

# MIKRODEV®

Innovation in Automation

## PRODUCT CATALOG



## INDUSTRIAL AUTOMATION & COMMUNICATION

- PROGRAMMABLE LOGIC CONTROLLER (PLC)
- DISTRIBUTED CONTROL SYSTEMS (DCS)
- OPERATOR CONTROL & MONITORING SYSTEMS
- IOT GATEWAYS

[www.mikrodev.com](http://www.mikrodev.com)

**MIKRODEV®**



# ABOUT US

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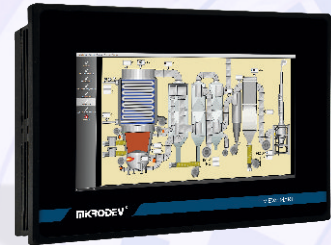
MIKRODEV has been developing and producing industrial control and communication products since 2006.

MIKRODEV provides services to system integrators in the public and private sectors, OEMs and end users. Our products are manufactured in accordance with the quality standards required by the industrial automation sector and our products have been proved by the quality of our products for many years without problems.

MIKRODEV is one of the few companies in the world with its own designed IEC 61131-3 compliant library in its programmable logic controllers. In addition, an open, flexible, programmable SCADA solution has been developed by MIKRODEV and is available to the customers.

The performance, wide range of applications with MIKRODEV products and the company's technological know-how, helps customers achieve faster, easier and lower cost results.

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M-BUS MODBUS Gateway (MMS100 Series)

DLMS MODBUS Gateway (MDC100 Series)

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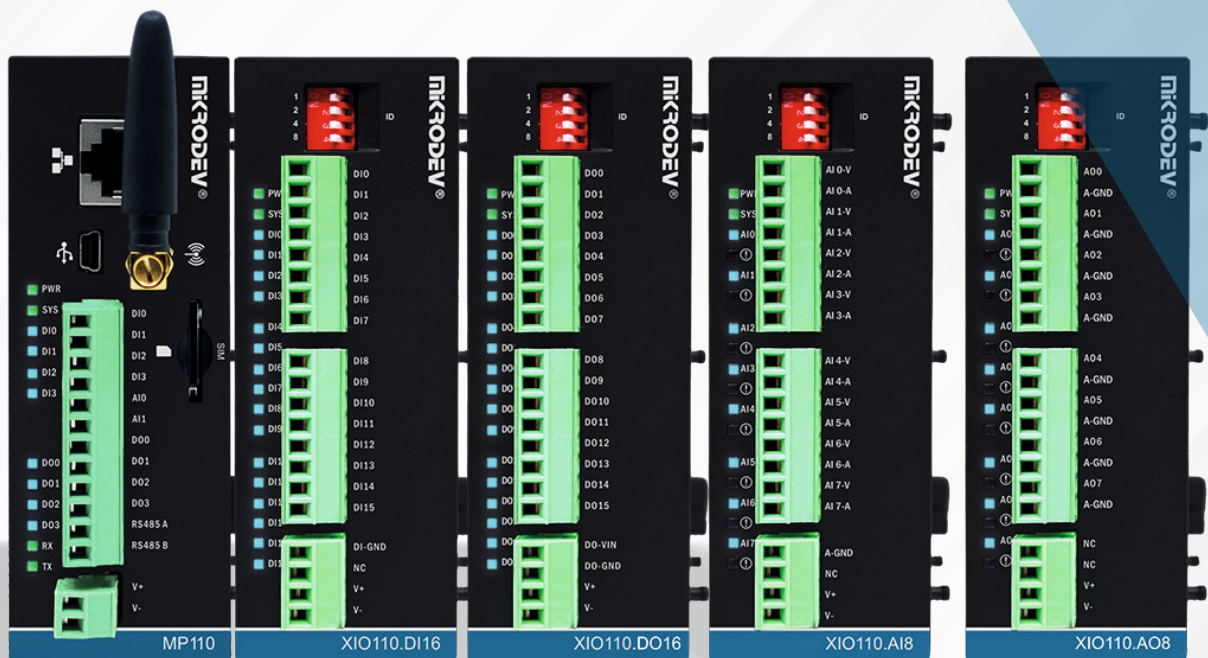
 HMI (ViewSMART Series)

SCADA (ViewPLUS)

NEW

# PROGRAMMABLE LOGIC CONTROLLER (PLC)





**Micro Level Control System**  
**Compact Controller System**  
**Expansion Modules**  
**Slim & Modular Controller System**  
**Slim Expansion Modules**  
**Mikrodiagram**

# MP110 SERIES



Cost Effective



Modular Design



GSM



IEC 61131-3



IOT Applications



Up to 512 I/O Expansion



## Easy to Use Programming

- ▶ IEC61131-3 Programming Interface: FBD (Function Block Diagram) LD (Ladder)
- ▶ Configuration & Programming : Type B Mini USB Ethernet 10/100 Mbps
- ▶ Programming with Standard USB Cable
- ▶ Remote Project Download / Upload & Firmware Update
- ▶ PID and ON-OFF Control Function library
- ▶ Data Logger Feature (Log via FTP Registry Access Support)
- ▶ Hot Swap (Changing While the System is Running)

## Position Control Functions

- ▶ Fast Counter Input: Max 200 kHz
- ▶ PWM : Max 65 kHz
- ▶ PTO : Max 50 kHz

## Communication Protocols

- ▶ MODBUS TCP Master / Slave
- ▶ MODBUS RTU Master / Slave
- ▶ MODBUS GATEWAY
- ▶ MQTT
- ▶ IP Protocols: TCP, UDP, NTP, SNMP, HTTP, TFTP, DHCP, DNS

