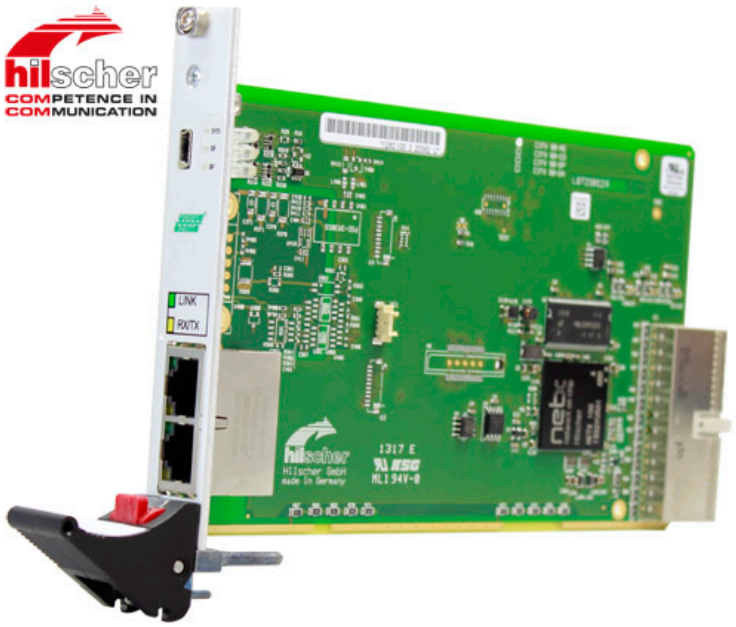
F752 – 3U CompactPCI® Real-Time Ethernet Interface Board

- **4HP 32-bit/33-MHz CompactPCI®**
- **Up to 100 MBit/s real-time Ethernet depending on loaded firmware for**
- **PROFINET (Controller & Device)**
- **EtherCAT (Master & Slave)**
- **Ethernet PowerLink (Controlled Node)**
- **EtherNet/IP (Scanner & Adapter)**
- **OpenModbus (Server & Client)**
- **Sercos (Master & Slave)**
- **VARAN (Client)**
- **Based on netX universal network controller**
- **Optical isolation with 1000 VDC isolation voltage**
- **Driver support for all common operating systems**
- **0 to +70°C screened**

