232	SU3-0471-ENSEMBLE
4 x RJ45 8-pos	4HP	2 x EIA-485/2-Wire • 2 x EIA-232	SU3-0472-ENSEMBLE
4 x RJ45 8-pos	4HP	3 x EIA-485/2-Wire • 1 x EIA-232	SU3-0473-ENSEMBLE
4 x RJ45 8-pos.	4HP	4 x EIA-485/2-Wire	SU3-0474-ENSEMBLE
4 x RJ45 8-pos	4HP	1 x EIA-485/4-Wire • 3 x EIA-232	SU3-0481-ENSEMBLE
4 x RJ45 8-pos	4HP	2 x EIA-485/4-Wire • 2 x EIA-232	SU3-0482-ENSEMBLE
4 x RJ45 8-pos	4HP	3 x EIA-485/4-Wire • 1 x EIA-232	SU3-0483-ENSEMBLE
4 x RJ45 8-pos	4HP	4 x EIA-485/4-Wire	SU3-0484-ENSEMBLE
8 x RJ45 8-pos	8HP	8 x EIA-232	SU3-0870-ENSEMBLE
8 x RJ45 8-pos	8HP	1 x EIA-485/2-Wire • 7 x EIA-232	SU3-0871-ENSEMBLE
8 x RJ45 8-pos	8HP	2 x EIA-485/2-Wire • 6 x EIA-232	SU3-0872-ENSEMBLE
8 x RJ45 8-pos	4HP	3 x EIA-485/2-Wire • 5 x EIA-232	SU3-0873-ENSEMBLE
8 x RJ45 8-pos.	8HP	4 x EIA-485/2-Wire • 4 x EIA-232	SU3-0874-ENSEMBLE
8 x RJ45 8-pos	8HP	5 x EIA-485/2-Wire • 3 x EIA-232	SU3-0875-ENSEMBLE
8 x RJ45 8-pos	8HP	6 x EIA-485/2-Wire • 2 x EIA-232	SU3-0876-ENSEMBLE
8 x RJ45 8-pos	8HP	7 x EIA-485/2-Wire • 1 x EIA-232	SU3-0877-ENSEMBLE
8 x RJ45 8-pos	8HP	8 x EIA-485/2-Wire	SU3-0878-ENSEMBLE
8 x RJ45 8-pos	8HP	1 x EIA-485/4-Wire • 7 x EIA-232	SU3-0881-ENSEMBLE
8 x RJ45 8-pos	8HP	2 x EIA-485/4-Wire • 6 x EIA-232	SU3-0882-ENSEMBLE
8 x RJ45 8-pos	4HP	3 x EIA-485/4-Wire • 5 x EIA-232	SU3-0883-ENSEMBLE
8 x RJ45 8-pos.	8HP	4 x EIA-485/4-Wire • 4 x EIA-232	SU3-0884-ENSEMBLE
8 x RJ45 8-pos	8HP	5 x EIA-485/4-Wire • 3 x EIA-232	SU3-0885-ENSEMBLE
8 x RJ45 8-pos	8HP	6 x EIA-485/4-Wire • 2 x EIA-232	SU3-0886-ENSEMBLE
8 x RJ45 8-pos	8HP	7 x EIA-485/4-Wire • 1 x EIA-232	SU3-0887-ENSEMBLE
8 x RJ45 8-pos	8HP	8 x EIA-485/4-Wire	SU3-0888-ENSEMBLE

Baud Rates

The SU5-ENSEMBLE is identical to the SU3-ENSEMBLE, except the UART clock, which is quadrupled to 58.9824MHz vs. 14.4756MHz. Given same UART prescalings, the baud rates for both cards can be retrieved from the table below. Some SU5-ENSEMBLE settings are common UART baud rates, others are proprietary and would require SU5-ENSEMBLE cards on either cable side.

Baud Rate Comparison	
SU3-ENSEMBLE	SU5-ENSEMBLE
110	440
300	1200
600	2400
1200	4800
2400	9600
4800	19200
9600	38400
14400	57600
19200	76800
38400	153600
56000	224000
57600	230400
115200	460800
128000	512000
230400	921600
256000	1024000 1)
460800	1843200 1) 2)
921600	3686400 1) 3)

- 1) baud rates beyond SU3-ENSEMBLE, require SU5-ENSEMBLE on both cable heads
- 2) maximum RS-232 baud rate tested, via RJ45 connectors & 3m CAT cable
- 3) maximum RS-485 baud rate tested, via 4-wire connection 100m CAT cable

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