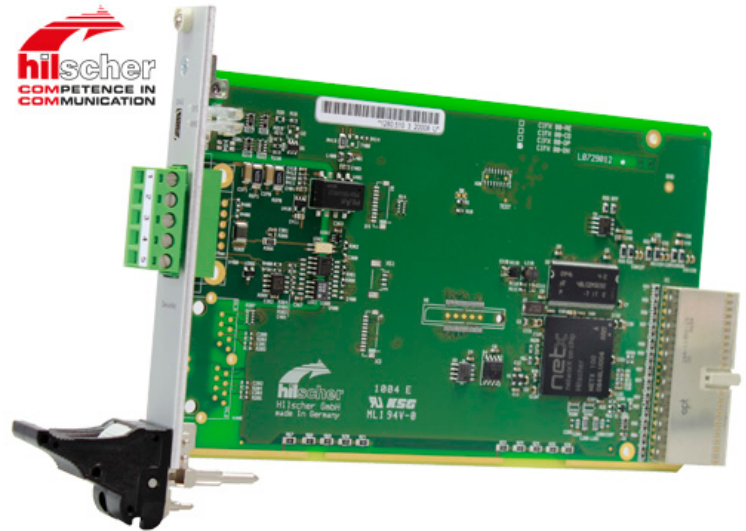


# F751 – 3U CompactPCI® DeviceNet Interface Board

- **4HP 32-bit/33-MHz CompactPCI®**
- **DeviceNet interface according to ISO-11898**
- **DeviceNet 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 F751 is a single Eurocard CompactPCI® DeviceNet controller; that only requires one slot on the CompactPCI® bus.

It features a DeviceNet interface supporting an ISO high-speed of up to 500 kBit/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 F751, and data exchange to the host is done via Dual-Port-Memory or DMA.

The F751 is based on the netX SOC. This highly integrated network controller supports parallel data

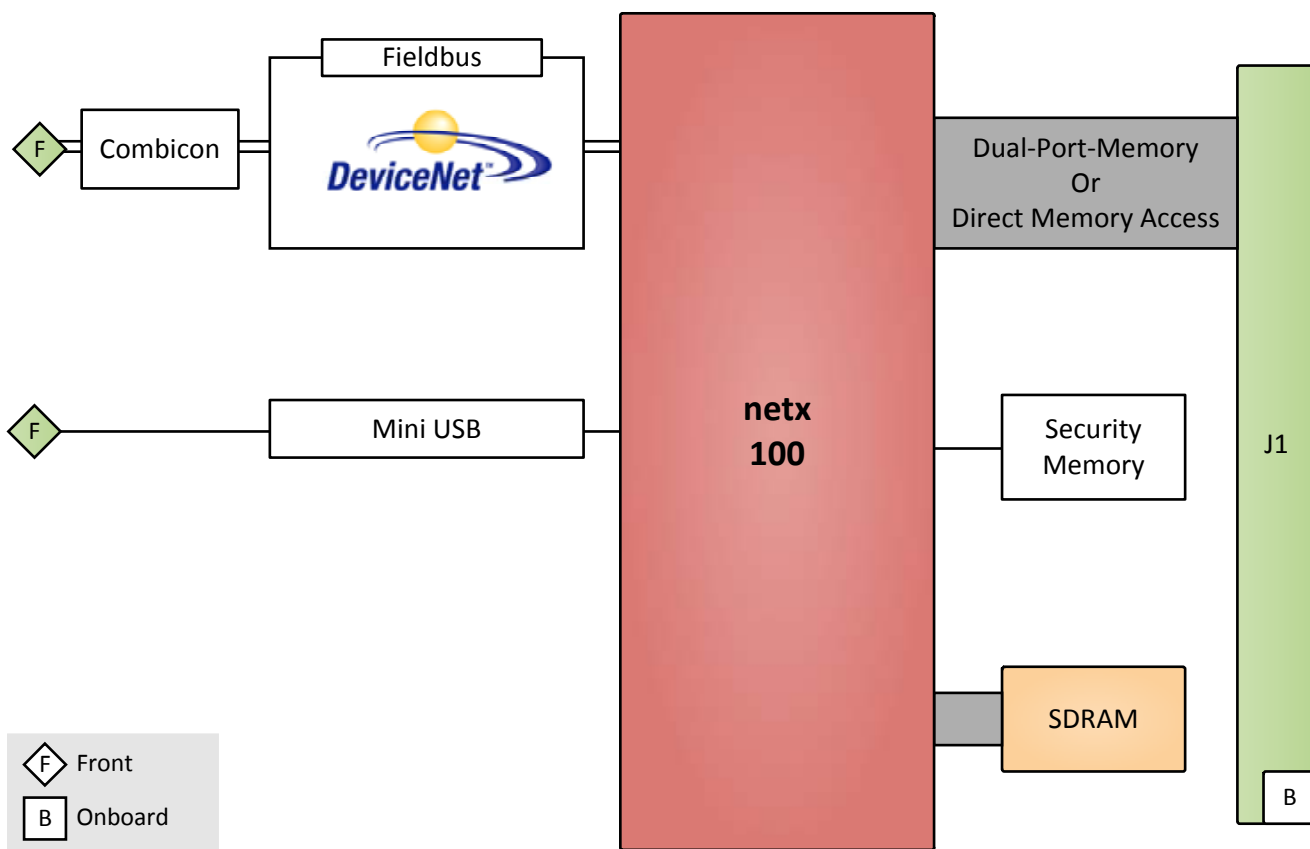
transmission via several data paths between the internal CPU and graphics engines, and the communication and host controllers. The netX SOC also controls the on-board memory and other peripheral interfaces such as UARTS, USB, SPI or I<sup>2</sup>C.