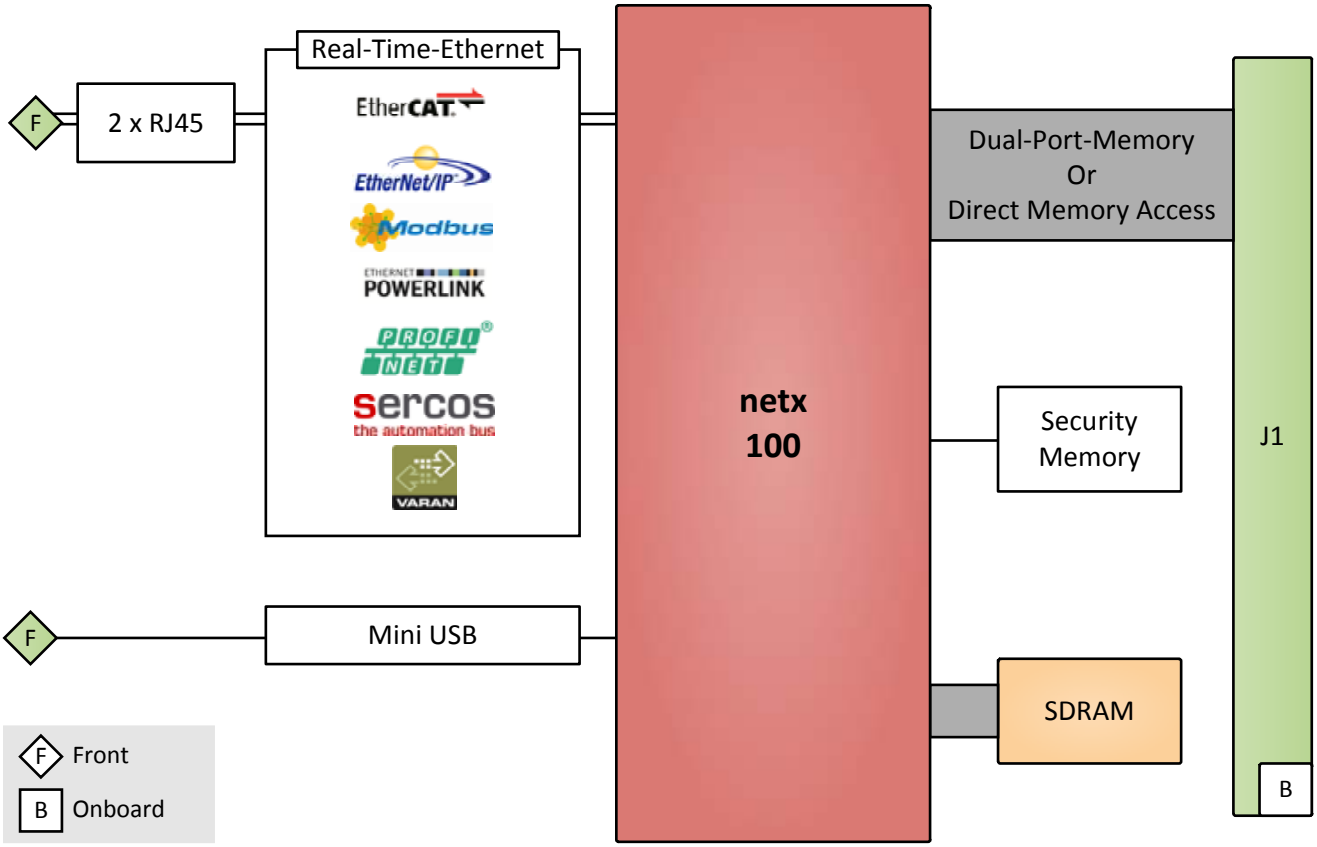


The F752 is a single Eurocard CompactPCI® Ethernet controller; that needs only one slot on the CompactPCI® bus.

It supports leading high-performance Real-Time Ethernet protocol standards, with transmission speeds of up to 100MBit/s. Protocol configuration for PROFINET, EtherCAT, Ethernet PowerLink, EtherNet/IP, OpenModbus, sercos and VARAN is done by loadable firmware. The respective physical interfaces are isolated from the system.
The complete protocol stack is executed on the F752, and data exchange to the host is done via Dual-Port-Memory or DMA.

The F752 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 F752 to host and from host to F752.
The F752 supports a wide range of operating systems including Windows®, Windows® CE, Linux and VxWorks®.
The F752 has been designed for mission-critical industrial and for mobile applications with demand for high resistance regarding temperature, shock and vibration

Diagram


Real-Time-Ethernet
F
2 x RJ45
EtherCAT
EtherNet/IP
Modbus
POWERLINK
PROFINET
sercos
the automation bus
VARAN
netx
100
Dual-Port-Memory
Or
Direct Memory Access
Security
Memory
SDRAM
J1
B
F
Mini USB
F Front
B Onboard

Technical Data

Ethernet	■ Supported communication determined by firmware: □ EtherCAT Master, EtherCAT Slave □ EtherNet/IP Scanner (Master), EtherNet/IP Adapter (Slave) □ Open Modbus/TCP □ POWERLINK Controlled Node/Slave □ PROFINET IO-Controller (Master), PROFINET IO-Device (Slave) □ sercos Master, sercos Slave □ VARAN Client (Slave) ■ Ethernet frame type II ■ Interface □ Transmission Rate: 100 MBit/s, 10 MBit/s (depending on loaded firmware) □ Type: 100 BASE-TX, 10 BASE-T (depending on loaded firmware) □ Isolated □ RJ45 Socket
Communication Controller	■ Hilscher netX 100 SOC
Integrated Memory	■ 8MB SDRAM ■ 4 MB serial Flash EPROM ■ 64 KByte Dual-Port Memory (DPM)
Diagnostic Interface	■ Mini B USB plug (5 pin)
LED Display	■ System status LED ■ LED Communication 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 □ +3,3V dc ±5% / 650mA ■ Connected via CompactPCI® Bus
Mechanical Specifications	■ Dimensions (L x W x H): 162,2 x 100 x 20 mm ■ Compact PCI slot (3.3 V) ■ Weight: 136 g
Environmental Conditions	■ Operating temperature range □ 0..+70°C ■ Storage temperature range □ 0..+70°C ■ Humidity □ Max. 95% relative humidity 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

Technical Data

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 software, please visit: □ CompactPCI® Ethernet Communication Interface
Support and Downloads	■ For more information on supported operating system versions and drivers see Downloads.

Ordering Information

Standard F752 Models	**02F752-00**	1 Real-Time-Ethernet Slave interface, supports Ethercat, Modbus, Powerlink, Profinet, Sercos, Varan, 0..+70°C screened
	02F752-01	1 Real-Time-Ethernet Master interface, supports Ethercat, Modbus, Powerlink, Profinet, Sercos, Varan, 0..+70°C screened
Related Hardware	This board can only be ordered together with the MEN MH70I complete system. For more information please go to: MH70I - Rugged 19" Modular Industrial PC.	
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	F750/F751/F752 and F753 User Manual

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