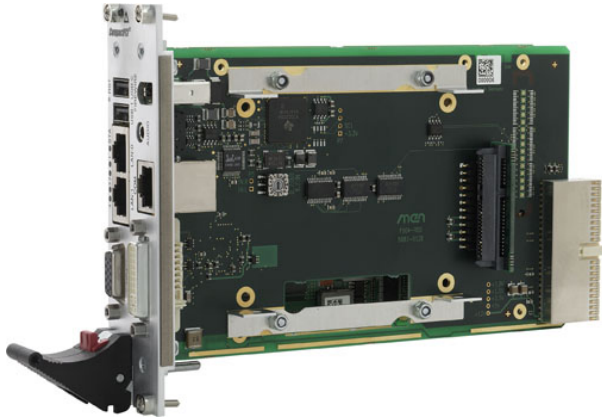


F604 - 3U CompactPCI® Side Card FireWire



- **4 HP extension for 3U Intel® SBCs F14, F15, F17, F18**
- **1 IEEE 1394 interface**
- **1 DVI-D Single Link**
- **1 HD Audio (in or out)1 or 2 RS232**
- **2.5" SATA hard-disk slot**

The F604 is a 4HP FireWire and multimedia extension card for 3U Intel® based CompactPCI® single-board computers such as F14, F15, F17, F18 and further boards of the Intel® low power family. The IEEE 1394 high-speed serial bus is often used in combination with modern high-end digital camera equipment instead of USB. Thus, the F604 side-card extends the standard features of a powerful multi-core or Pentium® M CPU board by one 400 MBit/s FireWire interface connected via PCI Express® links. It further provides a DVI-D single link port, an HD audio - in or out - port as well as one, optionally two COM interfaces.

In addition an on-board 2.5" SATA hard-disk slot is available on the F604.

The F604 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.

Technical Data

I/O

- FireWire
 - One FireWire connector at front panel
 - According to IEEE 1394
 - Full 400 Mbit/s via PCI Express®
 - Remote feeding 12V/1.5A (power class 1)
 - For connection of FireWire devices (F604 has no GUID)
- DVI
 - One DVI-D connector at front panel
 - Single link
 - SDVO PanelLink transmitter
 - Maximum resolution: 1600 x 1200 pixels
 - 60Hz refresh rate
- Audio
 - One HD (high definition) audio codec at front panel
 - Symmetric stereo output (two 185mW mono amplifiers)
 - Switchable to stereo input
- UART
 - One RS232 via adapter cable (see Accessories)
 - Two RS232 via customized adapter cable (optional)
 - One RJ45 connector at front panel
 - Data rates 300bit/s..230kbit/s (up to 1 Mbit/s with shielded cable)
 - FIFO receive and transmit buffers for high data throughput
 - Handshake lines: CTS, RTS for first COM

Mass Storage

- Serial IDE (SATA)
 - One port for on-board 2.5" hard-disk drive
 - Transfer rates up to 150MB/s (depends on hard disk)
 - RAID level 0/1 support (depends on CPU board)

Miscellaneous

- CompactPCI® J1 is assembled for increased mechanical stability and/or for power supply

Electrical Specifications

- Supply voltage/power consumption:
 - +5V (-3%/+5%), 440mA typ. (w/o hard disk)
 - +3.3V (-3%/+5%), 390mA typ. (w/o hard disk)
- MTBF: 947,377h @ 40°C according to IEC/TR 62380 (RDF 2000)

Mechanical Specifications

- Dimensions: conforming to CompactPCI® specification for 3U boards
- Mountable on right (standard) or left (option) side of the CPU
- Weight: 146g (w/o hard disk)

Environmental Specifications

- Temperature range (operation):
 - 0..+60°C up to -40..+85°C (depending on hard disk; please refer to the hard disk specifications for possible limits)
 - Airflow: min. 10m³/h
- 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): 2g/10..150Hz
- Conformal coating on request

Safety

- PCB manufactured with a flammability rating of 94V-0 by UL recognized manufacturers

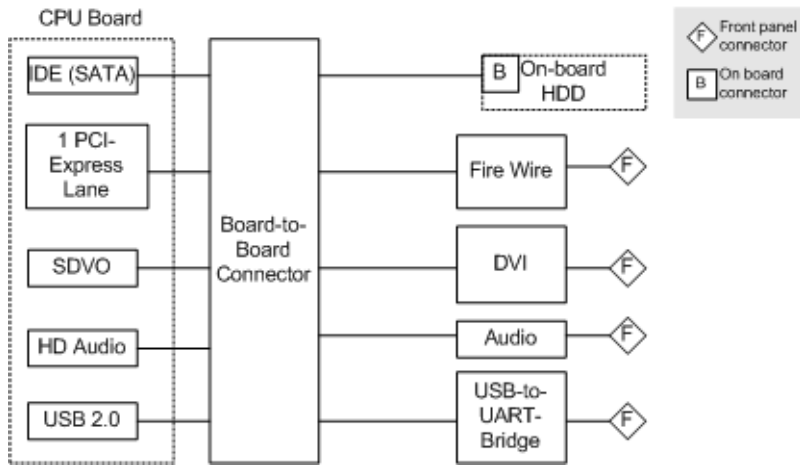
EMC

- Tested according to EN 55022 (radio disturbance), IEC1000-4-2 (ESD) and IEC1000-4-4 (burst)

Software Support

- Driver software for the UART interface and the FireWire interface for Windows®, Linux (to be verified), VxWorks® (to be verified), QNX® (on request)
- For more information on supported operating system versions and drivers see Software.
- Further information can be found in the data sheet of the CPU board that you use.

Diagram



Configuration & Options

Standard Configurations

Article No.	Interfaces	Mass Storage	Position	Operation Temperature
02F604-00	1 FireWire, 1 DVI-D, 1 audio (I/O), 1 COM	SATA HD slot	right of CPU	0..+60°C

Options

Mass storage

- CompactFlash® interface instead of SATA hard disk
 - Via AD95 adapter

I/O

- FireWire Interface
 - Connection of other hosts to the FireWire interface to form a FireWire network (TCP/IP over FireWire)(on request)
- UART
 - One COM with MEN adapter cable (see Accessories)
 - Two COMs with customized adapter cable

Mechanical

- Mounting of side card on left side of the CPU

Operation Temperature

- 0..+60°C
- -40..+85°C

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 Hardware

02F604-00 3U CompactPCI® side card with 1 IEEE 1394 FireWire, 1 DVI, 1 HD audio and 1 COM extension, SATA hard disk slot, for F14 and compatible SBCs, mounted to the right of the SBC, 0..+60°C

Memory

0751-0028 CompactFlash® card, 2 GB, Type I, -40..+85°C, S.M.A.R.T. interface

0751-0029 CompactFlash® card, 1 GB, Type I, -40..+85°C, S.M.A.R.T. interface

Miscellaneous

05F006-00 RS232 interface cable RJ45 to 9-pin D-Sub (1 COM to 1 COM), 2m

0710-0018 SATA150 hard disk 2.5" 60GB, 5400rpm, 8MB cache, NCQ, +5..+55°C

0710-0025 SATA hard disk 2.5", 80 GB, 5400 rpm, 24h/7d, -30..+85°C; N.B.: between -30°C to -20°C power-on time is 12 s typ. (incl. stand-offs and mounting screws)

08AD95-01 SATA-to-CompactFlash® adapter for F14, F15, F17, F18 side cards

Documentation

20F604-00 F604 User Manual

For the most up-to-date ordering information and direct links to other data sheets and downloads, see the F604 online data sheet under » www.men.de.

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