Communication works via a dual-port SRAM interface and is supported by window and pointer access mechanism. Interrupts are available in both directions from F751 to host and from host to F751.

The F751 supports a wide range of operating systems including Windows®, Windows® CE, Linux and VxWorks®.

The F751 has been designed for mission-critical industrial and for mobile applications with demand for high resistance regarding temperature, shock and vibration.

# Diagram



## Technical Data

<b>DeviceNet</b>	<ul style="list-style-type: none"> <li>■ Supported communication determined by firmware: <ul style="list-style-type: none"> <li>□ DeviceNet Master</li> <li>□ DeviceNet Slave</li> </ul> </li> <li>■ DeviceNet Interface <ul style="list-style-type: none"> <li>□ Type ISO-11898</li> <li>□ Optically isolated</li> <li>□ CombiCon male connector, 5 pin</li> </ul> </li> </ul>
<b>Communication Controller</b>	<ul style="list-style-type: none"> <li>■ Hilscher netX 100 SOC</li> </ul>
<b>Integrated Memory</b>	<ul style="list-style-type: none"> <li>■ 8 MB SDRAM</li> <li>■ 4 MB serial Flash EPROM</li> <li>■ 64 KB Dual-Port Memory (DPM)</li> </ul>
<b>Diagnostic Interface</b>	<ul style="list-style-type: none"> <li>■ Mini B USB plug (5-pin)</li> </ul>
<b>LED Display</b>	<ul style="list-style-type: none"> <li>■ System Status LED</li> <li>■ Module Network Status (duo LED)</li> </ul>
<b>CompactPCI® Bus</b>	<ul style="list-style-type: none"> <li>■ Compliant with PICMG 2.0 R2.1</li> <li>■ 32-bit/33-MHz bridge</li> <li>■ DPM or DMA data access</li> </ul>
<b>Electrical Specifications</b>	<ul style="list-style-type: none"> <li>■ Supply voltage/maximum current <ul style="list-style-type: none"> <li>□ +3.3 V DC ±5% / 650 mA</li> </ul> </li> <li>■ Connected via CompactPCI® Bus</li> </ul>
<b>Mechanical Specifications</b>	<ul style="list-style-type: none"> <li>■ Dimensions (L x W x H): 162.2 x 100 x 20 mm</li> <li>■ CompactPCI® slot (3.3 V)</li> <li>■ Weight: 134 g</li> </ul>
<b>Environmental Conditions</b>	<ul style="list-style-type: none"> <li>■ Temperature range (operation): -20..+70°C</li> <li>■ Temperature range (storage): -10..+70°C</li> <li>■ Relative humidity: max. 95% non-condensing</li> </ul>
<b>CE Conformity</b>	<ul style="list-style-type: none"> <li>■ EN 55011:2009 + A1:2010, CISPR 11:2009, Class A (radio disturbance)</li> <li>■ EN 61000-4-2:2009 (electrostatic discharge)</li> <li>■ EN 61000-4-3:2006 + A1:2008 + A2:2010 (radiated, radio-frequency, electromagnetic field immunity)</li> <li>■ EN 61000-4-4:2004 + A1:2010 (burst electrical fast transients/burst)</li> <li>■ EN 61000-4-5:2006 (surge)</li> <li>■ EN 61000-4-6:2009 (to conducted disturbances, induced by radio- frequency fields)</li> <li>■ EN 61000-4-8:2010 (power frequency magnetic field)</li> <li>■ EN 61000-6-2:2005 + B1:2011 (for industrial environments)</li> </ul>
<b>Certification</b>	<ul style="list-style-type: none"> <li>■ The device is certified according to UL 508 <ul style="list-style-type: none"> <li>□ UL-File-Nr. E221530</li> </ul> </li> </ul>
