

F602 – 3U CompactPCI® Express Side Card

- 4 HP extension for 3U Intel® SBCs F14, F15, F17, F18
- 4 PCI Express® links x1 to backplane
- 1 COM via SA-Adapter
- 1 USB 2.0
- 1 DVI connection
- 2.5" SATA hard-disk slot



The F602 is a 4HP CompactPCI® Express extension card for 3U Intel®-based CompactPCI® single-board computers. It can be used in combination with the F14, F15, F17 and F18 CPU boards. That way, these CPU boards can be used both as system-slot cards in a CompactPCI® environment and as system-slot cards on a CompactPCI® Express backplane.

The F602 supports 4 PCI Express® links with 1 lane each to the backplane via its XJ2 and XJ3 connectors. In a standard 8-slot hybrid backplane from Schroff® the CompactPCI® Express single-board computer sits in the middle, with the possibility to plug another three

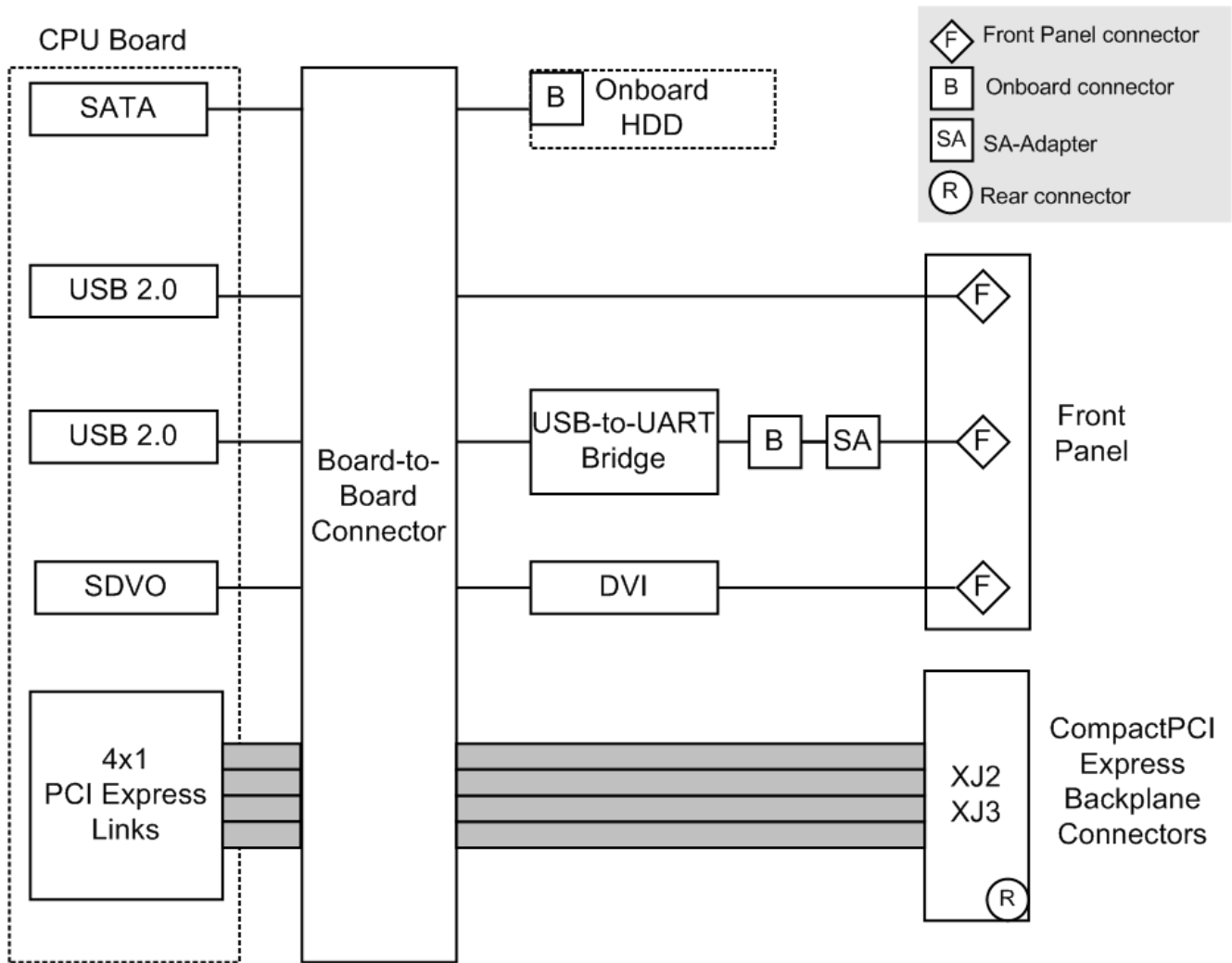
legacy CompactPCI® cards to the left and three CompactPCI® Express cards to the right.

