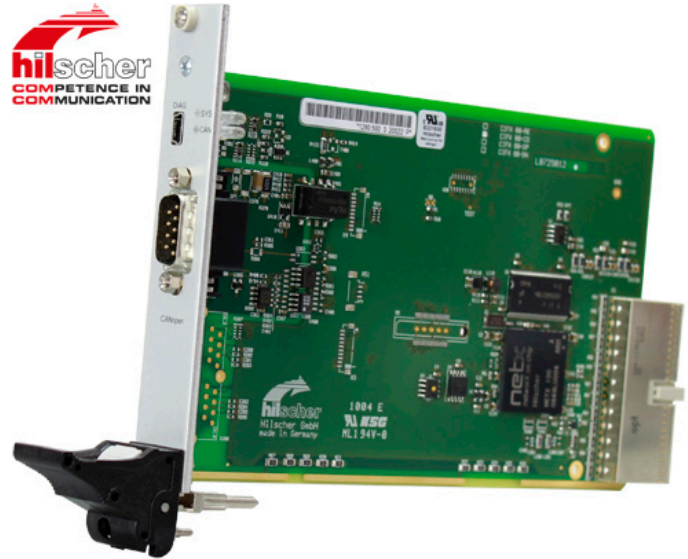# F750 – 3U CompactPCI® CANopen Interface Board

- **4HP 32-bit/33-MHz CompactPCI®**
- **Full CAN/Extended CAN according to ISO-11898**
- **CANopen master and slave by loadable firmware**
- **Based on netX universal network controller**
- **Optical isolation with 1000 VDC isolation voltage**
- **Driver support for all common operating systems**
- **-20 to +70°C screened**

The F750 is a single Eurocard CompactPCI® CANopen controller; that needs only one slot on the CompactPCI® bus.

It features one CAN bus interface supporting ISO high-speed up to 1 Mbit/s. The physical interface is isolated from the system.
Master or Slave protocol configuration can easily be done by loadable firmware. The complete protocol stack is executed on the F750, and data exchange to the host is done via Dual-Port-Memory or DMA.
The F750 is based on the netX SOC. This highly integrated network controller supports parallel data
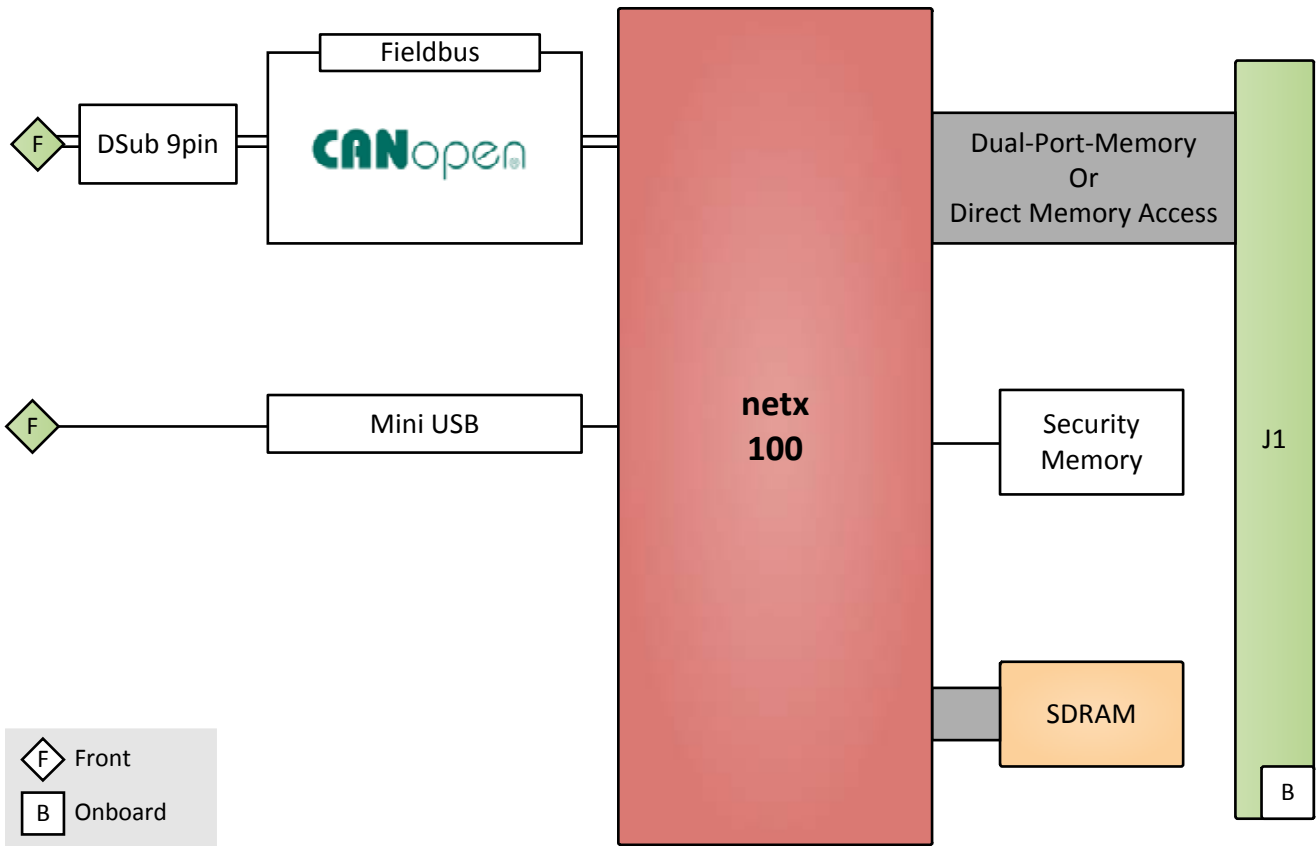
transmission via several data paths between the internal CPU and graphics engines, and the communication and host controllers. The netX SOC also controls the on-board memory and other peripheral interfaces such as UARTS, USB, SPI or I²C.
Communication works via a dual-port SRAM interface and is supported by window and pointer access mechanism. Interrupts are available in both directions from F750 to host and from host to F750.
The F750 supports a wide range of operating systems including Windows®, Windows® CE, Linux and VxWorks®.
The F750 has been designed for mission-critical industrial and for mobile applications with demand for high resistance regarding temperature, shock and vibration.

