

More Precision



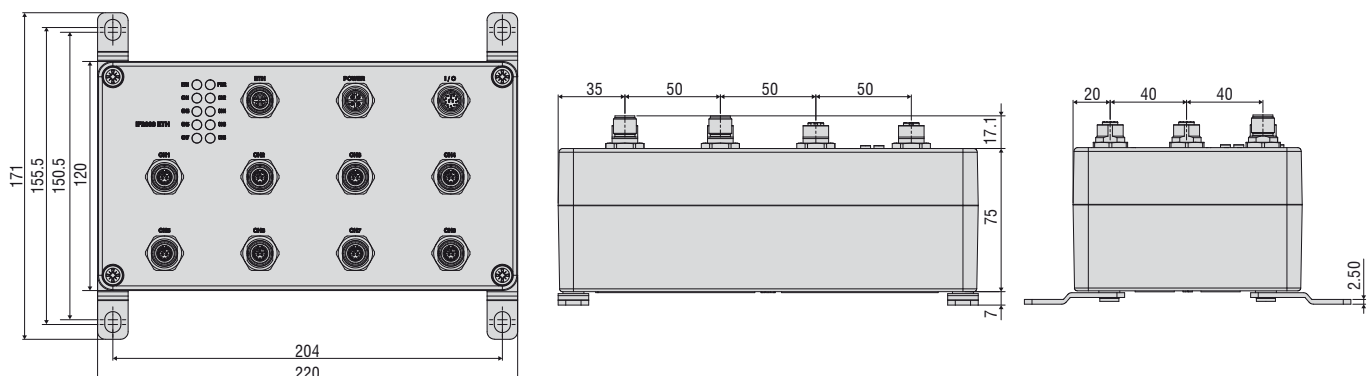
IF2008/ETH

Interface module for Ethernet connection of Micro-Epsilon products

- 8-channel system
- Compatible with Micro-Epsilon sensors with RS422 interface
- Encoder inputs
- LED status display



Model	IF2008/ETH	
Speed	Ethernet: 200 kHz data output	
Supply voltage	11 ... 30 VDC	
Power consumption	< 4 W with 24 VDC (without sensor)	
Signal input	RS422	
Digital interface	Ethernet	
Switching input/switching output	4x I/O (adjustable via software)	
Connection	Sensors/encoders: 8 x 12-pin socket; Ethernet: 4-pin socket; Supply: 5-pin socket; I/O: 12-pin socket	
Mounting	Screw connection via four mounting brackets	
Temperature range	Storage	+5 ... 50 °C
	Operation	+0 ... 50 °C
Humidity	5 % ... 95 % (non-condensing)	
Shock (DIN-EN 60028-2-27)	15 g, 6 ms in 3 axes	
Vibration (DIN-EN 60068-2-6)	2 g, 20 ... 500 Hz	
Protection class (DIN-EN 60529)	IP65 (when all plugs are connected)	
Compatibility	optoNCDT 1420, 1750, 1900, 2300	
	confocalDT 2451, 2461, 2471	
	optoCONTROL 2520, 2600	
Material	Die-cast aluminum	
Weight	1700 g	
Control and Display Elements	1 x LED for power status, 1 x LED for Ethernet status, 8 x LEDs for sensor/encoder status	



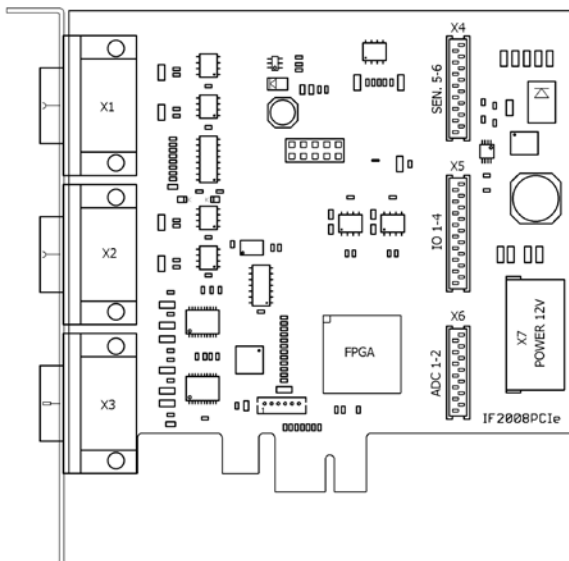
IF2008PCIe Interface Card

The IF2008 interface card is designed for installation in PCs with PCI Express slots and enables the synchronous capture of four digital sensor signals and two encoders. The absolutely synchronous data acquisition plays an important role particularly for planarity and thickness measurements. The data are stored in a FIFO memory in order to enable resource-saving processing in blocks in the PC.

