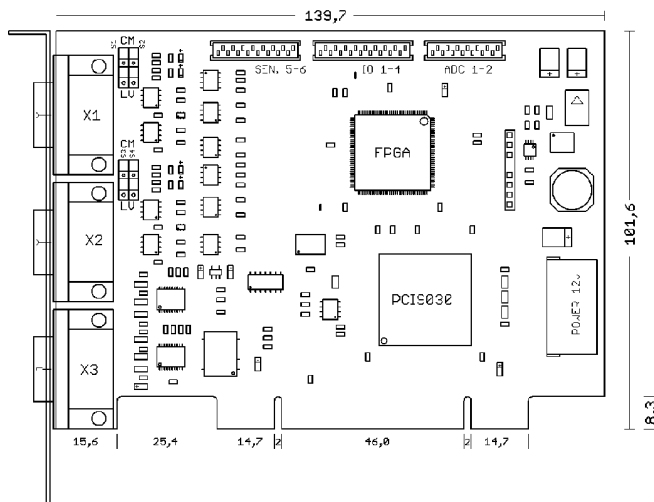


IF2008 - PCI interface card

The IF 2008 interface card is designed for installation in PCs and enables the synchronous capture of 4 digital sensor signals and 2 encoders. The absolutely synchronous data acquisition plays an important role particularly for planarity or thickness measurement tasks. The data are stored in a FIFO memory in order to enable resource-saving processing in the PC in blocks.

Particular Benefits

- 4x digital signals and two encoders with basic printed circuit board
- Additional expansion board for a total of 6x digital signals, 2x encoder and 2x analogue signals and 8x I/O Signals
- FIFO data memory
- Synchronous data acquisition



IF2008 basic printed circuit board

Mechanics and environment

- Dimensions (circuit board dimensions) approx. 140 x 102 mm
- Maximum 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

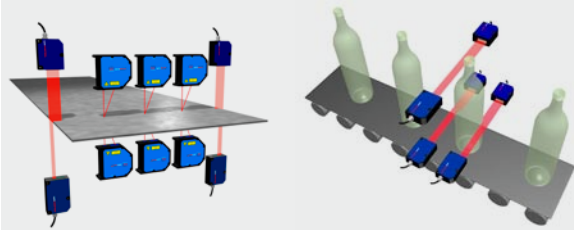
PCI bus

- PCI connector 3.3 or 5 Volt 32-bit 2x60 pin
- Target interface (slave) according to specification Revision 2.1 and 2.2 (PLX module PCI 9030)
- Bus clock speed max. 40 MHz
- Current consumption at +5 Volt approx. 0.5 A, without sensors and encoder



IF2008 supports the following sensors and measuring systems

- | | |
|---------------------|-----------------------------|
| optoNCDT 1302 | optoNCDT 2401/ 2431 |
| optoNCDT 1402 | optoNCDT ILR 110x/ ILR 115x |
| optoNCDT 1700 | optoNCDT ILR 118x/ ILR 1191 |
| optoNCDT 1800/ 1810 | optoCONTROL 2500 |
| optoNCDT 2200 | optoCONTROL 2600 |
| optoNCDT 2220 | |



Sensor Interface (X1 / X2)

- 2 RS422 drivers and two RS422 receivers with galvanic isolation per connector (input / output frequency max. 5 MHz)
- 2 LVDS or 3.3 CMOS outputs with galvanic isolation per connector (output frequency max. 5 MHz)

Encoder Interface (X3)

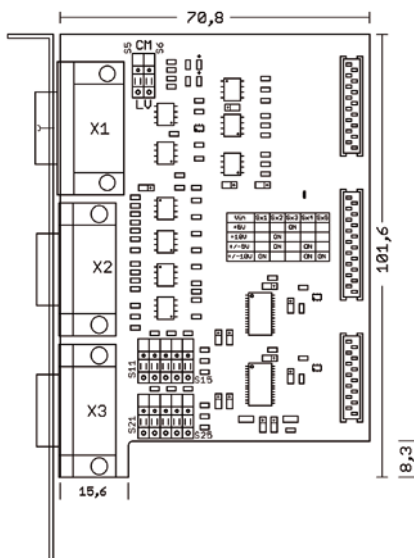
- Interface for two encoders with 1Vss or RS422 signals
- Power supply of the encoders with +5 V from PCI power supply without galvanic isolation (current consumption dependent on the connected encoders)
- Interpolation programmable from 1 to 64 times for encoders with 1Vss signals (input frequency max. = 3.2 MHz / interpolation)
- Evaluation programmable from 1 to 4 times for encoders with RS422 signals (input frequency max. = 3.2 MHz / evaluation)

IF2008E - Expansion board

The IF 2008E expansion board is designed for installation in PCs and enables the synchronous capture of 2 digital sensor signals and 2 encoders as well as 8 I/O-Signals. The expansion board is connected to the basis board IF2008. The absolutely synchronous data acquisition plays an important role particularly for planarity or thickness measurement tasks.

Particular Benefits

- Two digital signals, two analogue signals and 8 I/O signals
- Overall with IF2008: 6 digital signals, 2 encoders and 2 analogue signals and 8 I/O Signals
- FIFO data memory
- Synchronous data acquisition



IF2008E Expansion board

Mechanics and environment

- Dimensions approx. 71 x 102 mm
- Ambient temperature +40 °C
- 1 D-SUB female connector HD 15-pin for sensor connections
- 1 D-SUB female connector 9-pin for IO-Interface
- 1 D-SUB male connector 9-pin for analogue inputs

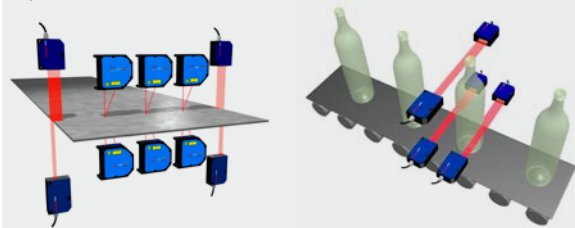
Sensor Interface (X1)

- Identical to basic board IF2008(X1)



IF2008 supports the following sensors and measuring systems

- | | |
|---------------------|-----------------------------|
| optoNCDT 1302 | optoNCDT 2401/ 2431 |
| optoNCDT 1402 | optoNCDT ILR 110x/ ILR 115x |
| optoNCDT 1700 | optoNCDT ILR 118x/ ILR 1191 |
| optoNCDT 1800/ 1810 | optoCONTROL 2500 |
| optoNCDT 2200 | optoCONTROL 2600 |
| optoNCDT 2220 | |



IO-Interface (X2)

- 4 opto coupler inputs, input current max. 5mA, input frequency max. 1MHz
- 4 opto coupler- outputs, output current max. 10mA, output frequency max. 1MHz

Analogue-Interface (X3)

- Two ADC channels
- Input voltage range 0-5V, 0-10V, $\pm 5V$, $\pm 10V$, adjustable for each channel via DIP switch
- Resolution 16Bit
- Offset error max. $\pm 3mV$, gain error max. $\pm 5mV$
- Conversion rate max. 150kHz