In addition to the CompactPCI® Express functionality the F602 provides one USB 2.0, one COM (RS232, RS422/485, with or without optical isolation via SA-Adapter) and one DVI port at its front panel.

On top of that an onboard 2.5" SATA hard-disk slot is available on the F602.

The F602 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

CompactPCI® Express	<ul style="list-style-type: none"> ■ Compliance with CompactPCI® Express PICMG EXP.0 R1.0 Specification ■ CompactPCI® Express connector XP1 for power supply ■ CompactPCI® Express connectors XJ2 and XJ3 for 4 CompactPCI® Express links with 1 lane each <ul style="list-style-type: none"> □ CPU board F14 only supports 2 or 3 CompactPCI® Express links with 1 lane each ■ CompactPCI® Express connector XJ4 for control signals and ground
I/O	<ul style="list-style-type: none"> ■ DVI <ul style="list-style-type: none"> □ One DVI-D connector at front panel □ SDVO PanelLink transmitter □ Maximum resolution: 1600 x 1200 pixels □ 60Hz refresh rate □ Dual monitor support ■ USB <ul style="list-style-type: none"> □ One USB 2.0 port □ Series A connector at front panel □ UHCI implementation □ Data rates up to 480Mbit/s □ High current up to 1A ■ UART <ul style="list-style-type: none"> □ One 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 1 Mbit/s □ FIFO receive and transmit buffers for high data throughput □ Handshake lines: full support; lines depend on SA-Adapters
Mass Storage	<ul style="list-style-type: none"> ■ Serial ATA (SATA) <ul style="list-style-type: none"> □ One 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)
Electrical Specifications	<ul style="list-style-type: none"> ■ Supply voltage/power consumption: <ul style="list-style-type: none"> □ +5V (-3%/+5%), tbd typ. (w/o hard disk) □ +3.3V (-3%/+5%), tbd typ. (w/o hard disk) ■ MTBF: 1,861,103h @ 40°C according to IEC/TR 62380 (RDF 2000)
Mechanical Specifications	<ul style="list-style-type: none"> ■ Dimensions: conforming to CompactPCI® specification for 3U boards ■ Mountable on right side of the CPU ■ Weight: 150g (w/o hard disk)
Environmental Specifications	<ul style="list-style-type: none"> ■ Temperature range (operation): <ul style="list-style-type: none"> □ 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	<ul style="list-style-type: none"> ■ PCB manufactured with a flammability rating of 94V-0 by UL recognized manufacturers
EMC	<ul style="list-style-type: none"> ■ Tested according to EN 55022 (radio disturbance), IEC1000-4-2 (ESD) and IEC1000-4-4 (burst)
Software Support	<ul style="list-style-type: none"> ■ Driver software can be found in the data sheet of the CPU board that you use.

Configuration & Options

Standard Configurations

Article No.	PCI Express	Interfaces	Mass Storage	Position	Operation Temperature
02F602-00	4 links x1 to cPCIe backplane	1 COM, 1 USB 2.0, 1 DVI	SATA HD	right of CPU	0..+60°C

Options

Mass storage	<ul style="list-style-type: none"> ■ CompactFlash® interface instead of SATA hard disk <ul style="list-style-type: none"> □ Via AD95 adapter
Operation Temperature	<ul style="list-style-type: none"> ■ 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 F602 Models	02F602-00	3U CompactPCI® to CompactPCI® Express side card with 1 USB, 1 COM, 1 DVI, SATA hard disk slot, for F14 and compatible SBCs, 0..+60°C
Memory	0751-0028	CompactFlash® card, 2 GB, Type I, -40..+85°C, S.M.A.R.T. interface
	0751-0060	CompactFlash® card, 16 GB, -40..+85°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
	08SA02-07	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
Miscellaneous Accessories	0710-0038	HDD SATA 2.5", 100 GB, 1.5GB/s, 4200rpm, -10..+70°C
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)	
	20F602-00	F602 User Manual
20F602-ER	F602 Errata	

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