



BC200 • *Embedded Blue*®

Configurable Industrial PC

Preliminary Edition





Technical Features

General

- ▶ Industrial PC box based on proven CompactPCI® Serial technology
- ▶ Highly configurable I/O and CPU type
- ▶ Suitable for installation of two CompactPCI® Serial cards, up to 8HP assembly each
- ▶ Wide input range 6 - 36VDC power supply 160W w. vehicle ignition function
- ▶ Dimensions: 256mm (W) x 312mm (D) x 44mm (H), metal case
- ▶ Wireless communication options WiFi, Bluetooth, WWAN (e.g. LTE), GNSS
- ▶ M.2 SSD storage solution (selectable NVMe or SATA)
- ▶ SKU and custom versions available

Main Board

- ▶ T-shaped base board as active CompactPCI® Serial backplane
- ▶ Two docking ports for in-line horizontal mounting of two CompactPCI® Serial cards
- ▶ Acts as backplane with respect to the CompactPCI® Serial CPU board and peripheral card
- ▶ Additional active components and mezzanine expansion (SSD storage, USB I/O, wireless)
- ▶ Left side docking connectors intended for a CPU card (CompactPCI® Serial system slot)
- ▶ Right side docking connectors intended for a peripheral card (CompactPCI® Serial fat pipe peripheral slot)

CompactPCI® Serial Slots

- ▶ CompactPCI® Serial system slot (left docking port), rJ1 - rJ6 connector suite, suitable for a single size Eurocard CPU board either 4HP or 8HP front width assembly
- ▶ CompactPCI® Serial peripheral slot (right docking port), rJ1, rJ2 and rJ6 connectors, fat pipe slot PCIe® x8, suitable for a single size Eurocard CPU board either 4HP or 8HP front width assembly
- ▶ Front panels of CompactPCI® Serial cards will be replaced by a common BC200 box front

Technical Features

On-Board Devices

- ▶ M.2 socket M-key for 2280 size SSD
- ▶ SATA or PCIe® x4 (NVMe) interface configuration selectable by jumper
- ▶ M.2 socket E-key for 2230 size WiFi/Bluetooth module
- ▶ PCIe® & USB2 interface
- ▶ M.2 socket B-key for 3042 size WWAN/GNSS module
- ▶ USB2/USB3 interface
- ▶ Micro-SIM card socket
- ▶ Dual USB 3.0 Type A front receptacle

Power Supply

- ▶ DC Input, 6 - 36VDC, input current max. 7.2A @24VDC
- ▶ Reverse polarity protection
- ▶ Input connector male M12 power, L-coded 5-pole, or custom specific (e.g. terminal block)
- ▶ Input fuse 20A socketed
- ▶ ATX style outputs, 160W total
- ▶ Standby consumption <1W
- ▶ Temperature range -20°C to +70°C
- ▶ Efficiency up to 93%
- ▶ Motor vehicle ignition function, 14 different modes of operation selectable by jumper
- ▶ High quality components for maximum reliability & long life
- ▶ MTBF 990,000h @50°C
- ▶ Output load max. +12VDC 12A, +5VDC 8A, +5V_{SB} 2A, +3.3VDC 8A
- ▶ All outputs protected: Short circuit, overvoltage, overtemperature

Cooling

- ▶ Three long life fans at the back panel, PWM regulated
- ▶ Temperature controller NCT7491 on-board
- ▶ Additional dedicated cooling of CPU card

Technical Features

Applications

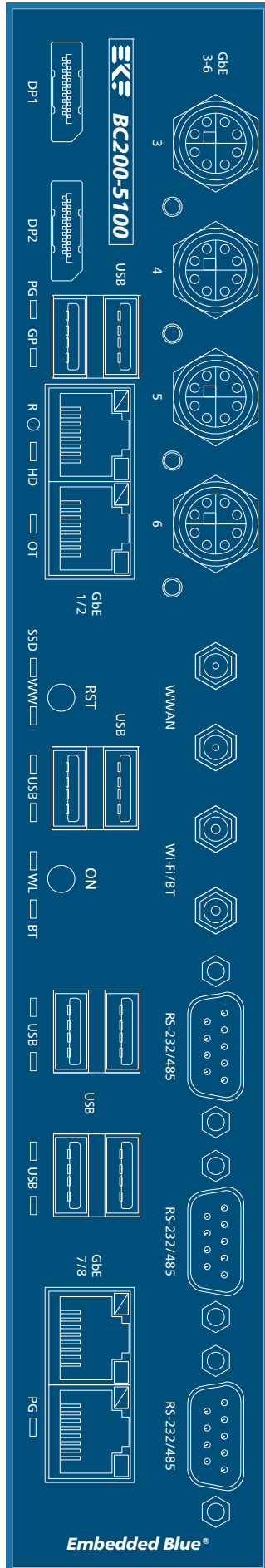
- ▶ Highest flexibility in the boxed computer market due to the T-model construction
- ▶ Versatile front I/O configurations & processor performance by choice of CPU card, peripheral card, mezzanine cards
- ▶ Industrial computing
- ▶ IOT networking & edge computing
- ▶ Rugged environments
- ▶ Transportation vehicles
- ▶ Construction and harvesting machinery
- ▶ Passenger cars
- ▶ Custom specific solutions

