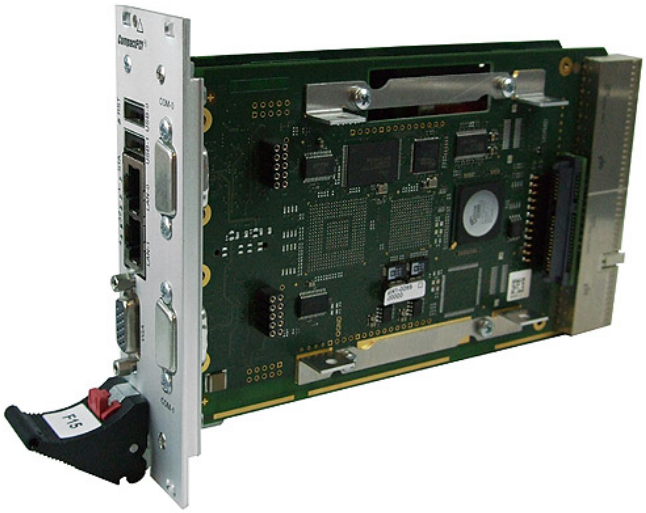
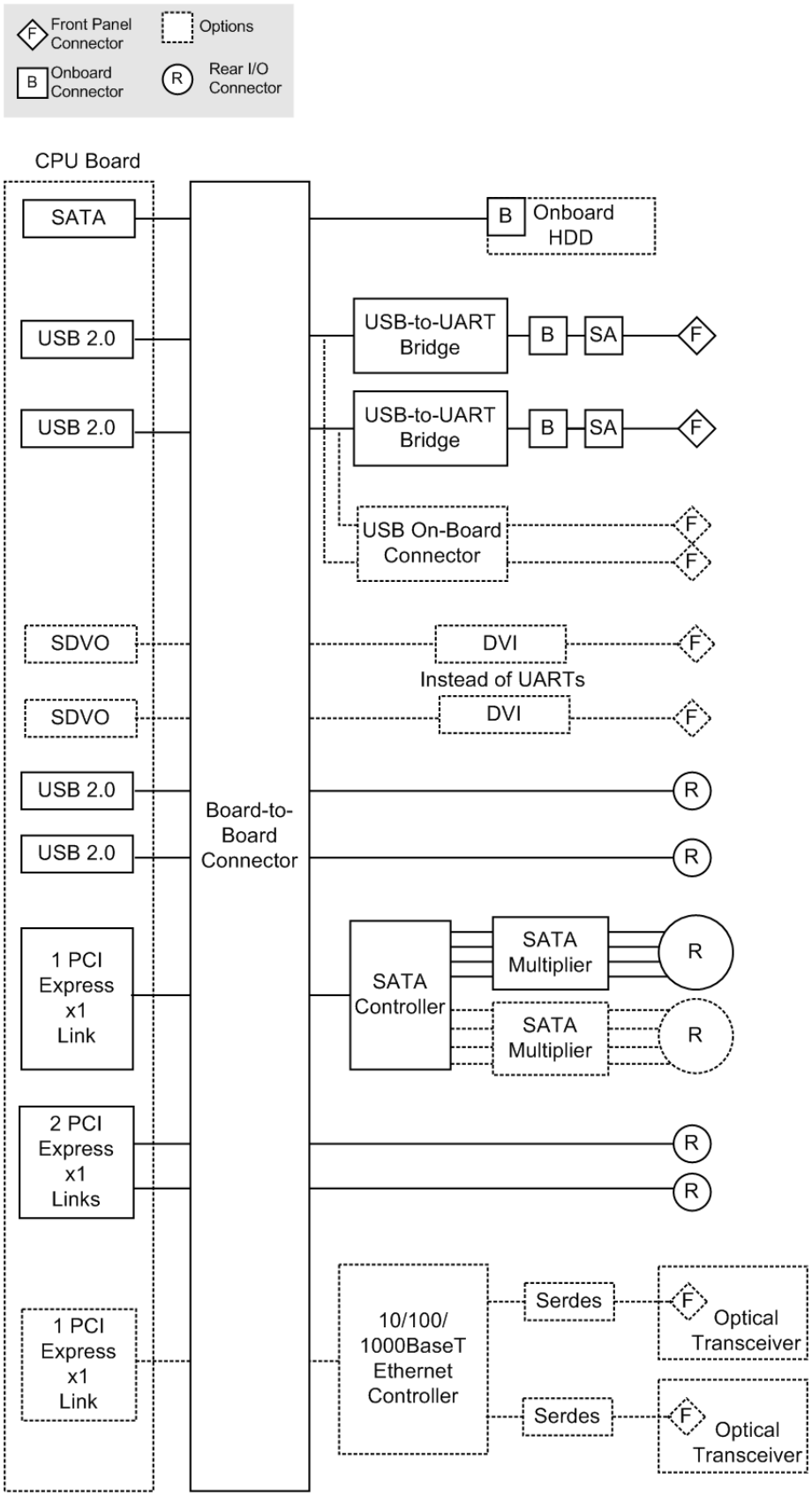
F608 – 3U CompactPCI® Side Card for RAID Systems

