# Ethernet data logger
# 16 analog inputs, 16-bit, diff., 40 dig. I/O

MSX-*i*log

## MSX-ilog-AI16-DI040

16 analog inputs, differential, 16-bit

Voltage or current inputs

36 dig. inputs, 4 dig. outputs, 24 V

Acquisition, visualisation and analysis in one device

No software installation needed

Automatic storing of measured values (internal SSD hard disk)

RoHS 2002/95/EC

More information at www.addi-data.com

The intelligent Ethernet data logger MSX-ilog-AI16-DI40 has 16 differential analog inputs, 16-bit, with a transfer rate of 200 kHz as well as 36 digital inputs, 24 V. Four additional 24 V digital outputs are available for the switching of actuators and the transfer of signals.
The parametering and visualisation of the measured values are carried out via an integrated web site which is accessible over a standard browser (Internet Explorer, Firefox) with Java from version 1.6x. Thus no additional software installation is needed.
The acquisition, visualisation and data storage take place automatically.

## Features

- 64-bit MIPS processor
- 128 GB memory (SSD hard disk), data remains stored at power loss
- The buffered real-time clock keeps the system time even without supply voltage
- Robust metal housing
- Power Save Mode: Reduced power consumption when no acquisition runs

### Analog inputs

- 16 diff. inputs, 16-bit, 37-pin D-Sub connector
- Sampling frequency max. 200 kHz
- Input ranges: 0-10 V, ±10 V, 0-5 V, ±5 V, 0-2 V, ±2 V, 0-1 V, ±1 V
- Current inputs: 0-20 mA (option) can be combined freely with voltage inputs

### Digital inputs and outputs

- 36 opto-isolated digital inputs, 24 V
- 4 opto-isolated digital outputs, 5 V to 30 V, open collector
- Output current for each channel max. 50 mA typ.
- 2x 37-pin D-Sub connector (1x 32 digital inputs, 1x 8 digital I/O)

### Acquisition

- Automatic acquisition and recording of measured data
- Conversion of measured data into real values e. g. mm, bar, temperature, etc.
- Acquisition of virtual channels

### Trigger

- Acquisition triggered via hardware or software
- 24 V hardware trigger (external)
- Trigger through timer (internal)
- Threshold trigger (when the defined level of the analog inputs is exceeded)
- Trigger from external software (Software trigger)
- Manual trigger (web interface)
- Optional pre-trigger (records events which have occurred before the trigger event)

### Alarm functions

- Upper and lower limits of channels
- Data storage depending on alarms
- Can be combined with the pre-trigger

### Analysis

- Online graphical analysis of measured data
- Data export (xml, csv)

### Safety features

- Optical isolation 1000 V
- Input filters
- Overvoltage protection ± 40 V
- Internal temperature monitoring

## Applications

- Data logger • Long-term data recording
- Monitoring of infrastructure

## Interfaces

- Fast 24 V trigger input
- Fast Ethernet (100 MBit/s)

### Communication interfaces

- Web server (configuration and monitoring)
- Data server (TCP/IP or UDP socket) for sending acquisition data

*Preliminary product information

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## Specifications*

### Analog inputs

| | |
|---|---|
| Number/type: | 16 differential inputs |
| Resolution: | 16-bit |
| Input ranges: | 0-10 V, ±10 V, 0-5 V, ±5 V, 0-2 V, ±2 V, 0-1 V, ±1 V |
| | 0-20 mA optional |
| Input frequency: | 200 kHz |
| Connector for sensors: | 37-pin D-Sub connector |

### Digital inputs

| | |
|---|---|
| Number: | 36 |
| Optical isolation: | Over opto-couplers, 1000 V |
| Nominal voltage: | 24 V |
| Connectors: | 2x 37-pin D-Sub connector (inputs 1-32 and 33-36) |

### Digital outputs

| | |
|---|---|
| Number: | 4 |
| Output type: | Open collector |
| Optical isolation: | Over opto-couplers, 1000 V |
| Max. switching current: | 50 mA typ. |
| Nominal voltage: | 24 V |
| Connectors: | 1 x 37-pin D-Sub connector (together with digital inputs 33-36) |

### Data storage

| | |
|---|---|
| RAM: | 128 MB |
| FLASH: | 16 MB for system data |
| SSD hard disk: | 128 GB (127 GB for measuring data) |
| Buffered real-time clock: | approx. 2 years at 20 °C |

### Voltage supply

| | |
|---|---|
| Input voltage: | 100 V - 240 V, AC, 47-63 Hz (other on request) |

### Ethernet

| | |
|---|---|
| Interface: | Ethernet acc. to IEEE802.3 specification |
| Number of ports: | 1 |
| Cable length: | 150 m max. at CAT5E UTP |
| Bandwidth: | 10 Mbps auto-negotiation |
| | 100 Mbps auto-negotiation |
| Protocol: | 10Base-T IEEE802.3 compliant |
| | 100Base-TX IEEE802.3 compliant |
| MAC address: | unique for each device |
| Connector: | RJ45 |

### Trigger

| | |
|---|---|
| Number of inputs: | 1 trigger input (digital input 33) |
| Filter/protective circuit: | Low-pass/transorb diode |
| Optical isolation: | 1000 V |
| Nominal voltage: | 24 V external |

### EMC – Electromagnetic compatibility

The product complies with the European EMC directive. The tests were carried out by a certified EMC laboratory in accordance with the norm from the EN 61326 series (IEC 61326). The limit values as set out by the European EMC directive for an industrial environment are complied with. The respective EMC test report is available on request.

### System features

| | |
|---|---|
| Housing: | Chromated aluminium, colour RAL 5010, "Enzianblau" |
| Heat dissipation: | Through programmable fan |
| Interface: | Ethernet acc. to IEEE802.3 specification |
| Housing dimensions: | 278 x 170 x 165 mm |
| Temperature range: | 0 – 50°C |

### System requirements

Standard browser (Internet Explorer, Firefox) with Java from version 1.6.x

## Ordering information

### MSX-ilog-AI16-DIO40

Ethernet data logger, 16 analog inputs, 16-bit, diff., 40 dig. I/O. Incl. technical description.

### Terminal panels / Connection cables

**PX901-AG:** Screw terminal panel with transorb diodes with housing for DIN rail for connecting the analog I/O
**PX901-ZG:** Screw terminal panel for connecting the digital inputs (channel 33-36) and outputs, for DIN rail
**PX901-DG:** Screw terminal panel with LED status display for DIN rail
**ST011:** Standard round cable, shielded, twisted pairs, 5 m
**ST010:** Standard round cable, shielded, twisted pairs, 2 m

### Options

**Option PC-Diff:** Current input for 1 diff. channel 0(4)-20 mA
**Option DF:** Precision filter for 1 channel

**MSX-SCREW:** Assembly equipment for direct mounting on machines
**MSX-RAILDIN:** Assembly equipment for DIN-rail mounting

**Additional analog inputs:** on request
**Additional digital I/O:** on request
**SSD hard disk with more storage space:** on request

*Preliminary product information