

F601 - 3U CompactPCI® Side Card for Multimedia



- 4/8 HP extension for 3U Intel® SBCs F14, F15, F17, F18
- 2 DVI connections
- 1 HD audio
- 1 COM, alternatively with optical isolation
- 2.5" SATA hard-disk slot

The F601 is a 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.

A variety of graphics, audio and serial interfaces characterize the functionality of the F601. Depending on the combination of these functions, the F601 may take one slot (4HP) or two slots (8HP) alongside the CPU card.

The two DVI interfaces supporting the digital PanelLink technology deliver a maximum of 1600 x 1200 pixels in true-color mode. Together with the analog CRT interface from the CPU board it is possible to connect two monitors.

The audio interface supports the new high definition standard.

SA-Adapters™ provide different physical layers for the UART interface, so that the F601 can be configured flexibly with either RS232, RS422 or RS485, alternatively isolated or not isolated.

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

The F601 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 or 12HP 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

- DVI
 - One (4HP) or two (8HP) DVI-D connectors at front panel
 - SDVO PanelLink transmitter
 - Maximum resolution: 1600 x 1200 pixels
 - 60Hz refresh rate
 - Dual monitor support
- Audio
 - One HD (high definition) audio codec at front panel
 - Symmetric stereo output (two 350mW mono amplifiers)
 - Symmetric mono output (integrated 2W Class D mono amplifier)
- RS232..422 UART (COM1)
 - One D-Sub connector at second front panel
 - Via SA-Adapter™
 - Data rates up to 115.2kbits/s
 - Handshake lines: full support; lines depend on SA-Adapter™

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 and J2 are assembled for increased mechanical stability and/or for power supply via J1
- CompactPCI® J2 can optionally be used to realize several functions via rear I/O. See Options.

Electrical Specifications

- Supply voltage/power consumption:
 - +5V (-3%/+5%), 635mA typ. with hard disk, max. value depends on hard disk
 - +3.3V (-3%/+5%), tbd A typ./max.
- MTBF: 394,000h @ 40°C (derived from MIL-HDBK-217F)

Mechanical Specifications

- Dimensions: conforming to CompactPCI® specification for 3U boards
- Weight: 330g (with hard disk and 12HP front panel)

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)
 - Industrial temperature range on request
 - 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): 1g/10..150Hz
- Conformal coating on request

