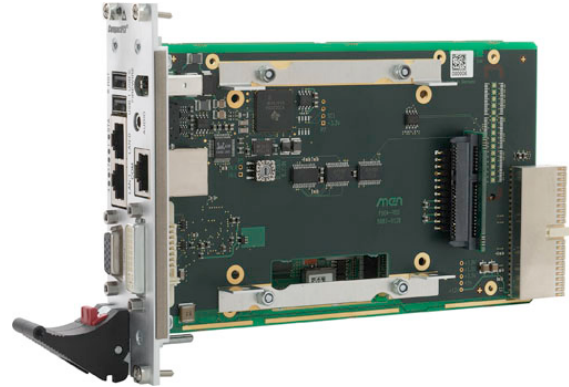


# F604 – 3U CompactPCI® Side Card FireWire

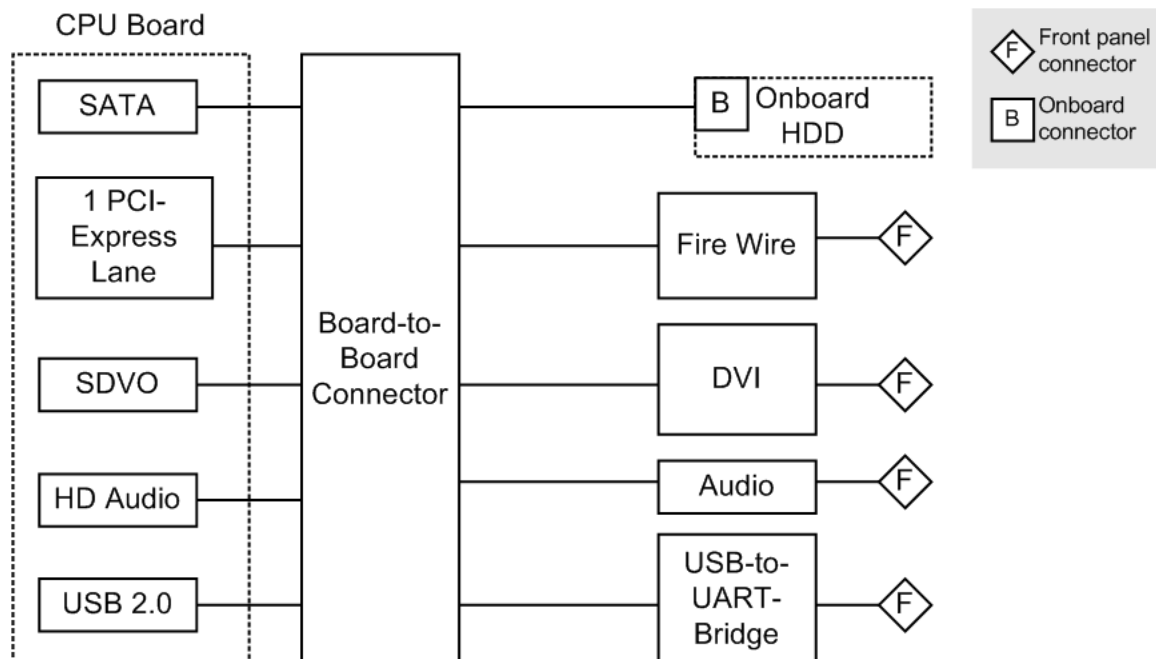
- 4 HP extension for 3U Intel® SBCs F14, F15, F17, F18, F19P, F21P
- 1 IEEE 1394 interface
- 1 DVI-D Single Link
- 1 HD Audio (in or out)
- 1 or 2 RS232
- 2.5" SATA hard-disk slot



The F604 is a 4HP FireWire and multimedia extension card for 3U Intel® based CompactPCI® single-board computers. It can be used in combination with the F14 and compatible CPU boards. 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 onboard 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.