## Integrated Communication Ports

- ▶ Ethernet : 1 Port, 10/100 Mbps
- ▶ Serial Port : 1 Port RS485
- ▶ ESD Protection: ESD Protection 18 kV Contact / 25 kV Air

## Optional

- ▶ Integrated GSM: SMS, DTMF, GPRS/LTE

## Real Time Clock & Calendar

- ▶ RTC : Lithium Battery, 4 Years Battery Life
- ▶ WDT: Software Watch Dog Timer
- ▶ Timing Functions: Weekly / Annual Programming Astronomical Timing
- ▶ NTP Client Support
- ▶ Battery Status / Level Reading Functions
- ▶ Time Synchronization over Modbus

## Input / Output

- ▶ Internal I/O: GB0; 4DI, 4DO, 2AI GB1; 8DI, 2DO
- ▶ Expansion : Max. 512 I/O (XIO110)

## Supply

- ▶ Supply Voltage: 12-36VDC
- ▶ Supply Current : 50 mA @ 24VDC

## ACCESSORIES

PRODUCT	
Wired Antenna	3 dbi antenna gain, 3 m cable length, magnetic (For all product)
Wired Antenna	9 dbi antenna gain, 7 m cable length, magnetic (For all product)
Wired Antenna	9 dbi antenna gain, 12 m cable length, magnetic (For all product)
USB Cabo	Type B USB, 50 cm (For MP211 & RTU300 Series)
USB Cabo	Type B Mini USB, 50 cm (For MP110, DM100, ViewSMART & IOT Gateway Series)



# MP110 ORDER CODE

**1**

Remote communication port selection.

**2**

Board type selection according to number of I/O and port.

**3**

Selection of other options  
Power supply, SD card, serial port selections are made here. Option codes may vary depending on the board type.



## MP110-E1G-GB0-B6000

**Product Family;**  
MP110

**Ethernet Port;**  
E1: 1 Port

**Wireless;**  
N: No Wireless  
G: 2G  
L: 4G/LTE

**Board Type;**  
GB0  
GB1

**Power;**  
B: 24 V DC

**SD Card;**  
6: No

**Isolation;**  
000: No Isolation  
(GB0, GB1)  
009: Yes (GB0, GB1)

# MP110 ORDER CODE

MODEL-COM-BOARD-OPTIONS			
COM	ETHERNET	WIRELESS	MINIMUM ORDER QUANTITY
E1N	1		8
E1G	1	2G	8
E1L	1	LTE/4G	8

MODEL-COM-BOARD-OPTIONS					
BOARD	DIN	DOUT	AIN	RS485 (ESD Protection 18 kV Contact / 25 kV Air)	MINIMUM ORDER QUANTITY
	Channel Number	Channel Number	Channel Number		
GB0	4	4	2	1	8
GB1	8	2		1	24

MODEL-COM-BOARD-OPTIONS						
OPTIONS	SUPPORTED BOARD TYPE	POWER	AIN		RS485 ISOLATION	MINIMUM ORDER QUANTITY
			Resolution	Signal Type		
B6000	GB1	24V DC	0-20ma	12 Bit		8
B6009	GB0	24V DC	0-20ma	12 Bit	✓	16

# MP211 SERIES



Compact CPU



Modular Design



GSM, WiFi



IEC 61131-3



SD Card



Up to 512 I/O Expansion



## Easy to Use Programming

- ▶ IEC61131-3 Programming Interface: FBD (Function Block Diagram) LD (Ladder)
- ▶ Configuration and Programming : Type B USB Ethernet 10/100 Mbps
- ▶ Motion Control Function Library
- ▶ PID & ON-OFF Control Function library
- ▶ Remote Project Upload / Download & Firmware Update
- ▶ Hvac Systems Function Library
- ▶ Programmable Data Logging
- ▶ Hot Swap (Changing While the System is Running)

## Integrated Communication Ports

- ▶ Ethernet : 1 Port 10/100 Mbps
- ▶ Serial Port : GA0/GA1/GA6; 1 Port RS485 & 1 Port RS232 GA3/GA4/GA7; 2 Port RS485
- ▶ ESD Protection : 8kV Contact / 15kV Air

## Optional

- ▶ Integrated GSM : SMS, DTMF, GPRS/LTE
- ▶ Wi-Fi
- ▶ SD Card Support : Micro SD Card
- ▶ Serial Port Selection: RS232 - RS485

## Data Logger / Data Log Feature

- ▶ Programmable Data Log Blocks
- ▶ Memory Capacity: 256 Blocks / Registers

## Special GSM Functions

- ▶ SMS Receiving, Analyzing and Decoding Functions
- ▶ Creating Multiple Different SMS & Send Functions
- ▶ Call/DTMF Call Acceptance & DTMF Decoding Functions
- ▶ Dial / DTMF Call Initiation & DTMF Code Sending Functions

## Communication Protocols

- ▶ MODBUS TCP Master/Slave
- ▶ MODBUS RTU Master/Slave
- ▶ MODBUS GATEWAY
- ▶ MQTT
- ▶ IP Protocols: TCP, UDP, NTP, SNTP, HTTP, TFTP, DHCP, DNS

## Real Time Clock & Calendar

- ▶ RTC : Lithium Battery, 4 Years Battery Life
- ▶ WDT: Software Watch Dog Timer
- ▶ Timing Functions: Weekly / Annual Programming Astronomical Timing
- ▶ NTP Client Support
- ▶ Battery Status / Level Reading Functions
- ▶ Time Synchronization Over MODBUS

## Input / Output

- ▶ Internal I/O: GA0 / GA3; 16DI, 8DO, 4AI, 2AO, 4RELAY, 2RTD GA1 / GA4; 16DI, 8DO, 4AI, 2AO, 4RELAY GA6 / GA7; 16DI, 8DO, 4AI
- ▶ Expansion : Max. 1024 I/O (XIO211)