Environmental, Regulatory

- ▶ Designed & manufactured in Germany
- ▶ ISO 9001 certified quality management
- ▶ Long term availability
- ▶ Rugged solution
- ▶ RoHS compliant
- ▶ Operating temperature -20°C to +70°C
- ▶ 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 Regulations EN55022, EN55024, EN60950-1 (UL60950-1/IEC60950-1)
- ▶ MTBF tbd years

all items are subject to technical changes

Sample Front Panel



SC5-FESTIVAL
w. SCL-RHYTHM

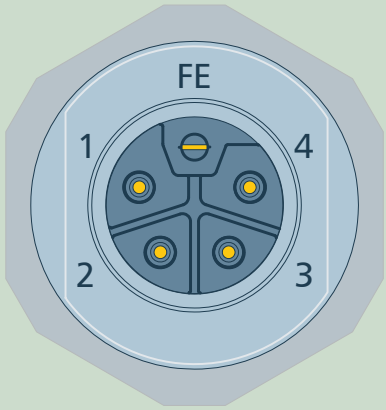
EKF Part #312.2.044256312.02.0

SBF-CROSSOVER
8HP (3 x SUI/SUJ)

BC200-5100 (front) • © EKF • ekf.com

Embedded Blue®

M12 Power Connector Pin Assignment

M12-L 5-Position Male			
	brown	1	+12VDC/24VDC
	white	2	Ignition
	blue	3	0VDC (GND)
	black	4	NC/RSVD
	grey	5	FE (Shield)

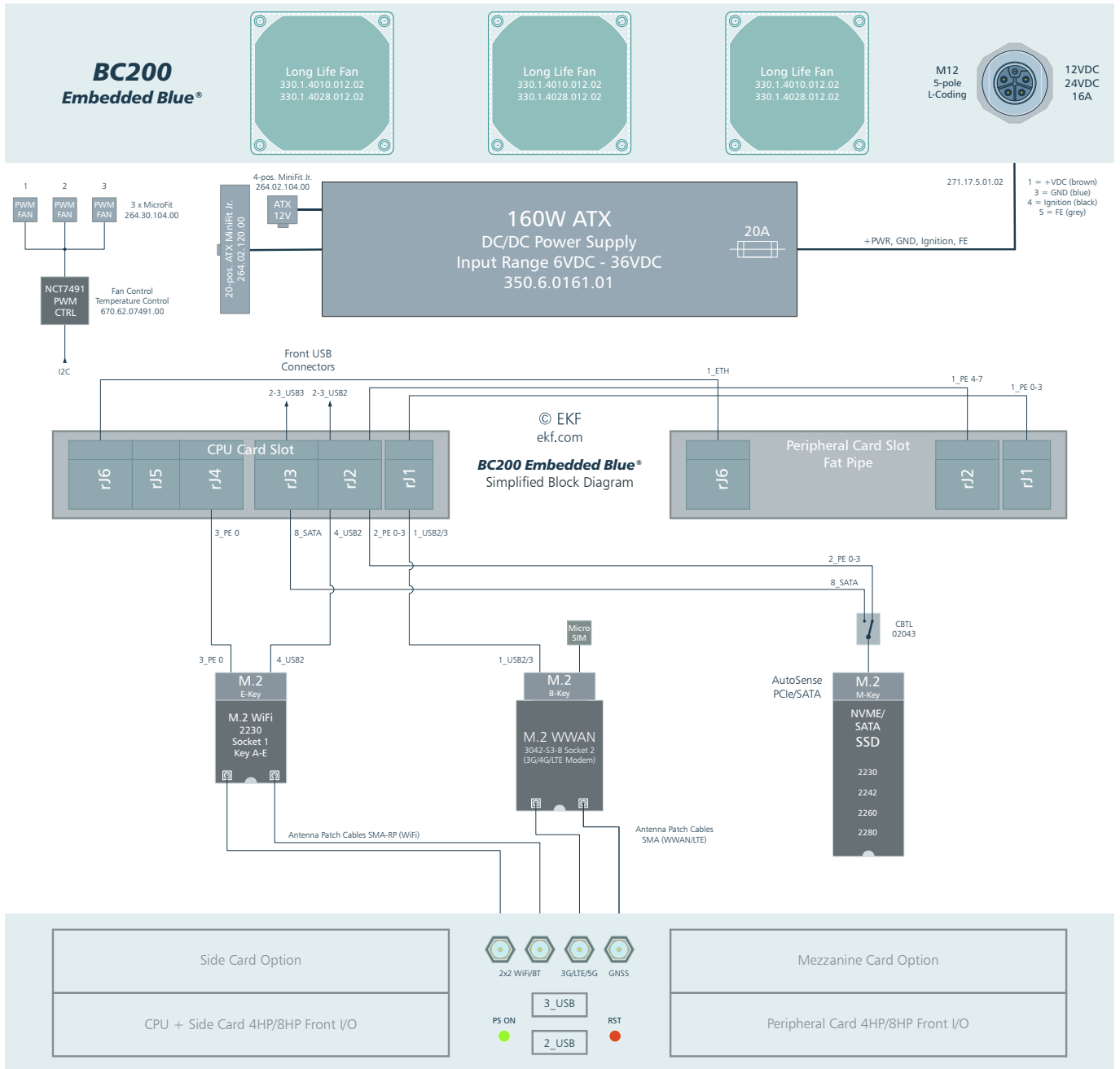
The M12-L power connector is situated at the back panel of the box.

