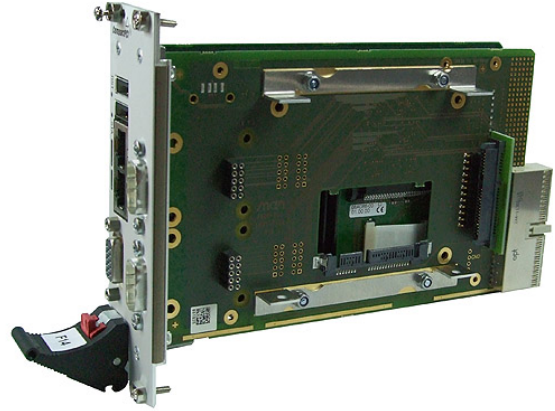# F600 – 3U CompactPCI® Side Card for SATA/ Legacy I/O

- **4 HP extension for 3U Intel® SBCs F14, F15, F17, F18, F19P, F21P**
- **1-4 COMs via SA-Adapters™**
- **Optical isolation depending on SA-Adapter™**
- **2.5" SATA hard-disk slot**
- **Additional SATA port for external device**
- **-40 to +85°C screened**

The F600 is a 4HP legacy I/O extension card for 3U Intel® based CompactPCI® single-board computers. It can be used in combination with the F14 and compatible CPU boards.
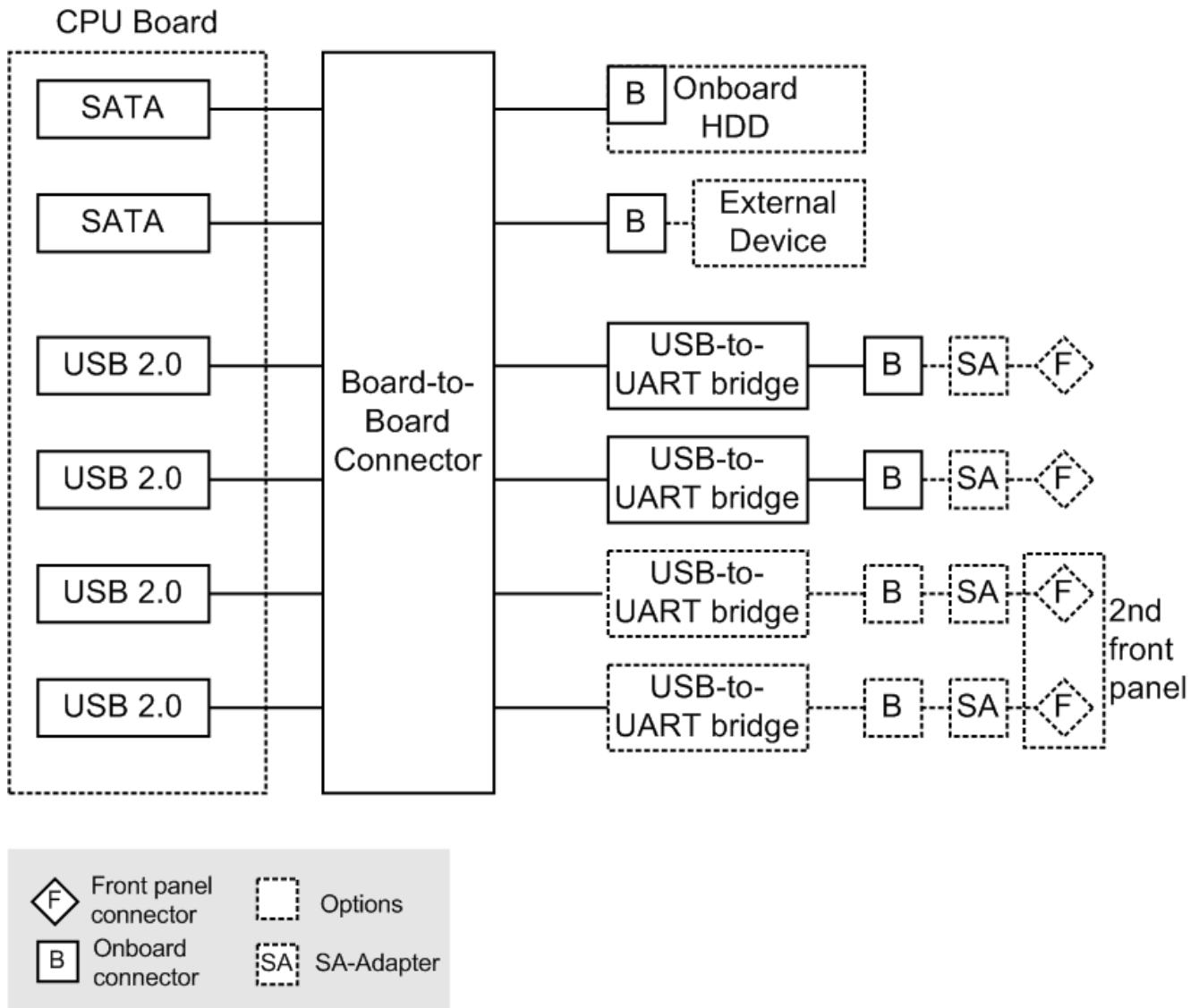Modern Intel® based boards increasingly support USB interfaces as an exclusive universal connection of devices such as keyboard, mouse, CD-ROM, floppy etc. Especially in industrial applications however many existing systems still use COM interfaces.
The F600 provides SA-Adapter™ slots for up to four additional COMs, two at the front panel and two on board. Since SA-Adapters™ provide the physical layers, the F600 can be configured flexibly with a combination of RS232, RS422 or RS485 interfaces, alternatively isolated or not isolated. In addition an onboard 2.5" SATA hard-disk slot can be used on the standard version of the F600, which comes with two COM interfaces.
The F600 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

