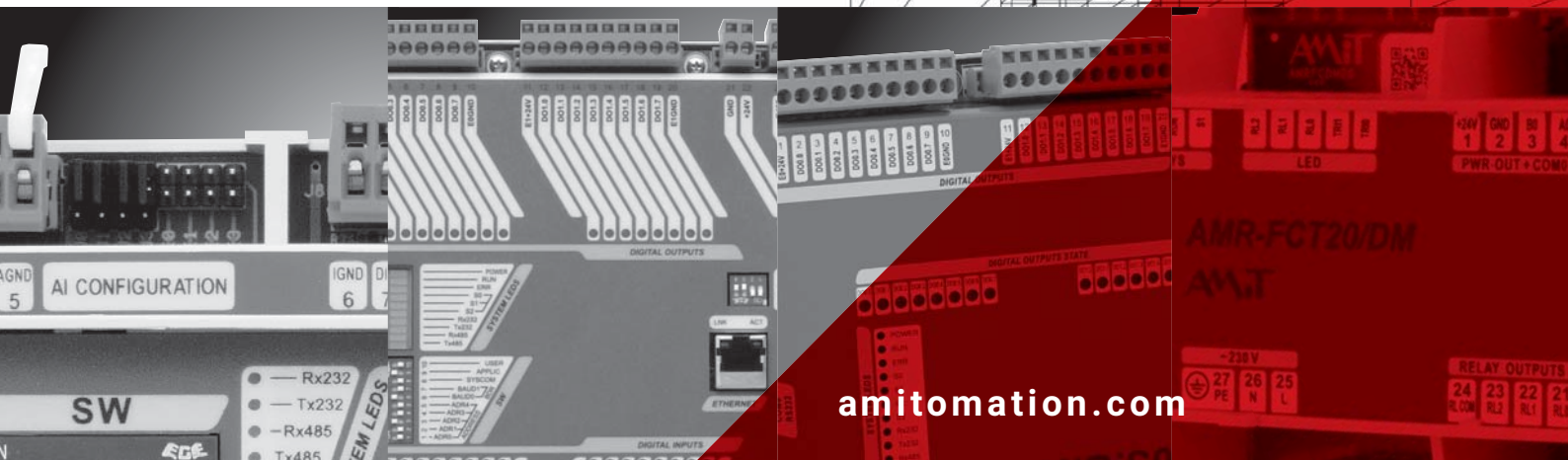# Product overview

- control systems
- industrial computers
- electronics for industrial automation
- custom development and production of electronics

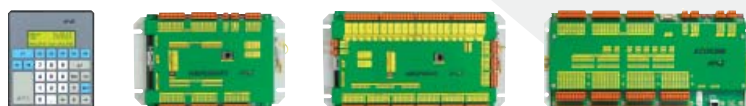amitomation.com

AMiT automation

Automating Your Success®

Small control systems

- freely programmable
- ideal price-performance ratio
- small, easy to install
- integrated display and keyboard
- easily expandable with remote I/O modules
- supports standard communication interfaces
- freely parametrisable web server
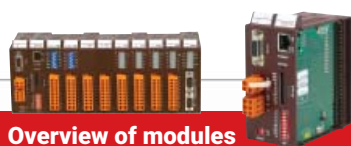- operating temperature range -20 °C to 70 °C

	DI	DO	AI	AO	Interface	HMI
AMiNi4W2(/G)	8	8	8	4	RS232, RS485, Ethernet, SD, web server, (SMS)	–
AMiNi4DW2(/G)	8	8	8	4	RS232, RS485, Ethernet, SD, web server, (SMS)	(122 × 32) points , 8 keys
AMiNi5D	8	8	8	4	RS232, RS485, Ethernet, SD, web server	(320 × 240) points, 8 keys
AMR-CP4x	–	–	–	–	RS232, RS485, Ethernet, SD, web server, (SMS/data, Poseidon 868 MHz)	

Compact control systems

- freely programmable
- preset inputs/outputs configuration
- high interference resistance
- easily expandable with remote inputs/outputs
- variants with integrated display and keyboard
- optional analogue outputs and communication modules
- freely parametrisable web server
- operating temperature range -40 °C to 70 °C