## Position Control Functions

- ▶ Fast Counter Input: Max 200 kHz
- ▶ PWM : Max 65 kHz
- ▶ PTO : Max 50 kHz

# MP211 ORDER CODE

1

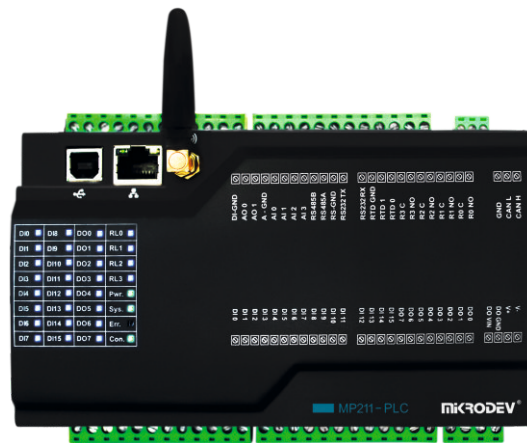
Remote communication port selection.

2

Board type selection according to number of I/O and port.

3

Selection of other options  
Power supply, SD card, serial port selections are made here. Option codes may vary depending on the board type.



## MP211-E1W-GA1-B6001

**Product Family;**  
MP211

**Ethernet Port;**  
E1: 1 Port

**Wireless;**  
N: No Wireless  
G: 2G  
L: 4G/LTE  
W: WiFi

**Board Type;**  
GA0  
GA1  
GA3  
GA4  
GA6  
GA7

**Power;**  
B: 24 V DC

**SD Card;**  
6: No  
7: Yes

**Isolation;**  
000: No Isolation (GA6, GA7)  
001: No Isolation (GA0, GA1, GA3, GA4)  
008: Yes (GA7)  
009: Yes (GA3, GA4)  
00C: Yes (GA6)  
00D: Yes (GA0, GA1)

# MP211 SERIES

## MODEL-COM-BOARD-OPTIONS

COM	ETHERNET	WIRELESS	MINIMUM ORDER QUANTITY
E1N	1		8
E1G	1	2G	8
E1L	1	LTE/4G	8
E1W	1	WiFi	8

## MODEL-COM-BOARD-OPTIONS

BOARD	DIN	DOUT	RELAY	AIN	AOUT	RTD	RS232 (ESD Protection 8kV Contact / 15 kV Air)	RS485 (ESD Protection 8 kV Contact / 15 kV Air)	MINIMUM ORDER QUANTITY
	Channel Number	Channel Number	Channel Number	Channel Number	Channel Number	Channel Number			
GA0	16	8	4	4	2	2	1	1	16
GA1	16	8	4	4	2		1	1	8
GA3	16	8	4	4	2	2		2	16
GA4	16	8	4	4	2			2	8
GA6	16	8		4			1	1	8
GA7	16	8		4				2	8

## MODEL-COM-BOARD-OPTIONS

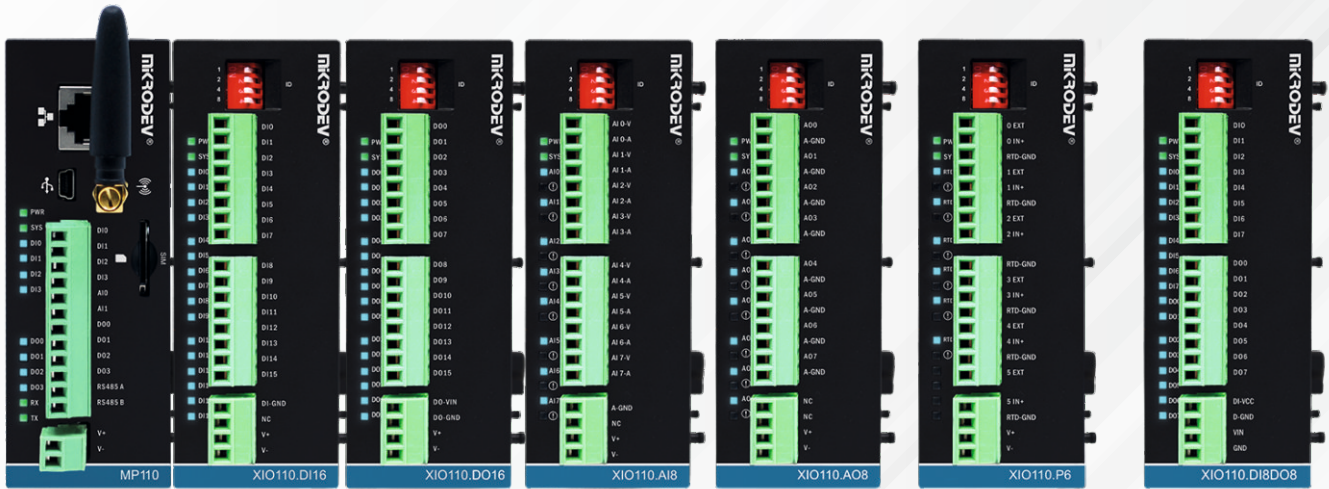
OPTIONS	SUPPORTED BOARD TYPE	POWER	AIN		AOUT		RTD	SD CARD	RS232 ISOLATION	RS485 ISOLATION	MINIMUM ORDER QUANTITY
			Resolution	Signal Type	Resolution	Signal Type	Signal Type				
B6000	GA6, GA7	24V DC	12 Bit	0-20ma							8
B6001	GA0, GA1, GA3, GA4	24V DC	16 Bit	0-20ma	12 Bit	0-20ma	PT1000 (GA0, GA3)				8
B6008	GA7	24V DC	12 Bit	0-20ma						✓	16
B6009	GA3, GA4	24V DC	16 Bit	0-20ma	12 Bit	0-20ma	PT1000 (GA3)			✓	16
B600C	GA6	24V DC	12 Bit	0-20ma					✓	✓	16
B600D	GA0, GA1	24V DC	16 Bit	0-20ma	12 Bit	0-20ma	PT1000 (GA0)		✓	✓	16
B7000	GA6, GA7	24V DC	12 Bit	0-20ma				✓			8
B7001	GA0, GA1, GA3, GA4	24V DC	16 Bit	0-20ma	12 Bit	0-20ma	PT1000 (GA0, GA3)	✓			8
B7008	GA7	24V DC	12 Bit	0-20ma				✓		✓	16
B7009	GA3, GA4	24V DC	16 Bit	0-20ma	12 Bit	0-20ma	PT1000 (GA3)	✓		✓	16
B700C	GA6	24V DC	12 Bit	0-20ma				✓	✓	✓	16
B700D	GA0, GA1	24V DC	16 Bit	0-20ma	12 Bit	0-20ma	PT1000 (GA0)	✓	✓	✓	16