Diagram

Fieldbus

DSub 9pin

F

CANopen

Mini USB

F

netx
100

Dual-Port-Memory
Or
Direct Memory Access

Security
Memory

SDRAM

J1

B

F Front

B Onboard

Technical Data

CANopen	■ Supported communication determined by firmware: □ CANopen Master □ CANopen Slave ■ CANopen Interface □ Type ISO-11898 □ Optically isolated □ 9-pin D-Sub receptacle connector
Communication Controller	■ Hilscher netX 100 SOC
Integrated Memory	■ 8 MB SDRAM ■ 4 MB serial Flash EPROM ■ 64 KB Dual-Port Memory (DPM)
Diagnostic Interface	■ Mini B USB plug (5-pin)
LED Display	■ System status LED ■ CANopen status (duo LED)
CompactPCI® Bus	■ Compliant with PICMG 2.0 R2.1 ■ 32-bit/33-MHz bridge ■ DPM or DMA data access
Electrical Specifications	■ Supply voltage/maximum current □ +3.3 V DC ±5% / 650 mA ■ Connected via CompactPCI® Bus
Mechanical Specifications	■ Dimensions (L x W x H): 162.2 x 100 x 20 mm ■ CompactPCI® slot (3.3 V) ■ Weight: 134 g
Environmental Conditions	■ Temperature range (operation): -20..+70°C ■ Temperature range (storage): -10..+70°C ■ Relative humidity: max. 95% non-condensing
CE Conformity	■ EN 55011:2009 + A1:2010, CISPR 11:2009, Class A (radio disturbance) ■ EN 61000-4-2:2009 (electrostatic discharge) ■ EN 61000-4-3:2006 + A1:2008 + A2:2010 (radiated, radio-frequency, electromagnetic field immunity) ■ EN 61000-4-4:2004 + A1:2010 (burst electrical fast transients/burst) ■ EN 61000-4-5:2006 (surge) ■ EN 61000-4-6:2009 (to conducted disturbances, induced by radio- frequency fields) ■ EN 61000-4-8:2010 (power frequency magnetic field) ■ EN 61000-6-2:2005 + B1:2011 (for industrial environments)
Certification	■ The device is certified according to UL 508 □ UL-File-Nr. E221530
Operating Systems	■ Windows® ■ Windows® CE ■ Linux ■ VxWorks® ■ QNX®
Software and Drivers	■ Configuration software master and slave: □ SYCON.net ■ Configuration Software Slave: □ netX Configuration Tool ■ For more information regarding drivers and firmware, please visit: □ CompactPCI® Communication Interface for CANopen master □ CompactPCI® Communication Interface for CANopen slave
Support and Downloads	■ For more information on supported operating system versions and drivers see Downloads.

Ordering Information

Standard F750 Models	**02F750**-00	1 CANopen Slave interface, -20..+70°C screened
	02F750-01	1 CANopen Master interface, -20..+70°C screened
Related Hardware	This board can only be ordered together with one of the complete systems available from MEN.	
Software: Linux	This product is designed to work under Linux. See below for all available separate software packages.	
	13F750-90	Linux driver (Hilscher netX) for CANopen, PROFIBUS, DeviceNET, EtherNET/IP, EtherCat, PROFINET, OpenModBus, Sercos, Varan for F750, F751, F752, F753, PX50, PX51, PX52 and PX53.
Software: Windows®	This product is designed to work under Windows®. See below for all available separate software packages.	
	Windows® and Windows® CE software for Hilscher boards, as well as firmware and additional documentation can be downloaded directly from the following links: Hilscher Software and Hilscher Support and Downloads	
Software: VxWorks®	This product is designed to work under VxWorks®. For details regarding supported/unsupported board functions please refer to the corresponding software data sheets.	
	13F750-60	VxWorks® 5.4 / 6.2 driver (Hilscher netX) for CANopen, PROFIBUS, DeviceNET, EtherNET/IP, EtherCat, PROFINET, OpenModBus, Sercos, Varan for F750, F751, F752, F753, PX50, PX51, PX52 and PX53.
Software: QNX®	This product is designed to work under QNX®. For details regarding supported/unsupported board functions please refer to the corresponding software data sheets.	
	13F750-40	QNX® 6.4/6.5 driver (Hilscher netX) for CANopen, PROFIBUS, DeviceNET, EtherNET/IP, EtherCat, PROFINET, OpenModBus, Sercos, Varan for F750, F751, F752, F753, PX50, PX51, PX52 and PX53.
Software: Miscellaneous	A large range of corresponding driver software, software updates, firmware and firmware updates, as well as additional technical documentation is available at www.hilscher.com.	

For operating systems not mentioned here contact MEN sales.

Documentation	Compare Chart 3U CompactPCI® / PlusIO peripheral cards » Download	
	20F750-00	User Manual for Hilscher cards F750, F751, F752, F753 as well as PX50, PX51, PX52 and PX53

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