	DI	DO	AI	AO	Interface	HMI
ART4000W3	8	8	8	2	RS232, RS485, Ethernet, web server	(4 × 20) chars, 27 keys
AMiRiS99W3	16	16	8	4	RS232, Ethernet, (RS485/CAN/M-Bus), SD, web server	–
AMAP99W3	24	4 + 19r	15	6	RS232, Ethernet, (RS485/CAN/M-Bus), SD, web server	–
ACOS200	32	32	16	8	RS232, RS485, Ethernet, 2× (RS232/RS485/CAN), SD, web server	–

Modular control system

- modular design
- application-based I/O optimisation
- wide range of I/O modules
- special purpose modules
- extensive communication capabilities
- operating temperature range -40 °C to 70 °C
- CPU – RS232, RS485, Ethernet, SD card
- freely parametrisable web server

Overview of modules	
AD-DI8A AD-DI16A AD-FDI8	digital inputs 24 V
AD-PDO8 AD-DO16	digital outputs 24 V
AD-RDO5S	relay outputs
AD-AI5 AD-AI8 AD-GAI8 AD-FAI8	analogue inputs 0 to 5 V, 0 to 10 V, 0 to 20 mA
AD-NI8	RTD inputs Ni1000, Pt1000
AD-AO8U AD-AO8I AD-GAO4U AD-GAO4I	analogue outputs 0 to 10 V, 0 to 20 mA
AD-UART	RS232 communication module
AD-UART4	RS485 communication module
AD-CAN	CAN communication module (CANopen)
ADC-CAN	CPU extension for I/O signals
AD-ETH100	Ethernet communication interface

Operator and control HMIs

- text and graphic HMIs
- graphic HMIs with touchscreens
- supports special diacritics and Cyrillic
- membrane keyboard with IP55 protection rate
- control HMIs also serve as control
- systems without direct I/Os
- selected models for extreme operating environments
- operating temperature range -20 °C to 70 °C

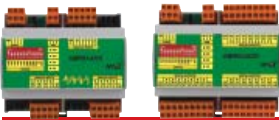|	Type	Display	Keys	Interface
APT1000G	text	(4 × 20) chars	27	RS232, RS485/422
AMR-OP10	graphic, touchscreen, 3˝	(132 × 64) px, black and white		1× RTD, 2× RS485, Ethernet, web server
AMR-OP83	graphic, touchscreen, 3.2˝	(320 × 240) px, 65,536 colours		1× RS485, Ethernet, (1× RS232/RS485/ CAN), SD, web server
AMR-OP87(/G)	graphic, touchscreen, 7˝	(800 × 480) px, 65,536 colours		2× RS485, Ethernet, SD, web server, SMS/ data
AMR-OP87/P	graphic, touchscreen, 7˝	(800 × 480) px, 65,536 colours		1× RS485, w/o SD, (Poseidon 868 MHz)

Embedded and panel computers

- industrial computers on a PC platform
- panel computers with a 10.1˝ or 15.6˝ screen
- power supply 24 V DC
- robust design for industrial environment
- pre-installed Linux / TouchDet visualisation environment
- fanless version with extended operating temperature range -20 °C to 50 °C

	Type	Display	Interface
APTXA4010AT	panel	10.1˝, touchscreen, (1024 × 600) points, 262k colours	2× Ethernet, 2× USB, RS232, RS485, mSATA, SD
APTXA4015AT	panel	15.6˝, touchscreen, (1366 × 768) points, 262k colours	
PPCXA4000AT	embedded	no display, HDMI	

Remote I/O Modules

- smart extension I/O modules based on MODBUS RTU communication (RS485)
- up to 63 modules can be connected to a single serial RS485 line
- communication failure detection
- system support by all AMiT control systems and controllers
- freely programmable in DetStudio
- operating temperature range variants from -40 °C to 70 °C

Overview of modules	
AMRIO-DI24	24× digital input 24 V
AMRIO-DO21	21× digital output 24 V
AMRIO-AI12	12× analogue input 0 to 5 V, 0 to 10 V, 0 to 20 mA, RTD
AMRIO-AO8I	8× analogue output 0 to 20 mA
AMRIO-RDO12	12× NO relay
AMRIO-AI8DO8	8× universal inputs, 8× digital outputs 24 V
AMRIO-AI8RDO8	8× universal inputs, 8× NO relay
AMRIO-AI8AO8U	8× universal inputs, 8× analogue outputs 0 to 10 V

Freely programmable controllers

- unified programming in DetStudio, EsiDet
- Ethernet communication with MODBUS TCP/IP, DB-Net/IP
- RS485 communication MODBUS RTU, ARION, DB-Net
- ideal for distributed systems with local intelligence
- option to create custom-made user applications