- **4/8 HP extension for 3U Intel® SBCs F14, F15, F17, F18, F19P, F21P**
- **4 SATA ports via J2 rear I/O**
- **RAID 0, 1 and 5 support**
- **CompactPCI® PlusIO compliant**
- **1 SATA hard-disk slot 2.5" on board**
- **2 COMs via SA-Adapters™**
- **Optical isolation depending on SA-Adapter™**
- **Two optical Gigabit Ethernet interfaces via SFP as an option**



The F608 is a 4HP SATA extension card for 3U Intel® based CompactPCI® single-board computers. It can be used in combination with the F14 and compatible CPU boards.
It offers four SATA interfaces over a SATA port multiplier via PCI Express® as well as one SATA slot on-board (from the chipset). Two individually configurable UARTs are accessible via D-Sub connector at the front. Two USB and two PCI Express® links are available via rear I/O. As an option, the F608 also offers the possibility to realize two optical Ethernet interfaces via SFP.
The F608 is directly plugged to the right side of the respective single-board computer. A robust connector makes for high mechanical stability. It is delivered with an 8HP front panel, replacing the 4HP front panel of a 3U single-board computer and thus resulting in a solid one-piece front panel. The operating temperature range is 0..60°C.

Diagram


Front Panel Connector
Options
Onboard Connector
Rear I/O Connector
CPU Board
SATA
USB 2.0
USB 2.0
SDVO
SDVO
USB 2.0
USB 2.0
1 PCI Express x1 Link
2 PCI Express x1 Links
1 PCI Express x1 Link
Board-to-Board Connector
B Onboard HDD
USB-to-UART Bridge
B
SA
F
USB-to-UART Bridge
B
SA
F
USB On-Board Connector
F
F
DVI
F
Instead of UARTs
DVI
F
R
R
SATA Controller
SATA Multiplier
R
SATA Multiplier
R
R
R
10/100/ 1000BaseT Ethernet Controller
Serdes
F
Optical Transceiver
Serdes
F
Optical Transceiver

Technical Data

Mass Storage	■ One serial ATA (SATA) port for onboard 2.5" hard-disk drive □ Transfer rates up to 150MB/s (depends on hard disk) □ RAID level 0/1 support (depends on CPU board) ■ Four serial ATA (SATA) ports via rear I/O □ Onboard SATA controller via one PCI Express® lane from the chipset □ Port multiplier □ Transfer rates up to 150MB/s □ RAID level 0/1/5 support
UART	■ Two at front panel ■ Physical interface using SA-Adapter™ via 10-pin connector ■ RS232..RS422, isolated or not ■ Only full duplex operation for RS422 ■ Data rates up to 230.4kbit/s ■ FIFO receive and transmit buffers for high data throughput ■ Handshake lines: full support; lines depend on SA-Adapters™
USB	■ Two 2.0 host ports via rear I/O ■ Data rates up to 480Mbit/s
PCI Express®	■ Two x1 links via rear I/O ■ Data rate 250MB/s in each direction (2.5 Gbit/s per lane)
Miscellaneous	■ CompactPCI® J1 is assembled for increased mechanical stability and/or for power supply ■ CompactPCI® J2 is used for rear I/O
Electrical Specifications	■ Supply voltage/power consumption: □ +5V (-3%/+5%), 3.8A □ +3.3V (-3%/+5%),0.8A
Mechanical Specifications	■ Dimensions: conforming to CompactPCI® specification for 3U boards ■ Mountable on right side of the CPU ■ Weight: 150g (w/o hard disk and SA-Adapters™)
Environmental Specifications	■ Temperature range (operation): □ 0..+60°C □ Airflow: 1.0m/s ■ Temperature range (storage): -40..+85°C ■ Relative humidity (operation): max. 95% non-condensing ■ Relative humidity (storage): max. 95% non-condensing ■ Altitude: -300m to + 3,000m ■ Shock: 15g/11ms ■ Bump: 10g/16ms ■ Vibration (sinusoidal): 1g/10..150Hz ■ Conformal coating on request
MTBF	■ 1,944,987h @ 40°C according to IEC/TR 62380 (RDF 2000)
Safety	■ PCB manufactured with a flammability rating of 94V-0 by UL recognized manufacturers
EMC	■ Conforming to EN 55022 (radio disturbance), IEC1000-4-2 (ESD) and IEC1000-4-4 (burst)
Software Support	■ Driver software can be found in the data sheet of the CPU board that you use.

