

# F601 – 3U CompactPCI® Side Card for Multimedia

- 4/8 HP extension for 3U Intel® SBCs F14, F15, F17, F18, F19P, F21P
- 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. It can be used in combination with the F14 and [compatible CPU boards](#).

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

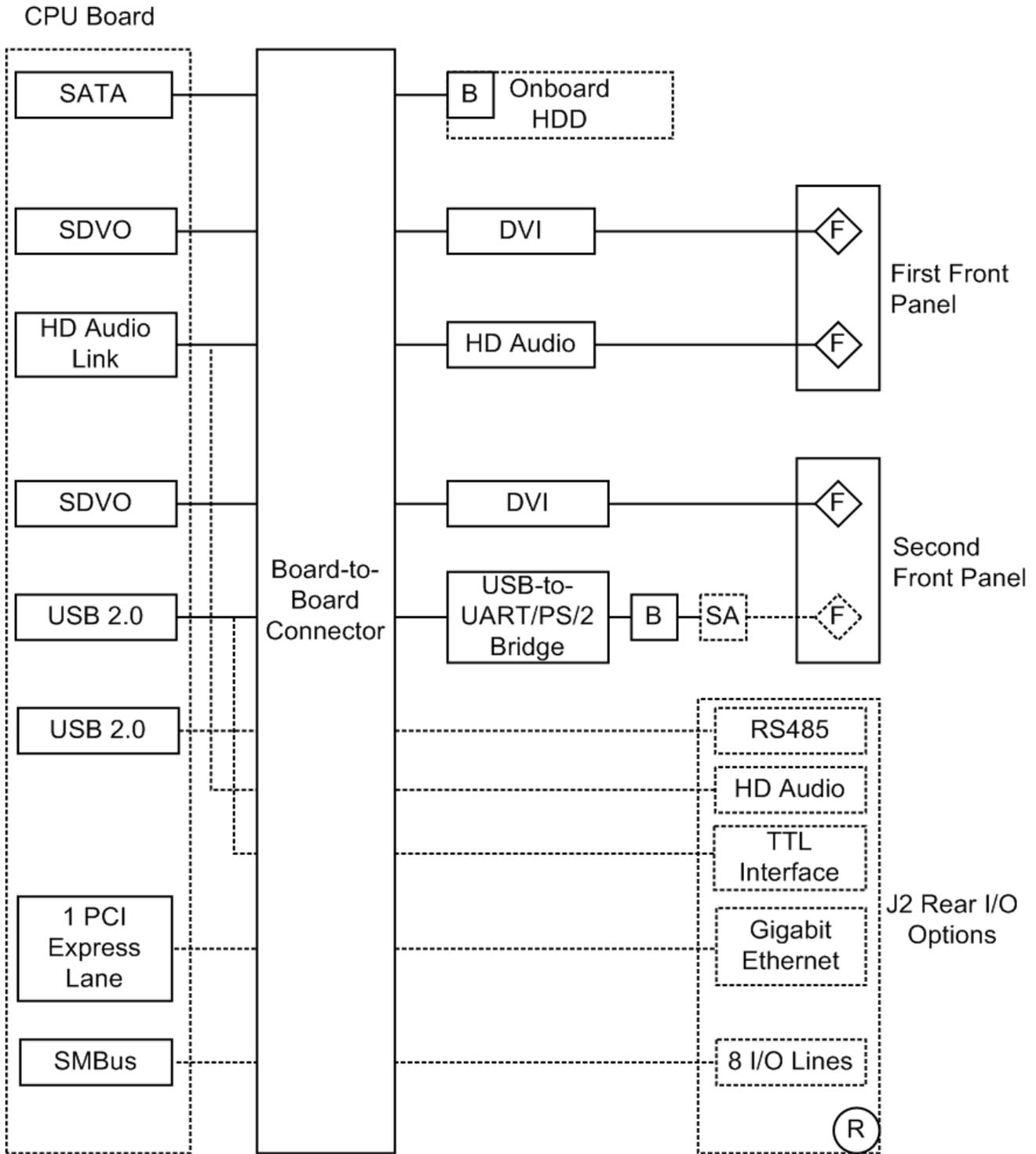
two monitors.