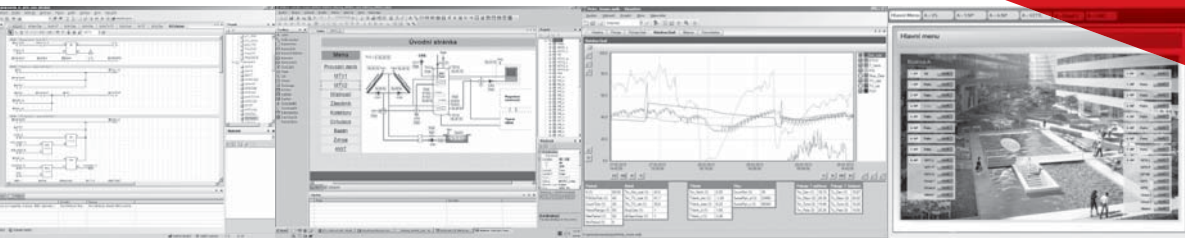|	Specifications	I/O	Functions
AMR-CU7xB	graphic display, 1× RS485, 24 V DC	room temperature, 2× RTD, 2× DO, 1× AO	on-wall controller
AMR-FCT20	2× RS485, 230 V AC	3× NO relay, 3× AO, 2× DO 24/230 V AC, 2× RTD	Fan Coil unit controller
AMR-UI2RDO2	1× RS485, 24 V DC	2× RTD, 2× NO relay	flush mounted module / 35 mm DIN rail

On-wall controllers

- can serve as an HMI for control systems and programmable controllers
- measurement of temperature, relative humidity and CO_2 concentration
- local mode and correction control, option to use time plans
- user-friendly button control or control via touchscreen
- RS485 interface with communication protocols MODBUS RTU, ARION and DB-Net
- users can create custom graphic design of displays and control algorithms

Controller variants	
AMR-OP30ARH	temperature, humidity measurement
AMR-OP31ARH	button, knob, LED – temperature, humidity, modes, correction
AMR-OP33ARH	button, LED – temperature, humidity, modes, correction
AMR-OP35ARH	button, knob, LED – temperature, humidity, modes, correction, Fan Coil rotations
AMR-OP40(RHC)	temperature, (humidity and CO_2)
AMR-OP41	2× button, knob, LED – temperature, modes, correction, on/off button
AMR-OP60	4× button, graphic back-lit LCD display, temperature
AMR-OP70RH(C/P)	graphic back-lit LCD display, touch screen, temperature, humidity, (CO_2 / Poseidon 868 MHz)
AMR-OP75RHR(C/P)	graphic colour back-lit display, touch screen, modern glass design, temperature, humidity, 1× RTD, 1× relay, (CO_2 / Poseidon 868 MHz)

Industrial communication

- converters for industrial communication
- converters with integration into the MODBUS network
- GSM modem
- industrial Ethernet switches

Communication converters	
DM-232TO485	RS232 <-> RS485 line converter for 35 mm DIN rail
DM-GSM3	GSM modem for 35 mm DIN rail
DM-MPBUS2	MODBUS <-> MP-Bus converter for 35 mm DIN rail
DM-OT2	MODBUS <-> OpenTherm converter for 35 mm DIN rail
DM-MBUS64	converter M-Bus <-> Ethernet (RS232), 64 devices
DM-ESW05	Ethernet switch 5× RJ45

