# F603 – 3U CompactPCI® Side Card USB/COM

- 4 HP extension for 3U Intel® SBCs F14, F15,
   F17, F18, F19P, F21P
- 1 RS232
- 2 USB 2.0
- 2.5" SATA hard-disk slot
- CompactFlash® slot



The F603 is a 4HP mixed USB/COM extension card for 3U Intel® based CompactPCI® single-board computers. It can be used in combination with the F14 and compatible CPU boards.

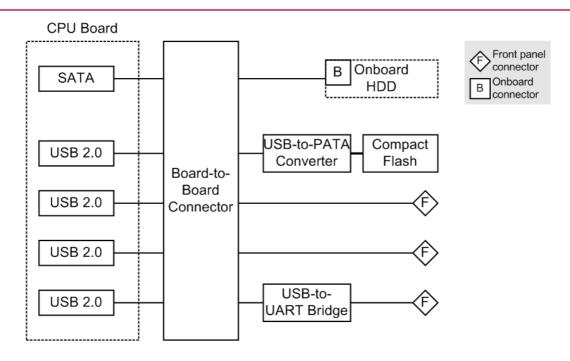
Modern Intel® based boards increasingly support USB interfaces as an exclusive universal connection of devices such as keyboard, mouse, CD-ROM, floppy etc. Especially in industrial applications however many existing systems still use legacy I/O.

Thus, the F603 provides one COM interface as well as two more USB 2.0 interfaces that extend the Single-Board Computer functionality to 4 USB ports at the front panel.

In addition an onboard 2.5" SATA hard-disk slot and a CompactFlash® slot is available on the F603.

The F603 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**

I/O	<ul> <li>USB</li> <li>Two USB 2.0 ports</li> <li>Series A connector at front panel</li> <li>UHCI implementation</li> <li>Data rates up to 480Mbit/s</li> <li>High current up to 1A</li> <li>UART</li> <li>One RS232 at front panel</li> <li>Data rates 300bit/s230kbit/s (up to 1 Mbit/s with shielded cable)</li> <li>FIFO receive and transmit buffers for high data throughput</li> <li>Handshake lines: full support</li> </ul>	
Mass Storage	<ul> <li>Serial ATA (SATA)</li> <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> <li>CompactFlash® card interface</li> <li>Via USB to PATA converter</li> <li>Type I</li> <li>True IDE mode</li> <li>Multiword DMA 2 and UDMA 4 support</li> <li>Please note that operating systems which cannot boot from removable data carriers (e.g. Windows® XP) cannot boot from the CompactFlash® over USB</li> </ul>	
Miscellaneous	■ CompactPCI® J1 is assembled for increased mechanical stability and/or for power supply	
Electrical Specifications	<ul> <li>Supply voltage/power consumption:</li> <li>+5V (-3%/+5%), 50mA typ. (w/o hard disk)</li> <li>+3.3V (-3%/+5%), 95mA typ. (w/o hard disk)</li> <li>MTBF: tbdh @ 40°C according to IEC/TR 62380 (RDF 2000)</li> </ul>	
Mechanical Specifications	<ul> <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: 130g (w/o hard disk and CompactFlash®)</li> </ul>	
Environmental Specifications	<ul> <li>Temperature range (operation):         <ul> <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/10150Hz</li> <li>Conformal coating on request</li> </ul>	
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	Mass Storage	Position	<b>Operation Temperature</b>
02F603-00	1 COM, 2 USB 2.0	SATA HD and CompactFlash	right of CPU	0+60°C

#### **Options**

Mass storage	<ul> <li>Second CompactFlash® interface instead of SATA hard disk</li> <li>Via AD95 adapter</li> </ul>		
Mechanical	<ul> <li>Mounting of side card on left side of the CPU</li> </ul>		
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 F603 Models	02F603-00	3U CompactPCI® side card with 2 USB and 1 COM extension, SATA hard disk and CompactFlash® slot, for F14 and compatible SBCs, mounted to the right of the SBC, 0+60°C		
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		
Miscellaneous Accessories	0710-0038	HDD SATA 2.5", 100 GB, 1.5GB/s, 4200rpm, -10°+70°C		
Documentation	Compare Chart 3	Compare Chart 3U CompactPCI® / PlusIO CPU cards » Download		
	Compare Chart 3U CompactPCI® / PlusIO peripheral cards » Download			
	Compare Chart 3U CompactPCI® / PlusIO extension cards » Download			
	20F603-00	F603 User Manual		

#### **Contact Information**

Germany

MEN Mikro Elektronik GmbH Neuwieder Straße 3-7 90411 Nuremberg Phone +49-911-99 33 5-0 Fax +49-911-99 33 5-901

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

info@men-france.fr www.men-france.fr USA

MEN Micro Inc. 860 Penllyn Blue Bell Pike Blue Bell, PA 19422 Phone (215) 542-9575 Fax (215) 542-9577

sales@menmicro.com www.menmicro.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.

MEN is not responsible for the results of any actions taken on the basis of information in the publication, nor for any error in or omission from the publication.

MEN expressly disclaims all and any liability and responsibility to any person, whether a reader of the publication or not, in respect of anything, and of the consequences of anything, done or omitted to be done by any such person in reliance, whether wholly or partially, on the whole or any part of the contents of the publication.

The correct function of MEN products in mission-critical and life-critical applications is limited to the environmental specification given for each product in the technical user manual. The correct function of MEN products under extended environmental conditions is limited to the individual requirement specification and subsequent validation documents for each product for the applicable use case and has to be agreed upon in writing by MEN and the customer. Should the customer purchase or use MEN products for any unintended or unauthorized application, the customer shall indemnify and hold MEN and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim or personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that MEN was negligent regarding the design or manufacture of the part.

In no case is MEN liable for the correct function of the technical installation where MEN products are a part of.

Copyright © 2013 MEN Mikro Elektronik GmbH. All rights reserved.