# XIO211 ORDER CODE



PRODUCT CODE	BOARD	POWER	DIN	DOUT	AIN			AOUT			RTD		DALI	MINIMUM ORDER QUANTITY
			Channel Number	Channel Number	Channel Number	Resolution	Signal Type	Channel Number	Resolution	Signal Type	Channel Number	Signal Type	Channel Number	
XIO211-E0N-GD0-B2000	GD0	24V DC	16											8
XIO211-E0N-GD1-B4000	GD1	24V DC		16										8
XIO211-E0N-GD2-B0401	GD2	24V DC			8	16 Bit	0-20ma/ 0-10V							8
XIO211-E0N-GD3-B0000	GD3	24V DC						8	12 Bit	0-20ma				8
XIO211-E0N-GD3-B0800	GD3	24V DC						8	12 Bit	0-10V				8
XIO211-E0N-GD4-B0000	GD4	24V DC									6	PT1000		8
XIO211-E0N-GD5-B0000	GD5	24V DC											8	8
XIO211-E0N-GD7-B4000	GD7	24V DC		8										16
XIO211-E0N-GD8-B6000	GD8	24V DC	8	8										16
XIO211-E0N-GD9-B0000	GD9	24V DC			4	12 Bit	0-20ma	4	12 Bit	0-20ma				16
XIO211-E0N-GD9-B0900	GD9	24V DC			4	12 Bit	0-10V	4	12 Bit	0-10V				16

# XIO110 ORDER CODE



PRODUCT CODE	BOARD	POWER	DIN	DOUT	AIN		AOUT			RTD		DALI	MINIMUM ORDER QUANTITY
			Channel Number	Channel Number	Channel Number	Resolution	Signal Type	Channel Number	Resolution	Signal Type	Channel Number	Signal Type	
XIO110-E0N-GD0-B2000	GD0	24V DC	16										8
XIO110-E0N-GD1-B4000	GD1	24V DC		16									8
XIO110-E0N-GD2-B0401	GD2	24V DC			8	16 Bit	0-20ma/ 0-10V						8
XIO110-E0N-GD3-B0000	GD3	24V DC						8	12 Bit 0-20ma				8
XIO110-E0N-GD3-B0800	GD3	24V DC						8	12 Bit 0-10V				8
XIO110-E0N-GD4-B0000	GD4	24V DC								6	PT1000		8
XIO110-E0N-GD6-B2000	GD6	24V DC	8										8
XIO110-E0N-GD7-B4000	GD7	24V DC		8									8
XIO110-E0N-GD8-B6000	GD8	24V DC	8	8									8
XIO110-E0N-GD9-B0000	GD9	24V DC			4	12 Bit	0-20ma	4	12 Bit 0-20ma				16
XIO110-E0N-GD9-B0900	GD9	24V DC			4	12 Bit	0-10V	4	12 Bit 0-10V				16
XIO110-E0N-GDA-B0000	GDA	24V DC										1	8
XIO110-E0N-GDX-B0000	GDX	24V DC	RAIL END MODULE										8

**NEW**

# MP1100 SERIES



**Cost Effective**



**Modular Design**



**Wireless Expansion Modules**



**IEC 61131-3**



**Hot Swap**



**Up to 512 I/O Expansion**



## Easy to Use Programming

- ▶ IEC61131-3 Programming Interface: FBD (Function Block Diagram) LD (Ladder)
- ▶ Configuration & Programming : Type C USB Ethernet 10/100 Mbps
- ▶ Programming with Standard USB Cable
- ▶ Remote Project Download / Upload & Firmware Update
- ▶ PID and ON-OFF Control Function library
- ▶ Data Logger Feature (Log via FTP Registry Access Support)
- ▶ Hot Swap (Changing While the System is Running)

## Special GSM Functions

- ▶ SMS Receiving, Analyzing and Decoding Functions
- ▶ Creating Multiple Different SMS & Send Functions
- ▶ Call/DTMF Call Acceptance & DTMF Decoding Functions
- ▶ Dial / DTMF Call Initiation & DTMF Code Sending Functions

## Communication Protocols

- ▶ MODBUS TCP Master / Slave MODBUS RTU Master / Slave
- ▶ MODBUS GATEWAY: MODBUS RTU<>Modbus TCP/IP
- ▶ MQTT
- ▶ IP Protocols: TCP, UDP, NTP, SNMP, HTTP, TFTP, DHCP, DNS