## Diagram



## Technical Data

<b>I/O</b>	<ul style="list-style-type: none"> <li>■ FireWire <ul style="list-style-type: none"> <li>□ One FireWire connector at front panel</li> <li>□ According to IEEE 1394</li> <li>□ Full 400 Mbit/s via PCI Express®</li> <li>□ Remote feeding 12V/1.5A (power class 1)</li> <li>□ For connection of FireWire devices (F604 has no GUID)</li> </ul> </li> <li>■ DVI <ul style="list-style-type: none"> <li>□ One DVI-D connector at front panel</li> <li>□ Single link</li> <li>□ SDVO PanelLink transmitter</li> <li>□ Maximum resolution: 1600 x 1200 pixels</li> <li>□ 60Hz refresh rate</li> </ul> </li> <li>■ Audio <ul style="list-style-type: none"> <li>□ One HD (high definition) audio codec at front panel</li> <li>□ Symmetric stereo output (two 185mW mono amplifiers)</li> <li>□ Switchable to stereo input</li> </ul> </li> <li>■ UART <ul style="list-style-type: none"> <li>□ One RS232 via adapter cable (see Accessories)</li> <li>□ Two RS232 via customized adapter cable (optional)</li> <li>□ One RJ45 connector at front panel</li> <li>□ Data rates 300bit/s..230kbit/s (up to 1 Mbit/s with shielded cable)</li> <li>□ FIFO receive and transmit buffers for high data throughput</li> <li>□ Handshake lines: CTS, RTS for first COM</li> </ul> </li> </ul>
<b>Mass Storage</b>	<ul style="list-style-type: none"> <li>■ Serial ATA (SATA) <ul style="list-style-type: none"> <li>□ One port for onboard 2.5" hard-disk drive</li> <li>□ Transfer rates up to 150MB/s (depends on hard disk)</li> <li>□ RAID level 0/1 support (depends on CPU board)</li> </ul> </li> </ul>
<b>Miscellaneous</b>	<ul style="list-style-type: none"> <li>■ CompactPCI® J1 is assembled for increased mechanical stability and/or for power supply</li> </ul>
<b>Electrical Specifications</b>	<ul style="list-style-type: none"> <li>■ Supply voltage/power consumption: <ul style="list-style-type: none"> <li>□ +5V (-3%/+5%), 440mA typ. (w/o hard disk)</li> <li>□ +3.3V (-3%/+5%), 390mA typ. (w/o hard disk)</li> </ul> </li> <li>■ MTBF: 947,377h @ 40°C according to IEC/TR 62380 (RDF 2000)</li> </ul>
<b>Mechanical Specifications</b>	<ul style="list-style-type: none"> <li>■ Dimensions: conforming to CompactPCI® specification for 3U boards</li> <li>■ Mountable on right (standard) or left (option) side of the CPU</li> <li>■ Weight: 146g (w/o hard disk)</li> </ul>
<b>Environmental Specifications</b>	<ul style="list-style-type: none"> <li>■ Temperature range (operation): <ul style="list-style-type: none"> <li>□ 0..+60°C up to -40..+85°C (depending on hard disk; please refer to the hard disk specifications for possible limits)</li> <li>□ Airflow: min. 10m³/h</li> </ul> </li> <li>■ Temperature range (storage): -40..+85°C</li> <li>■ Relative humidity (operation): max. 95% non-condensing</li> <li>■ Relative humidity (storage): max. 95% non-condensing</li> <li>■ Altitude: -300m to + 3,000m</li> <li>■ Shock: 15g/11ms</li> <li>■ Bump: 10g/16ms</li> <li>■ Vibration (sinusoidal): 2g/10..150Hz</li> <li>■ Conformal coating on request</li> </ul>
<b>Safety</b>	<ul style="list-style-type: none"> <li>■ PCB manufactured with a flammability rating of 94V-0 by UL recognized manufacturers</li> </ul>
<b>EMC</b>	<ul style="list-style-type: none"> <li>■ Tested according to EN 55022 (radio disturbance), IEC1000-4-2 (ESD) and IEC1000-4-4 (burst)</li> </ul>

## Technical Data

### 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 Downloads.](#)
- Further information can be found in the data sheet of the CPU board that you use.

## 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

<b>Standard F604 Models</b>	<b>02F604-00</b>	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
<b>Memory</b>	<b>0751-0028</b>	CompactFlash® card, 2 GB, Type I, -40..+85°C, S.M.A.R.T. interface
	<b>0751-0058</b>	CompactFlash® card, 16 GB, Type I, fixed bit set, -40..+85°C
<b>Miscellaneous Accessories</b>	<b>05F006-00</b>	RS232 interface cable RJ45 to 9-pin D-Sub (1 COM to 1 COM), 2m
	<b>0710-0038</b>	HDD SATA 2.5", 100 GB, 1.5GB/s, 4200rpm, -10..+70°C
<b>Documentation</b>		Compare Chart 3U CompactPCI® / PlusIO CPU cards » <a href="#">Download</a>
		Compare Chart 3U CompactPCI® / PlusIO peripheral cards » <a href="#">Download</a>
		Compare Chart 3U CompactPCI® / PlusIO extension cards » <a href="#">Download</a>
	<b>20F604-00</b>	F604 User Manual

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