Special advantages

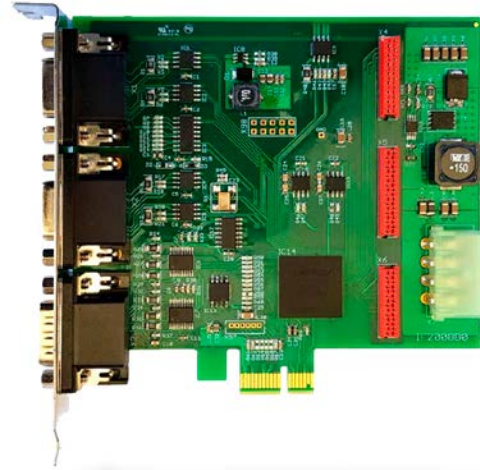
- 4x digital signals and 2x encoders with basic printed circuit board
- 6x digital signals, 2x encoders, 2x analog signals and 8x I/O signals together with IF2008E
- FIFO data memory
- Synchronous data acquisition

IF2008PCIe Basic printed circuit board



Mechanics and environment

- Dimensions (PCB) approx. 110 x 105 mm, width: 1 slot
- Max. permitted ambient temperature +40 °C
- 2x D-SUB female connectors HD 15-pin for sensor connections
- 1x D-SUB male connector HD 15-pin for encoder signals
- 1x Tyco/AMP Commercial MATE-N-LOK connector (IDE hard-drive connector) for supply of DC/DC converter
- 3x Tyco/AMP MicroMatch female connectors for connection to option board



PCI-Express bus

- PCI-Express x1 interface
- Target interface (slave) according to specification Revision 1.0
- Current consumption at +3.3 V approx. 0.5 A, without sensors and encoders
- Power supply of encoders with +5 V from the PCI power
- Power supply of the sensors with +24 V from the PC power supply

Sensor interface (X1 / X2)

- 4x RS422 drivers (2x TxD and 2x trigger out) and 2x RS422 receivers per connector (input/output frequency max. 5 MHz)
- Power supply of sensors with 24 V

Encoder interface (X3)

- Interface for two encoders with 1Vss, RS422 (difference) or TTL (single-ended) signals
- Power supply of the encoders with +5 V from PCI power supply without galvanic isolation (current consumption dependent on the connected encoders)
- Interpolation programmable from 1 to 64 times for encoders with 1Vss signals (input frequency max. = [3.2 MHz / interpolation] ≤ 800 kHz)
- Evaluation programmable from 1 to 4 times for encoders with:
 - RS422-/difference signals (input frequency max. = 800 kHz)
 - TTL-/single-ended signals (input frequency max. = 400 kHz)

IF2008 PCIe supports the following sensors and measuring systems

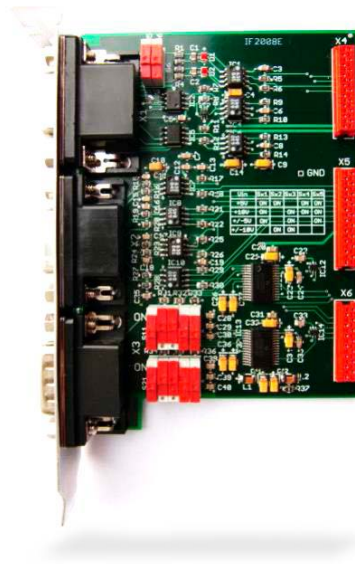
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|---------------|----------------------------|
| optoNCDT 1420 | optoNCDT ILR 118x/ILR 1191 |
| optoNCDT 1750 | optoCONTROL 2500 |
| optoNCDT 1710 | optoCONTROL 2520 |
| optoNCDT 2300 | optoCONTROL 2600 |
| optoNCDT 2310 | |

IF2008E Expansion Board

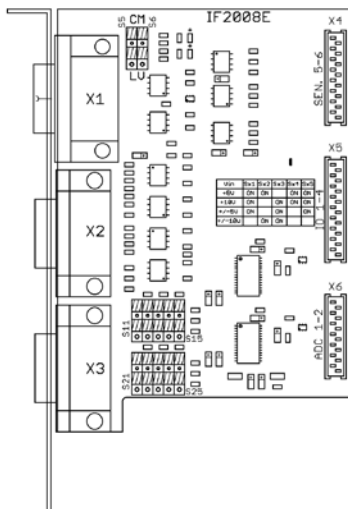
The IF2008E expansion board is designed for installation in PCs and enables the synchronous capture of two digital sensor signals, two analog sensor signals and eight I/O-Signals. The card is used as expansion board for the IF2008PCIe. The absolutely synchronous data acquisition is a special feature which plays an important role when evaluating several sensors.

Special advantages

- 4x digital signals and 2x encoders with basic printed circuit board
- 6x digital signals, 2x encoders, 2x analog signals and 8x I/O signals together with IF2008E
- FIFO data memory
- Synchronous data acquisition



IF2008E Expansion board



Mechanics and environment

- Dimensions (PCB) approx. 71 x 102 mm, width: 1 slot
- Max. permitted ambient temperature +40 °C
- 1x D-SUB female connector HD 15-pin for sensor connections
- 1x D-SUB female connector 9-pin for IO interface
- 1x D-SUB male connector 9-pin for analog inputs
- 3x MicroMatch female connectors for connection to basic printed circuit board

IO interface (X2)

- 4x optocoupler inputs, input current max. 5 mA, input frequency max. 1 MHz
- 4x optocoupler outputs, output current max. 20 mA, output frequency max. 1 MHz

Analog interface (X3)

- 2x ADC channels
- Input voltage range 0 - 5 V, 0 - 10 V, ± 5 V, ± 10 V, separately adjustable for each channel via DIP switch
- Resolution 16 bits
- Offset error max. ± 3 mV
- Gain error max. ± 5 mV
- Conversion rate max. 150 kHz per channel

IF2008E supports the following sensors and measuring systems

- | | |
|---------------|----------------------------|
| optoNCDT 1420 | optoNCDT ILR 118x/ILR 1191 |
| optoNCDT 1750 | optoCONTROL 2500 |
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| optoNCDT 2300 | optoCONTROL 2600 |
| optoNCDT 2310 | |