## Position Control Functions

- ▶ Fast Counter Input: Max 200 kHz
- ▶ PWM : Max 65 kHz
- ▶ PTO : Max 50 kHz

## Supply

- ▶ Supply Voltage: 12-36VDC
- ▶ Supply Current : 50 mA @ 24VDC

## Optional

- ▶ Modular: GSM, SMS, DTMF, GPRS/LTE

## Real Time Clock & Calendar

- ▶ RTC : Lithium Battery, 4 Years Battery Life
- ▶ WDT: Software Watch Dog Timer
- ▶ Timing Functions: Weekly / Annual Programming Astronomical Timing
- ▶ NTP Client Support
- ▶ Battery Status / Level Reading Functions
- ▶ Time Synchronization over Modbus

## Integrated Communication Ports

- ▶ Ethernet : 1 Port, 10/100 Mbps
- ▶ Serial Port : 1 Port RS485
- ▶ ESD Protection: ESD Protection 8 kV Contact / 15 kV Air

## Input / Output

- ▶ Internal I/O: GB0; 4DI, 4DO, 2AI GB1; 8DI, 2DO
- ▶ Expansion : Max. 512 I/O (XIO110)



# MP2100 SERIES



Compact CPU



Modular Design



GSM, WiFi, RF



IEC 61131-3



SD Card



Up to 512 I/O Expansion



## Easy to Use Programming

- ▶ IEC61131-3 Programming Interface:
  - FBD (Function Block Diagram)
  - LD (Ladder)
- ▶ Configuration and Programming :
  - Type C USB
  - Ethernet 10/100 Mbps
- ▶ Motion Control Function Library
- ▶ PID & ON-OFF Control Function library
- ▶ Remote Project Upload / Download & Firmware update
- ▶ Hvac Systems Function Library
- ▶ Programmable Data Logging
- ▶ Hot Swap (Changing While the System is Running)

## Integrated Communication Ports

- ▶ Ethernet :
  - 1 Port 10/100 Mbps
- ▶ Serial Port :
  - GA0/GA1/GA6; 1 Port RS485 & 1 Port RS232
  - GA3/GA4/GA7; 2 Port RS485
- ▶ ESD Protection :
  - 8kV Contact / 15kV Air

## Optional

- ▶ Integrated GSM : SMS, DTMF, GPRS/LTE
- ▶ Wi-Fi
- ▶ SD Card Support : Micro SD Card
- ▶ Serial Port Selection: RS232 - RS485

## Communication Protocols

- ▶ MODBUS TCP Master/Slave
- ▶ MODBUS RTU Master/Slave
- ▶ MODBUS GATEWAY
- ▶ MQTT
- ▶ IP Protocols: TCP, UDP, NTP, SNTP, HTTP, TFTP, DHCP, DNS

## Data Logger / Data Log Feature

- ▶ Programmable Data Log Blocks
- ▶ Memory Capacity: 256 Blocks / Registers

## Special GSM Functions

- ▶ SMS Receiving, Analyzing and Decoding Functions
- ▶ Creating Multiple Different SMS & Send Functions
- ▶ Call/DTMF Call Acceptance & DTMF Decoding Functions
- ▶ Dial / DTMF Call Initiation & DTMF Code Sending Functions

## Input / Output

- ▶ Internal I/O:
  - GA0 / GA3; 16DI, 8DO, 4AI, 2AO, 4RELAY, 2RTD
  - GA1 / GA4; 16DI, 8DO, 4AI, 2AO, 4RELAY
  - GA6 / GA7; 16DI, 8DO, 4AI
- ▶ Expansion : Max. 1024 I/O (XIO211)

## Position Control Functions

- ▶ Fast Counter Input: Max 200 kHz
- ▶ PWM : Max 65 kHz
- ▶ PTO : Max 50 kHz

## Real Time Clock & Calendar

- ▶ RTC : Lithium Battery, 4 Years Battery Life
- ▶ WDT: Software Watch Dog Timer
- ▶ Timing Functions:
  - Weekly / Annual Programming
  - Astronomical Timing
- ▶ NTP Client Support
- ▶ Battery Status / Level Reading Functions
- ▶ Time Synchronization Over MODBUS