Mating Pigtail Cable Assemblies 1.5m 16A 2.5mm ² w. Female Straight Plug (R/A on Request)	
EKF	271.17.5.11.15
Phoenix Contact	1414772, 1414782
Harting	2133A700524015
Weidmueller	SAIL-M12BG-L-1.5P





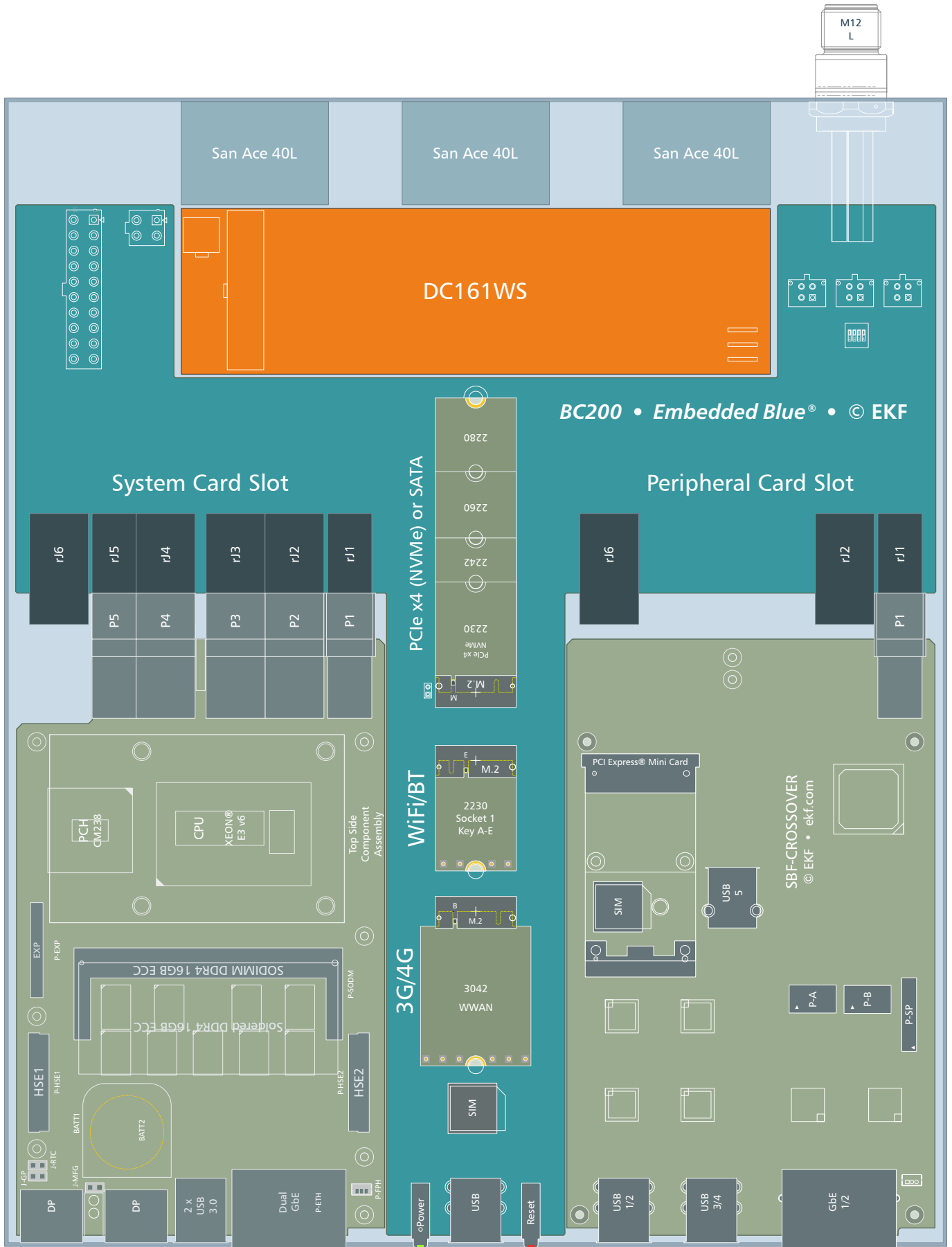
Block Diagram



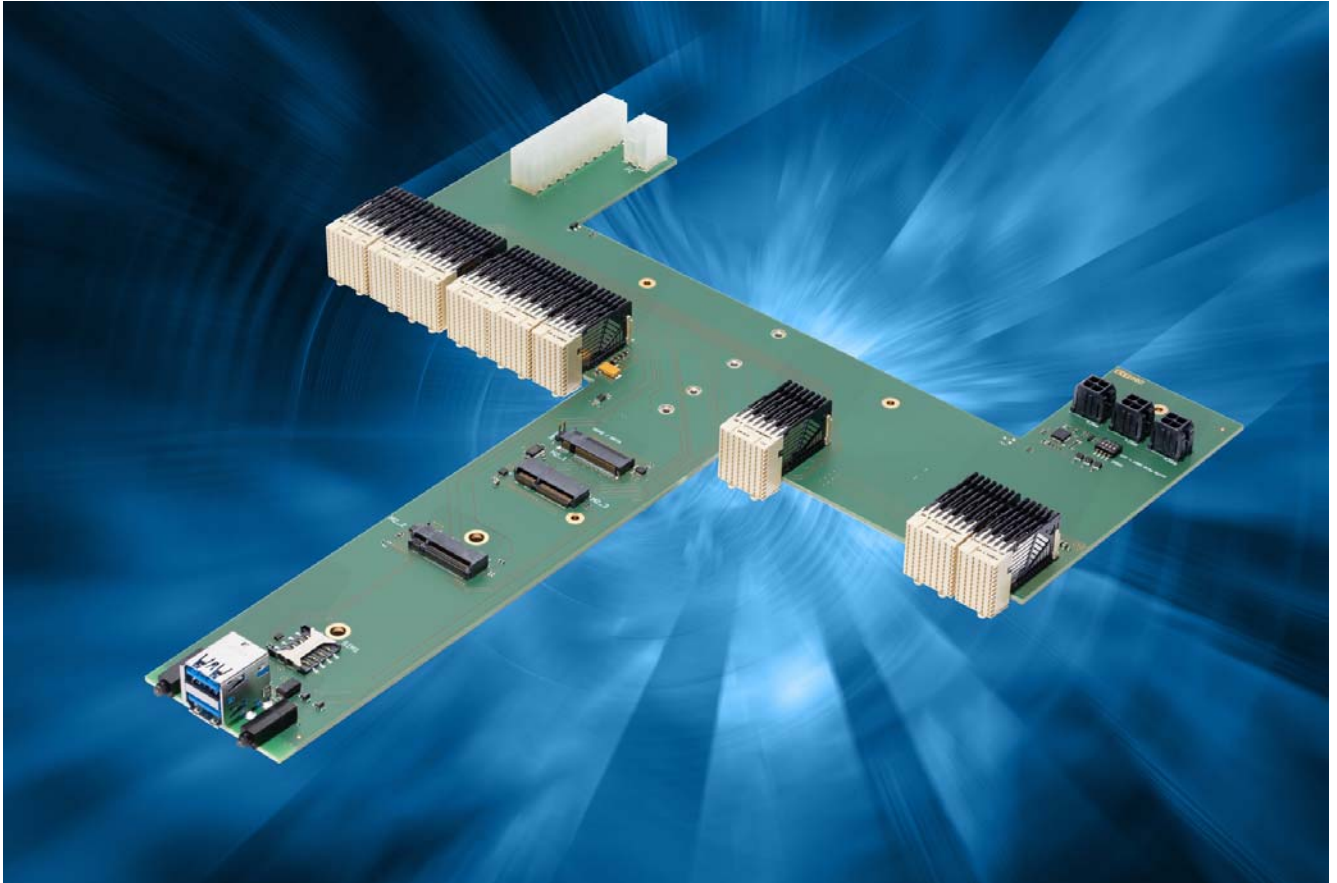
https://www.ekf.de/b/bc200/img/bc200_blk.pdf



Component Orientation



https://www.ekf.de/b/bc200/img/bc200_draft.pdf



Ordering Information

For popular BC200 SKUs please contact sales@ekf.de

Industrial Computers Made in Germany
boards. systems. solutions.

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