<b>Operating Systems</b>	<ul style="list-style-type: none"> <li>■ Windows®</li> <li>■ Windows® CE</li> <li>■ Linux</li> <li>■ VxWorks®</li> <li>■ QNX®</li> </ul>
<b>Software and Drivers</b>	<ul style="list-style-type: none"> <li>■ Configuration software master and slave: <ul style="list-style-type: none"> <li>□ SYCON.net</li> </ul> </li> <li>■ Configuration software slave: <ul style="list-style-type: none"> <li>□ <a href="#">netX Configuration Tool</a></li> </ul> </li> <li>■ For more information regarding drivers and software, please visit: <ul style="list-style-type: none"> <li>□ <a href="#">CompactPCI® Communication Interface for DeviceNet master</a></li> <li>□ <a href="#">CompactPCI® Communication Interface for DeviceNet slave</a></li> </ul> </li> </ul>
<b>Support and Downloads</b>	<ul style="list-style-type: none"> <li>■ <a href="#">For more information on supported operating system versions and drivers see Downloads.</a></li> </ul>

## Ordering Information

<b>Standard F751 Models</b>	<b>02F751-00</b>	1 DeviceNet Slave interface, -20..+70°C screened
	<b>02F751-01</b>	1 DeviceNet Master interface, -20..+70°C screened
<b>Related Hardware</b>	This board can only be ordered together with one of the complete systems available from MEN.	
<b>Software: Linux</b>	This product is designed to work under Linux. See below for all available separate software packages.	
	<b>13F750-90</b>	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.
<b>Software: Windows®</b>	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: <a href="#">Hilscher Software</a> and <a href="#">Hilscher Support and Downloads</a>	
<b>Software: VxWorks®</b>	This product is designed to work under VxWorks®. For details regarding supported/unsupported board functions please refer to the corresponding software data sheets.	
	<b>13F750-60</b>	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.
<b>Software: QNX®</b>	This product is designed to work under QNX®. For details regarding supported/unsupported board functions please refer to the corresponding software data sheets.	
	<b>13F750-40</b>	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.
<b>Software: Miscellaneous</b>	A large range of corresponding driver software, software updates, firmware and firmware updates, as well as additional technical documentation is available at <a href="http://www.hilscher.com">www.hilscher.com</a> .	
<b>For operating systems not mentioned here <a href="#">contact MEN sales</a>.</b>		
<b>Documentation</b>	Compare Chart 3U CompactPCI® / PlusIO peripheral cards » <a href="#">Download</a>	
	<b>20F750-00</b>	User Manual for Hilscher cards F750, F751, F752, F753 as well as PX50, PX51, PX52 and PX53

## Contact Information

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### 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 SAS  
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

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