Diagram legend

- F — Front panel connector
- B — Onboard connector
- Options
- SA — SA-Adapter

Technical Data

I/O	■ Up to four UARTs
	   □ From four CPU-controlled USB channels
	   □ Two at front panel
	   □ Two on board, instead of onboard SATA device, on request
	   □ Physical interface using SA-Adapters™ via 10-pin connectors
	   □ RS232..RS422, isolated or not: for free use in system (e. g. cable to front)
	   □ 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	■ Serial ATA (SATA)
	   □ One port for onboard 2.5" hard-disk drive
	   □ One port for external device (e.g. SATA DVD 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

Electrical Specifications	■ Supply voltage/power consumption:
	   □ +5V (-3%/+5%), 21mA typ. (with two SA1 SA-Adapters™, w/o hard disk)
	   □ +3.3V (-3%/+5%), 50mA typ. (with two SA1 SA-Adapters™, w/o hard disk)
	■ MTBF: 1,663,000h @ 40°C (derived from MIL-HDBK-217F)

Mechanical Specifications	■ Dimensions: conforming to CompactPCI® specification for 3U boards ■ Weight: 145g (w/o hard disk)

Environmental Specifications	■ Temperature range (operation):
	   □ -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 can be found in the data sheet of the CPU board that you use.

Configuration & Options

Standard Configurations

Article No.	Interfaces	SA-Adapters	Mass Storage	Position	Operation Temperature
02F600-00	2 COMs	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
UARTs	■ Two additional UARTs instead of onboard SATA hard disk ■ 1 to 4 COMs possible

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 F600 Models	02F600-00	2 COM extensions and SATA hard disk slot, for F14 and compatible SBCs, -40..+85°C screened
Memory	0751-0028	CompactFlash® card, 2 GB, Type I, -40..+85°C, S.M.A.R.T. interface
	0751-0058	CompactFlash® card, 16 GB, Type I, fixed bit set, -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
	08SA02-01	RS422/485, full duplex, 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
	08SA22-00	IBIS master SA-Adapter™, -40..+85°C screened
	08SA22-01	IBIS slave SA-Adapter™, -40..+85°C screened
	08SA25-00	GPS receiver, isolated, -40..+85°C screened
	08SA26-00	RS422 with 15-pin D-Sub connector, with handshake signals (RTS, CTS, DCD, DTR), coated, -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
	20F600-00	F600 User Manual

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