Development and Debugging Tools for User Applications

DetStudio

- user-friendly IDE for creation of applications for control systems and programmable controllers
- unified parametrisation for all types of control systems
- programming standards: ST/CFC
- option to create custom function blocks and subroutines
- on-line supervision and editing of process variables
- user-friendly WYSIWYG editor of user screens
- simulator of operator panels and control terminals
- support of multilingual applications, Unicode support
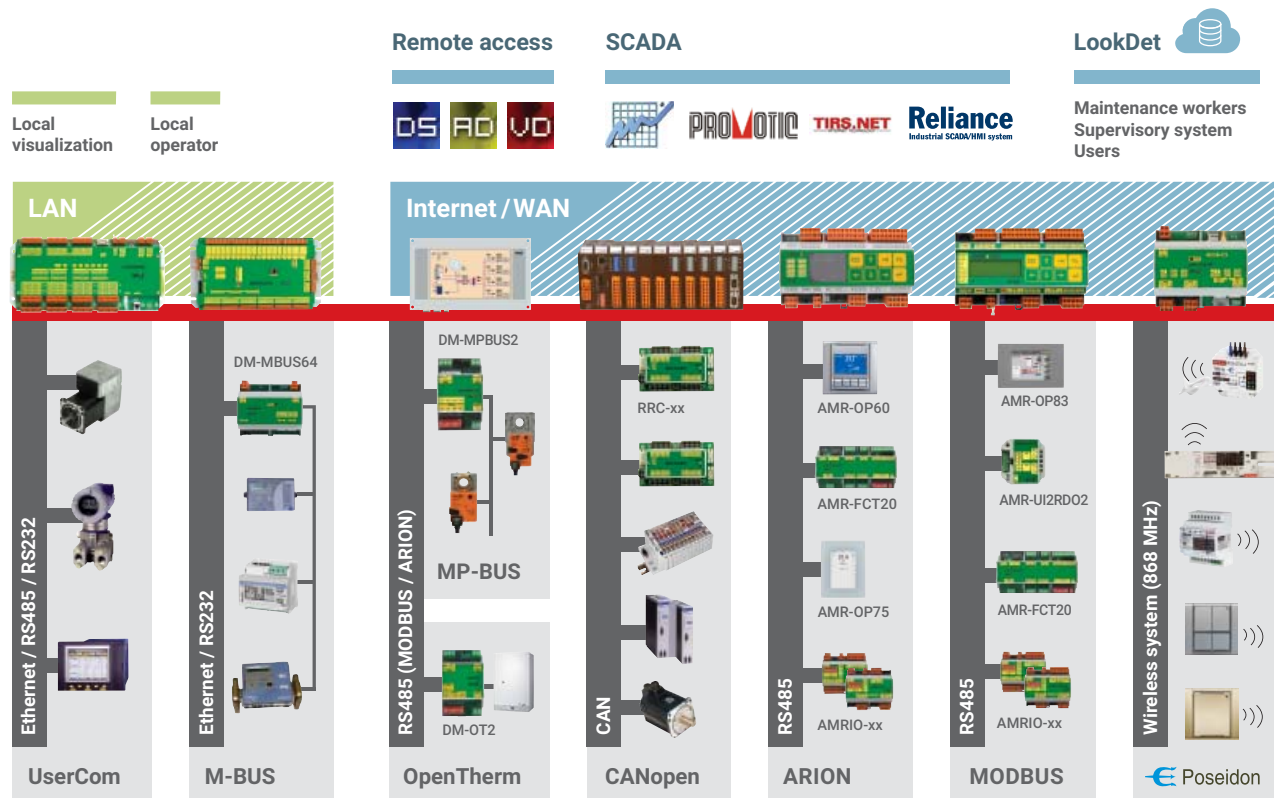- clean English environment

ViewDet

- service application for debugging and simple visualisation
- on-line reading and editing of database variables of control systems
- archiving, graphs, export of control system archived data
- keeping an operation log
- user application download
- support of remote communication with control systems via Internet

AWDet

- user-friendly control system web presentation editor
- wide range of pre-defined components for website design
- wide range of component parameters settings
- import of variables and communication parameters from DetStudio projects
- archiving variables to an SD card
- remote web server management and application implementation via FTP

LookDet
Cloud supervisory system

- visualisation and supervision cloud-based system running on clients server
- collection, management, archiving, viewing and exporting of data from control systems and meters
- access of clients' visualisation stations to the server via standard web browser
- number of clients is limited only by the server performance and its connectivity
- strict use of proven standard IT technologies
- simple and clear licensing policy, no periodic fees

Remote access | SCADA | LookDet

PROMOTIC | TIRS.NET | Reliance Industrial SCADA/HMI system

Maintenance workers
Supervisory system
Users

Local visualization | Local operator

LAN | Internet / WAN

UserCom	M-BUS	OpenTherm	CANopen	ARION	MODBUS	Poseidon
Ethernet / RS485 / RS232	Ethernet / RS232	RS485 (MODBUS / ARION)	CAN	RS485	RS485	Wireless system (868 MHz)

DM-MBUS64 | DM-MPBUS2 | RRC-xx | AMR-OP60 | AMR-OP83

MP-BUS | AMR-FCT20 | AMR-UI2RDO2

DM-OT2 | AMR-OP75 | AMR-FCT20

AMRIO-xx | AMRIO-xx

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