Configuration & Options

Standard Configurations

Article No.	Interfaces Rear	Interfaces Front	On-Board	Height	Position	Operation Temperature
02F608-00	4 SATA	2 COM	SATA HD slot	4 HP	right of CPU	0..+60°C

Options

Mass Storage	■ Eight SATA ports via rear I/O (not compliant to PICMG 2.30 PlusIO)
I/O	■ Two USB on 4HP front ■ Two DVI on 4HP front instead of UARTs ■ Two DVI and two USB on 8HP front ■ Two DVI and two UARTS on 8HP front ■ Two SFP slots on 12HP front □ For optical 1000Base-LX or 1000Base-SX or copper Gigabit Ethernet interfaces □ SFP not included ■ Two SFP slots, two DVI and two UARTs on 16HP front
Mechanical	■ 4HP..16HP

Please note that some of these options may only be available for large volumes. Please ask our sales staff for more information.

Ordering Information

Standard F608 Models	**02F608-00**	4 SATA and 2 COM ports, additional SATA hard disk slot on-board, for F14 and compatible SBCs, mounted to the right of the SBC, 0..+60°C
SA-Adapters™	You can find a more detailed overview of possible carrier board/SA-Adapter™ combinations along with software support in our option matrix (PDF).	
	08SA01-00	RS232, not optically isolated, 0..+60°C
	08SA02-01	RS422/485, full duplex, optically isolated, 0..+60°C
	08SA02-07	RS422/485, full duplex, optically isolated, -40..+85°C screened
	08SA03-00	1 RS232, optically isolated, 0..+60°C
	08SA03-01	1 RS232, optically isolated, -40..+85°C screened
	08SA22-00	IBIS master SA-Adapter™, -40..+85°C screened
	08SA22-01	IBIS slave SA-Adapter™, -40..+85°C screened
	08SA25-00	GPS receiver, isolated, -40..+85°C screened
	08SA26-00	RS422 with 15-pin D-Sub connector, with handshake signals (RTS, CTS, DCD, DTR), coated, -40..+85°C screened
Miscellaneous Accessories	**0710-0038**	HDD SATA 2.5", 100 GB, 1.5GB/s, 4200rpm, -10°..+70°C
Software: Linux	This product is designed to work under Linux. See below for potentially available separate software packages from MEN. For a Linux driver package supporting the Silicon Imaging SiI3132 SATA controller, please refer to Silicon Image's website.	
Software: Windows®	This product is designed to work under Windows®. See below for potentially available separate software packages from MEN. For a Windows® driver package supporting the Silicon Imaging SiI3132 SATA controller, please refer to Silicon Image's website .	

For operating systems not mentioned here contact MEN sales.

Documentation	Compare Chart 3U CompactPCI® / PlusIO CPU cards » Download Compare Chart 3U CompactPCI® / PlusIO peripheral cards » Download Compare Chart 3U CompactPCI® / PlusIO extension cards » Download For more information on the interoperability of the side cards with the respective CPU boards please see the extension card compatibility matrix (PDF)	
	20F608-00	F608 User Manual

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