Safety

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

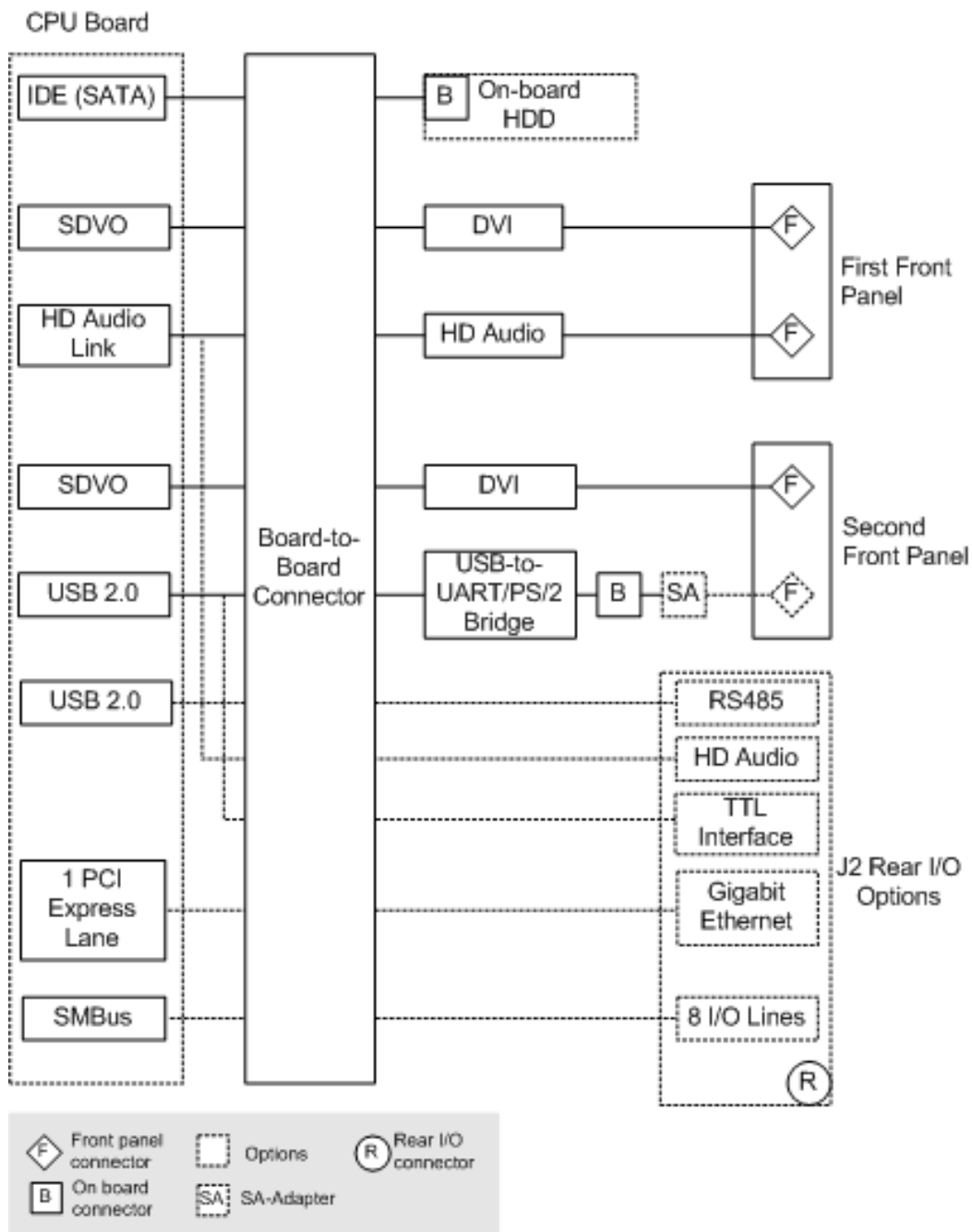
EMC

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

Software Support

- Driver software can be found in the data sheet of the CPU board that you use.

Diagram



Configuration & Options

Standard Configurations

Article No.	Interfaces	SA-Adapters™	Mass Storage	Position	Operation Temperature
02F601-00	1 DVI, 1 audio	to be ordered separately	SATA HD slot	right of CPU	0..+60°C
02F601-02	2 DVI, 1 audio, 1 COM	to be ordered separately	SATA HD slot	right of CPU	0..+60°C

Options

Mass storage

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

Interfaces (Front)

- 2 DVI, 1 audio, 1 COM
- 2 DVI, 1 audio, 1 PS/2
- PS/2 interface instead of COM (via SA-Adapter™ on second front panel)
- SA-Adapters™ to be ordered separately

Interfaces (Rear I/O)

- 1 HD audio link (instead of audio at the front; without audio codec and amplifiers)
- 8 I/O lines controlled by SMBus from the CPU board
- 1 serial TTL interface (full handshake support, instead of UART at the front)
- 1 RS485 interface (differential half-duplex)
- 1 Gigabit Ethernet

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

- 02F601-00** 1 DVI-D and 1 audio at front, SATA hard disk slot, for F14 and compatible SBCs, 4HP, 0..+60°C
- 02F601-02** 2 DVI-D, 1 audio, 1 COM (via SA-Adapter™) at front, SATA hard disk slot, for F14 and compatible SBCs, 8HP, 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

SA-Adapters

- 08SA01-00** RS232, not optically isolated, 0..+60°C
- 08SA02-07** RS422/485, full duplex, optically isolated, -40..+85°C screened
- 08SA03-00** RS232, optically isolated, 0..+60°C
- 08SA03-01** RS232, optically isolated, -40..+85°C screened
- 08SA13-00** PS/2 for keyboard/mouse, -40..+85°C with qualified components

Miscellaneous

- 05F601-00** Kit (cable only) for connection of 1 SA-Adapter™ to F601-02, SA-Adapters™ to be ordered separately
- 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

- 20F601-00** F601 User Manual
- 20F601-ER** F601 Errata

For the most up-to-date ordering information and direct links to other data sheets and downloads, see the F601 online data sheet under » www.men.de.

Contact Information

Germany

MEN Mikro Elektronik GmbH
 Neuwieder Straße 5-7
 90411 Nuremberg
 Phone +49-911-99 33 5-0
 Fax +49-911-99 33 5-901
 E-mail info@men.de
www.men.de

France

MEN Mikro Elektronik SA
 18, rue René Cassin
 ZA de la Châtelaine
 74240 Gaillard
 Phone +33 (0) 450-955-312
 Fax +33 (0) 450-955-211
 E-mail info@men-france.fr
www.men-france.fr

USA

MEN Micro, Inc.
 24 North Main Street
 Ambler, PA 19002
 Phone (215) 542-9575
 Fax (215) 542-9577
 E-mail sales@menmicro.com
www.menmicro.com

Diamond Point International (Europe) Ltd

Suite 13, Ashford House, Beaufort Court
 Sir Thomas Longley Road, Rochester, Kent, ME2 4FA, UK
 Phone 01634 300900 - Fax 01634 722398 - Email sales@dpie.com – Web www.dpie.com www.dpieshop.com



www.dpie.com

The date of issue stated in this data sheet refers to the Technical Data only. Changes in ordering information given herein do not affect the date of issue.

All brand or product names are trademarks or registered trademarks of their respective holders.

Information in this document has been carefully checked and is believed to be accurate as of the date of publication; however, no responsibility is assumed for inaccuracies. MEN Mikro Elektronik accepts no liability for consequential or incidental damages arising from the use of its products and reserves the right to make changes on the products herein without notice to improve reliability, function or design. MEN Mikro Elektronik does not assume any liability arising out of the application or use of the products described in this document.

The products of MEN Mikro Elektronik are not suited for use in nuclear reactors and for application in medical appliances used for therapeutical purposes.

Application of MEN's products in such plants is only possible after the user has precisely specified the operation environment and after MEN Mikro Elektronik has consequently adapted and released the product.

Copyright © 2008 MEN Mikro Elektronik GmbH. All rights reserved.



mikro elektronik
 gmbh • nürnberg