**NEW**

# XIO1100 ORDER CODE

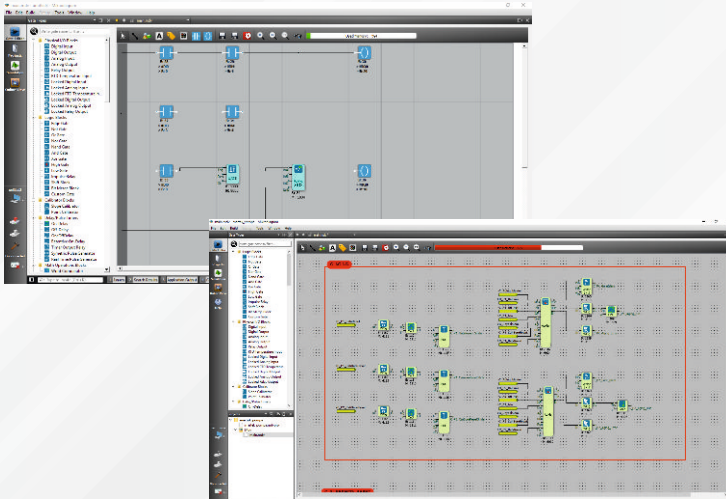


PRODUCT CODE	BOARD	POWER	DIN	DOUT	AIN		AOUT			RTD		DALI	MINIMUM ORDER QUANTITY
			Channel Number	Channel Number	Channel Number	Resolution	Signal Type	Channel Number	Resolution	Signal Type	Channel Number	Signal Type	
XIO1100-E0N-GD0-B2000	GD0	24V DC	16										8
XIO1100-E0N-GD1-B4000	GD1	24V DC		16									8
XIO1100-E0N-GD2-B0401	GD2	24V DC			8	16 Bit	0-20ma/ 0-10V						8
XIO1100-E0N-GD3-B0000	GD3	24V DC						8	12 Bit	0-20ma			8
XIO1100-E0N-GD3-B0800	GD3	24V DC						8	12 Bit	0-10V			8
XIO1100-E0N-GD4-B0000	GD4	24V DC									6	PT1000	8
XIO1100-E0N-GD4-B0010	GD4	24V DC									6	PT100	8
XIO1100-E0N-GD6-B2000	GD6	24V DC	8										8
XIO1100-E0N-GD7-B4000	GD7	24V DC		8									8
XIO1100-E0N-GD8-B6000	GD8	24V DC	8	8									8
XIO1100-E0N-GD9-B0000	GD9	24V DC			4	12 Bit	0-20ma	4	12 Bit	0-20ma			16
XIO1100-E0N-GD9-B0900	GD9	24V DC			4	12 Bit	0-10V	4	12 Bit	0-10V			16
XIO1100-E0N-GDA-B0000	GDA	24V DC										1	8

PRODUCT CODE	BOARD	POWER	WIRELESS COM.	GPS
XCM1100-E0N-GDC-B0000	GDC	24V DC	LTE	
XCM1100-E0N-GDD-B0000	GDD	24V DC	LTE	1
XCM1100-E0N-GDE-B0000	GDE	24V DC	2G	
XCM1100-E0N-GDF-B0000	GDF	24V DC	RF	
XCM1100-E0N-GDG-B0000	GDG	24V DC	WiFi	
XCM1100-E0N-GDX-B0000	GDX		RAIL END MODULE	

# MIKRODIAGRAM

Free of Charge



## PLC Project Development Facilities

- ▶ PLC Selection
- ▶ Adding / Removing Expansion Modules
- ▶ Generating Project Main Editor Page and Adding New
- ▶ Custom Logical Block Creation Feature
- ▶ Line Label Definition and Assigning Label
- ▶ Reporting Project Design Errors During Compilation
- ▶ Firmware and Program Update via TCP
- ▶ Upload / Download Project in PLC
- ▶ Project Encryption Feature
- ▶ FTP Logging Feature
- ▶ Accessing and Changing PLC Time and Parameter Information



## Programming Languages

- ▶ In accordance with IEC 61131-3 directives
- ▶ Functional Block Diagram and Ladder Programming



## Operating Modes

- ▶ Simulation Mode : Allows Project Testing Without PLC Connection
- ▶ Online Watch Mode: By Establishing PLC Connection over TCP or Serial Connection, Block Values are Displayed Instantly

## SOME OF FUNCTION BLOCKS

<u>Motion Control Blocks</u>	<u>Table Blocks</u>	<u>Calibration Blocks</u>	<u>Mathematical Operations Blocks</u>
Fast Counter Input	Word Table	Slope Calibrator	Word Comparator
Pulse Width Modulation	Analog Table	Point Calibrator	Analog Comparator
Pulse Train Output	Word Table Operation	<u>Delay / Pulse Timers</u>	Analog Math
Axis Definiton	Analog Table Operation	On Delay	Word Math
Axis Control	Long Table	Off Delay	Long Math
<u>Controller Blocks</u>	Bit Table	On/Off Delay	Long Comparator
Hysteresis	Long Table Operation	Retentive On Delay	<u>Number of Blocks</u>
PID Controller	<u>Calendar Blocks</u>	Timer Output Relay	Up / Down Counter
Analog Ramp	Weekly Timer	Symmetric Pulse Generator	Run Time
On / Off Controller	Yearly Timer	Real Time Pulse Generator	
	Astronomical Timer		

**NEW**

# DISTRIBUTED CONTROL SYSTEMS (DCS)





**Industrial RTU Router**

**Remote Terminal Unit**

**Rack Mount Remote Terminal Unit**

# DM50 SERIES



## </> Programming

- ▶ Programming Editor; Teledigram
- ▶ Function block diagram (FBD), Ladder
- ▶ Accessing Address Values via Web Interface



## Firewall

- ▶ Dmz
- ▶ Filtering (IP/Domain Name/MAC Address)
- ▶ Port Filtering
- ▶ Port Mapping
- ▶ Access Control



## Options

- ▶ Integrated GSM : SMS, DTMF, GPRS/LTE
- ▶ Wi-Fi
- ▶ SD Card Support : Micro SD Card
- ▶ Serial Port Selection: RS232 - RS485



## Expansion Capability

- ▶ Max 1024 I/O
- ▶ Compatible Expansion Module: XIO110, XIO1100



## Communication Port

- ▶ Ethernet : 2 Port WAN/LAN, 1 Port LAN, 10/100 Mbps
- ▶ Integrated GSM: 1 Port, 4G-LTE



## Environmental Conditions

- ▶ Operating Temperature : -25 / +75 C
- ▶ Storing Temperature : -30 / +80 C
- ▶ Humid : 25..95 RH
- ▶ Input Voltage : 9..50 V DC



## Real Time Clock & Calendar

- ▶ RTC : Lithium Battery, 4 Year
- ▶ WDT: Software Watch Dog Timer
- ▶ Timing Functions: Weekly / Annual Programming, Astronomical Timing
- ▶ NTP / SNTP Client Support
- ▶ Battery Status / Level Reading Functions
- ▶ Time Synchronization over MODBUS



## Management Interfaces

- ▶ Web-Based User Interface
- ▶ CLI
- ▶ SNMP



## Network

- ▶ Network Protocols: PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, DDNS, VRRP, HTTP, HTTPS, DNS, NTP, SNTP, ARP, QoS, Telnet
- ▶ VPN : IPsec, OpenVPN
- ▶ Encryption : TLS



