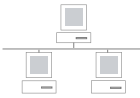


Ethernet analog output module

8 analog outputs, 16-bit

New!*



MSX-E3511

8 analog outputs, 16-bit

Optical isolation

Trigger / Synchro

Degree of protection IP 65

Cascadable

Extended temperature range

- 40° C to + 85° C

The Ethernet analog output module MSX-E3511 is used for regulating tasks in rough industrial environment thanks to the degree of protection IP 65 and the extended temperature range. The module has 8 analog outputs and a 16-bit resolution.

The distributed platform is based on ARM[®]9 technology. The cascading of the modules via the 2-port Ethernet switch avoids the separate connection of each module to the computer. The external trigger signal (hardware trigger) can also be synchronised from one module to the next. Furthermore, the I/O modules can be synchronised. Thanks to the combination of trigger signal synchronisation and cascading, data from several modules can be output simultaneously.

Features

- ARM[®]9 32-bit processor
- Extended temperature range - 40° C to + 85° C
- Synchronisation via 24 V digital trigger input
- 64 MB onboard SDRAM for storing data
- Integrated Ethernet switch
- Cascading of all MSX-E module types
- Cascading of the 24 V supply
- Complies with the degree of protection IP 65
- Robust normed metal housing
- Power Save Mode: reduction of the power consumption when no output runs
- LED status display for fast error diagnostics

Analog outputs

- 8 analog outputs, each configurable as voltage or current output
- 16-bit resolution
- Output voltage 0-10 V, ± 10 V
- Current outputs 0-20 mA
- Output voltage after reset 0 V
- M12 female connector

Safety features

- Optical isolation
- Diagnostic possible at short-circuits (voltage mode) or line break (current mode)
- Internal temperature monitoring

Applications

- Industrial process control
- Control of chemical processes
- Factory automation

Interfaces

- Ethernet switch with 2 ports
- Synchronisation/trigger In/Out
- 24 V supply and cascading

Communication interface

- Web server (configuration and monitoring)
- Access via TCP/IP socket
- Command server (SOAP) for sending commands
- Event server (TCP/IP socket) for sending module events (diagnostics such as temperature, short-circuits...)
- Access via UDP
- Command server (MODBUS) for sending commands

Software:

- Software drivers for Windows Vista™ (32-bit)/XP/2000
 - ADDIPACK (Some functions are not supported)
 - Direct access via SOAP (TCP/IP)
 - Direct access via MODBUS (UDP)
 - Programming examples .net2003, VC++ 6.0
- LABVIEW from 8.20 on request