The audio interface supports the 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 onboard 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.

# Diagram



## Technical Data

<b>I/O</b>	<ul style="list-style-type: none"> <li>■ DVI <ul style="list-style-type: none"> <li>□ One (4HP) or two (8HP) DVI-D connectors at front panel</li> <li>□ SDVO PanelLink transmitter</li> <li>□ Maximum resolution: 1600 x 1200 pixels</li> <li>□ 60Hz refresh rate</li> <li>□ Dual monitor support</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 350mW mono amplifiers)</li> <li>□ Symmetric mono output (integrated 2W Class D mono amplifier)</li> </ul> </li> <li>■ RS232..422 UART (COM1) <ul style="list-style-type: none"> <li>□ One D-Sub connector at second front panel</li> <li>□ Via SA-Adapter™</li> <li>□ Data rates up to 115.2kbit/s</li> <li>□ Only full duplex operation for RS422</li> <li>□ Handshake lines: full support; lines depend on SA-Adapter™</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 and J2 are assembled for increased mechanical stability and/or for power supply via J1</li> <li>■ CompactPCI® J2 can optionally be used to realize several functions via rear I/O. See Options.</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%), 635mA typ. with hard disk, max. value depends on hard disk</li> <li>□ +3.3V (-3%/+5%), 500 mA typ.</li> </ul> </li> <li>■ MTBF: 1,069,323h @ 40°C (derived from MIL-HDBK-217F)</li> </ul>
<b>Mechanical Specifications</b>	<ul style="list-style-type: none"> <li>■ Dimensions: conforming to CompactPCI® specification for 3U boards</li> <li>■ Weight: 330g (with hard disk and 12HP front panel)</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>□ Industrial temperature range on request</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): 1g/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>
<b>Software Support</b>	<ul style="list-style-type: none"> <li>■ Driver software can be found in the data sheet of the CPU board that you use.</li> </ul>

## 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

<b>Mass storage</b>	<ul style="list-style-type: none"> <li>■ CompactFlash® interface instead of SATA hard disk                             <ul style="list-style-type: none"> <li>□ Via AD95 adapter</li> </ul> </li> </ul>
<b>Interfaces (Front)</b>	<ul style="list-style-type: none"> <li>■ 2 DVI, 1 audio, 1 COM</li> <li>■ 2 DVI, 1 audio, 1 PS/2</li> <li>■ PS/2 interface instead of COM (via SA-Adapter™ on second front panel)</li> <li>■ SA-Adapters™ to be ordered separately</li> </ul>
<b>Interfaces (Rear I/O)</b>	<ul style="list-style-type: none"> <li>■ 1 HD audio link (instead of audio at the front; without audio codec and amplifiers)</li> <li>■ 8 I/O lines controlled by SMBus from the CPU board</li> <li>■ 1 serial TTL interface (full handshake support, instead of UART at the front)</li> <li>■ 1 RS485 interface (differential half-duplex)</li> <li>■ 1 Gigabit Ethernet</li> </ul>
<b>Operation Temperature</b>	<ul style="list-style-type: none"> <li>■ 0..+60°C</li> <li>■ -40..+85°C</li> </ul>

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 F601 Models</b>	<b>02F601-00</b>	1 DVI-D and 1 audio at front, SATA hard disk slot, for F14 and compatible SBCs, 4HP, 0..+60°C
	<b>02F601-02</b>	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
<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>SA-Adapters™</b>	You can find a more detailed overview of possible carrier board/SA-Adapter™ combinations along with software support in our <a href="#">option matrix (PDF)</a> .	
	<b>08SA01-00</b>	RS232, not optically isolated, 0..+60°C
	<b>08SA02-07</b>	RS422/485, full duplex, optically isolated, -40..+85°C screened
	<b>08SA03-00</b>	1 RS232, optically isolated, 0..+60°C
	<b>08SA03-01</b>	1 RS232, optically isolated, -40..+85°C screened
<b>Miscellaneous Accessories</b>	<b>05F601-00</b>	Kit (cable only) for connection of 1 SA-Adapter™ to F601-02, SA-Adapters™ to be ordered separately
	<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>20F601-ER</b>	F601 Errata
	<b>20F601-00</b>	F601 User Manual

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