## Communication Protocols

- ▶ MODBUS TCP Master/Slave
- ▶ MODBUS RTU Master/Slave
- ▶ MODBUS GATEWAY
- ▶ MQTT
- ▶ DNP3
- ▶ IEC 61850
- ▶ IEC 60870-5-101/103/104
- ▶ IEC 62056-21
- ▶ DLMS/COSEM
- ▶ DALI

## DM50 SERIES

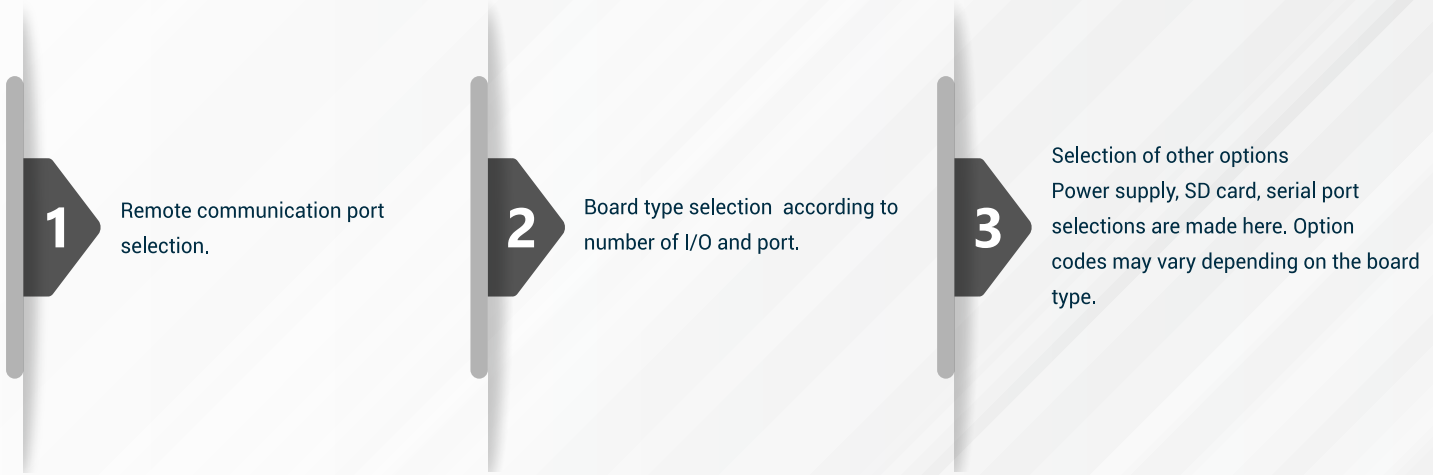
**Board Type**

- ▶ Internal I/O:
  - GE0; 2DI, 2DO, 2RS485
  - GE1; 2DI, 2DO, 1RS232, 2RS485, 1GPS
  - GE2; 4DI, 4DO, 2RS485
- ▶ Expansion :
  - Max. 1024 I/O (XIO110, XIO1100)

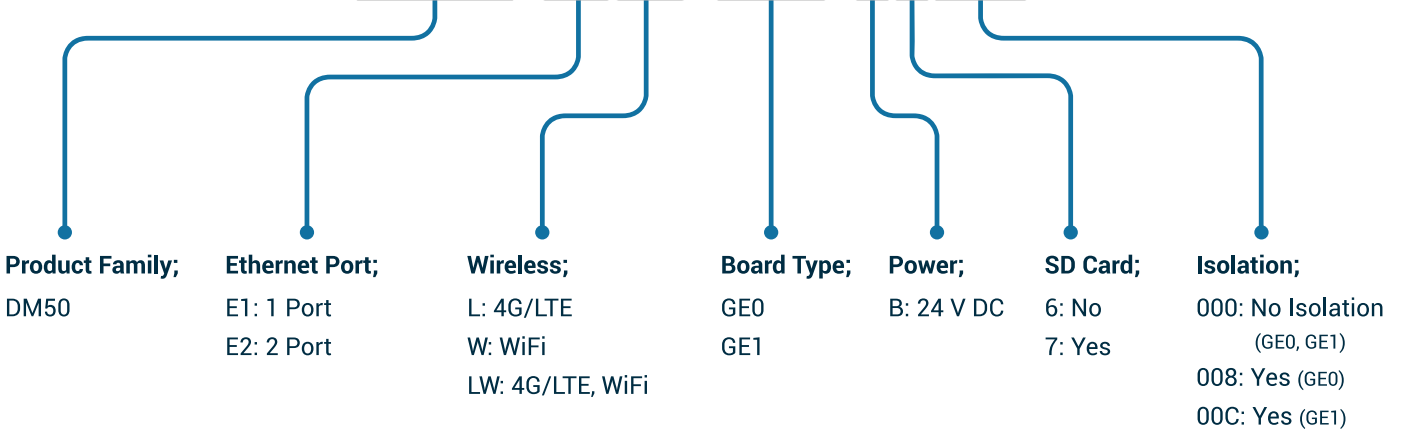
**Cellular**

- ▶ LTE/TDD LTE
- ▶ WCDMA/CDMA/TD-SCDMA
- ▶ HSUPA/HSPA+/DC-HSPA+
- ▶ GSM/GPRS/EDGE
- ▶ Automatic Operator Switching
- ▶ SMS Commands

# DM50 ORDER CODE



## DM50-E1LW-GE0-B7008





# DM50 ORDER CODE

## MODEL-COM-BOARD-OPTIONS

COM	ETHERNET	WIRELESS	MINIMUM ORDER QUANTITY
E1L	1	LTE/4G	-
E1W	1	WiFi	-
E1LW	1	LTE/4G, WiFi	-
E2L	2	LTE/4G	-
E2W	2	WiFi	-
E2LW	2	LTE/4G, WiFi	-