Current driver list on the web: www.addi-data.com



More information on
www.addi-data.com

*Preliminary
product information

Phone: +49 7223 9493-0
Fax: +49 7223 9493-97

info@addi-data.com
www.addi-data.com

ADDI-DATA[®]
SPIRIT OF EXCELLENCE



Ethernet analog output module

8 analog outputs, 16-bit

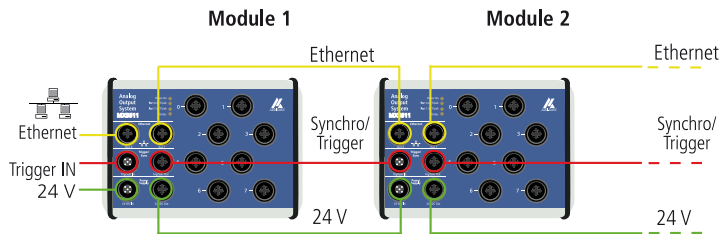
New!*

Features

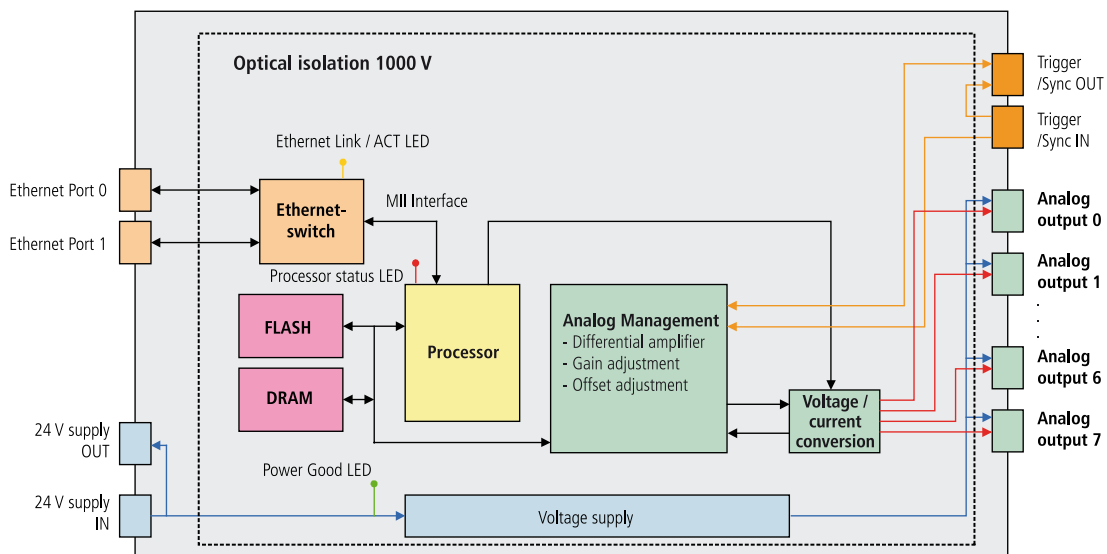


Synchronisation

Ethernet, synchronisation and supply signals can be put through from one module to the next. In this way, you can acquire and process distributed I/O signals directly at production machines. These features allow the I/O modules to be used for simple, distributed applications and for complex applications, in which numerous devices have to interact with signals that are far away from each other.



Simplified block diagram



* Preliminary product information

Ethernet analog output module

8 analog outputs, 16-bit

New!*

Analog outputs

Number of outputs:	8	
Resolution:	16-bit (bipolar)	
	15-bit (unipolar)	
Optical isolation:	1000 V	
Output range:	Voltage output:	0-10 V (± 10 V)
	Current output:	0-20 mA
Overvoltage protection:	± 14 V	
Output current/load:	Voltage output:	15 mA, min. 680 Ω
	Current output:	20 mA, max. 550 Ω
Short-circuit current:	Voltage output:	± 20 mA
	Current output:	± 32 mA
Output value after reset	0 V voltage output, without calibration	
1 watchdog (programmable):	16-bit, 1 μ s up to 65535 μ s	

Voltage supply

Nominal voltage	24 V ==	
Supply voltage	18-30 V	
Optical isolation	1000 V	
Current consumption at 24 V	150 mA	Without load
	310 mA	Current outputs switched on
	410 mA	Voltage outputs switched on
Voltage reversal protection	1 A	maximal

Ethernet

Number of ports	2	
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
Optical isolation	1000 V	
MAC address	00:0F:6C:##:##:##, unique for each device	

trigger input

Number of inputs	1 trigger input	
Filters/protective circuitry	Low-pass/transorb diode	
Optical isolation	1000 V	
Nominal voltage	24 V external	
Input voltage	0 to 30 V	
Input current	11 mA at 24 VDC, typical	
Input frequency (max.)	2 MHz at 24 V	

Synchro

Number of inputs	1	
Number of outputs	1	
Max. Cable length	20 m	
Optical isolation	1000 V	
Signal type	RS485	

System requirements

Interface	Ethernet acc. to specification IEEE802.3
Dimensions	154 mm x 110 mm x 51 mm
Weight	620 g
Degree of protection	IP 65
Current consumption	150 mA \pm 10 % typical in idle / power save
Temperature range	-40°C to +85°C
Function connectors	
Ethernet	2 x 4-pin flange type socket, D-coded M12 for Port 0 and Port1
Trigger/Synchro input	1 x 5-pin flange connector M12
Trigger/Synchro output	1 x 5-pin flange type socket M12
24 VDC input	1 x 5-pin flange connector M12
24 VDC output	1 x 5-pin flange type socket M12
Connectors for sensors	
Analog outputs	8 x 5-pin flange type socket, M12



ARM⁹
Technology

* Preliminary
product information

Phone: +49 7223 9493-0 info@addi-data.com
Fax: +49 7223 9493-97 www.addi-data.com

ADDI-DATA[®]
SPIRIT OF EXCELLENCE

Ethernet analog output module

8 analog outputs, 16-bit

New!*

Cable

Power Supply



Shielded cable,
M12 5-pin cable box/open end,
IP 65

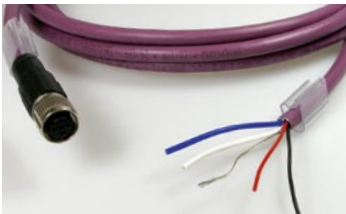
- CMX-20:** 1.5 m
- CMX-21:** 3 m
- CMX-22:** 5 m
- CMX-23:** 10 m
- CMX-29:** On request



For cascading
Shielded cable,
M12 5-pin cable box/connector
IP 65

- CMX-38:** 0.6 m
- CMX-30:** 1.5 m
- CMX-31:** 3 m
- CMX-32:** 5 m
- CMX-39:** On request

Trigger/Synchro



Shielded cable,
M12 5-pin cable box/open end,
IP 65

- CMX-40:** 1.5 m
- CMX-41:** 3 m
- CMX-42:** 5 m
- CMX-43:** 10 m
- CMX-49:** On request



For cascading
Shielded cable,
M12 5-pin cable box/connector
IP 65

- CMX-58:** 0.6 m
- CMX-50:** 1.5 m
- CMX-51:** 3 m
- CMX-52:** 5 m
- CMX-59:** On request

Ethernet



CAT5E cable,
M12 D-coded cable connector/
RJ45 connector

- CMX-60:** 2 m
- CMX-61:** 5 m
- CMX-62:** 10 m
- CMX-69:** On request



For cascading
CAT5E cable,
2 x M12 D-coded cable con-
nector

- CMX-78:** 1 m
- CMX-70:** 2 m
- CMX-71:** 5 m
- CMX-72:** 10 m
- CMX-79:** On request

Connection to peripherals



Shielded cable,
M12 5-pin cable box/open end,
IP 65

- CMX-81:** 3 m

Options

MX-Rail: for DIN-rail mounting



MX-Screw: for wall mounting



PCM-X-10:
Protection cap
for M12 connector
(without illustration)

PCM-X-13:
Protection cap
for M12 connector



Ordering information

MSX-E3511

Ethernet analog output module, 8 analog outputs, 16-bit. Incl. technical description and software drivers.

Connection cables

Voltage supply

Shielded cable, M12 5-pin cable box/open end, IP 65

- CMX-20:** 1.5 m
- CMX-21:** 3 m
- CMX-22:** 5 m
- CMX-23:** 10 m
- CMX-29:** Cable length on request

For cascading:

Shielded cable, M12 5-pin cable box/connector IP 65

- CMX-38:** 0.6 m
- CMX-30:** 1.5 m
- CMX-31:** 3 m
- CMX-32:** 5 m
- CMX-39:** Cable length on request

Trigger/Synchro

Shielded cable, M12 5-pin cable box/open end, IP 65

- CMX-40:** 1.5 m
- CMX-41:** 3 m
- CMX-42:** 5 m
- CMX-43:** 10 m
- CMX-49:** Cable length on request

For cascading:

Shielded cable, M12 5-pin cable box/connector IP 65

- CMX-58:** 0.6 m
- CMX-50:** 1.5 m
- CMX-51:** 3 m
- CMX-52:** 5 m
- CMX-59:** Cable length on request

Ethernet

CAT5E cable, M12 D-coded cable connector/RJ45 connector

- CMX-60:** 2 m
- CMX-61:** 5 m
- CMX-62:** 10 m
- CMX-69:** Cable length on request

For cascading:

CAT5E cable, 2 x M12 D-coded cable connector

- CMX-78:** 0.6 m
- CMX-70:** 2 m
- CMX-71:** 5 m
- CMX-72:** 10 m
- CMX-79:** Cable length on request

Connection to peripherals

Shielded cable, M12 5-pin cable box/open end, IP 65

- CMX-81:** 3 m

Options

MX-Rail: Mounting set for DIN-rail mounting

MX-Screw: Mounting set for direct mounting on devices
and machines

PCM-X-10: 5 protection caps for M12 connector (4 x female, 1 x male)
for Ethernet, trigger/synchro, power

PCM-X-13: 10 protection caps for M12 connector (analog)

*Preliminary product information