## MODEL-COM-BOARD-OPTIONS

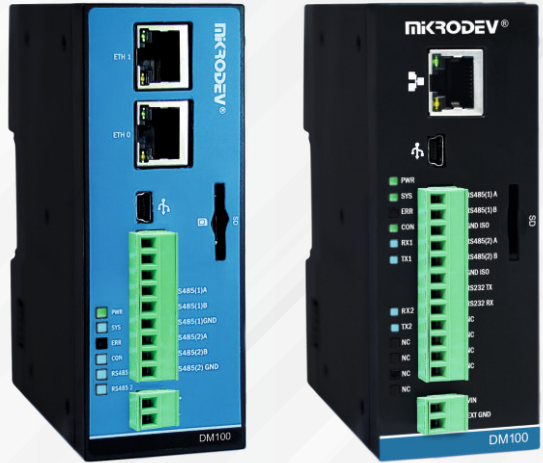
BOARD	DIN	DOUT	GPS	RS232	RS485	MINIMUM ORDER QUANTITY
	Channel Number	Channel Number	-	(ESD Protection 8kV Contact / 15 kV Air)	(ESD Protection 8 kV Contact / 15 kV Air)	
GE0	2	2			2	-
GE1	2	2	1	1	2	-
GE2	4	4			2	-

## MODEL-COM-BOARD-OPTIONS

OPTIONS	SUPPORTED BOARD TYPE	POWER	SD CARD	RS232 ISOLATION	RS485 ISOLATION	MINIMUM ORDER QUANTITY
B6000	GE0, GE1, GE2	24V DC				-
B6008	GE0, GE2	24V DC			✓	-
B600C	GE1	24V DC		✓	✓	-
B7000	GE0, GE1, GE2	24V DC	✓			-
B7008	GE0, GE2	24V DC	✓		✓	-
B700C	GE1	24V DC	✓	✓	✓	-

# DM100 SERIES

-   
High Performance RTU CPU
-   
NTP Time Synchronization
-   
Integrated SCADA
-   
DALI Lighting Protocol
-   
SD Card
-   
RESTful API



## Programming

- ▶ IEC 61131-3 Compatible Programming
- ▶ Live Process Data with Online Monitoring Monitoring / Response
- ▶ Remote Programming over TCP/IP
- ▶ Remote Project Upload / Download and Firmware Update
- ▶ Accessing Address Values via Web Interface
- ▶ PID and ON-OFF Control Function library
- ▶ NTP Time Synchronization
- ▶ Redundant Communication Ports (Ethernet)
- ▶ Programming Editor: Teledigram
- ▶ Teledigram Editor : IEC 61850, IEC 60870-5-101/103/104, DNP3, MQTT & MODBUS

## Environmental Conditions

- ▶ Operating Temperature: -25 / +75° C
- ▶ Storing Temperature : -30 / +80° C
- ▶ Case : Plastic, IP20

## Communication Protocols

- ▶ MODBUS TCP Master/Slave
- ▶ MODBUS RTU Master/Slave
- ▶ MODBUS GATEWAY
- ▶ MQTT
- ▶ DNP3
- ▶ IEC 61850
- ▶ IEC 60870-5-101/103/104
- ▶ IP Protokols: TCP, UDP, NTP, SNTP, HTTP, TFTP, DHCP, DNS, SNMP, TLS 1.2

## Event Logging

- ▶ Time Stamped Event Logging
- ▶ Event Logging Time Resolution: 1 Ms
- ▶ Max Event Log : 100.000

## Options

- ▶ Number of Ethernet Port
- ▶ Number of Serial Port
- ▶ Isolation of Serial Port

## Communication Port

- ▶ Ethernet :
  - GC0; 1 Port 10/100 Mbps
  - GC3; 2 Port 10/100 Mbps
- ▶ Serial Port :
  - GC0; 1 Port RS232 & 2 Port RS485
  - GC3; 2 Port RS485
- ▶ ESD Protection :
  - 8kV Contact / 15kV Air

## Data Logger / Data Recording Feature

- ▶ SD Card Support: Micro SD Card
- ▶ Programmable Data Log Trigger Blocks

## Input / Output

- ▶ Expansion: Max. 1024 I/O (with XIO110)

# DM100 SERIES

## ViewPLUS SCADA



- MODBUS TCP
- MQTT
- IEC60870-5-104
- IEC60870-5-101
- SNMP



- IEC62056-21
- IEC61850
- IEC60870-5-103
- MODBUS TCP / RTU
- DNP3

- Power Protection Relay
- Driver
- Network Analyzer
- Reactive Power Control Relay
- Physical Signals
- Power Meter



### Real Time Clock & Calendar

- ▶ RTC : Lithium Battery, 4 Year
- ▶ WDT: Software Watch Dog Timer
- ▶ Timing Functions:
  - Weekly / Annual Programming
  - Astronomical Timing
- ▶ NTP / SNTP Client Support
- ▶ Battery Status / Level Reading Functions
- ▶ Time Synchronization over MODBUS



### Supply

- ▶ Supply Voltage: 12-48VDC
- ▶ Supply Current : 300mA @ 24VDC



### Standards

- ▶ IEC 61000-4-2 : 6 kV Contact, 8 kV Air Discharge
- ▶ IEC 61000-4-5 : Surge Immunity (1 kV Line-Line, 2 kV Line-Earth (1,2/50µs))
- ▶ IEC 61000-4-6 : RF Field Effect by 10 Vrms (150kHz - 80MHz)
- ▶ IEC 61000-4-18 : 2.5 kV (1 Mhz Electromagnetic Wave 400/s Repeat)

# DM100 ORDER CODE

1

Remote communication port selection.

2

Board type selection according to number of I/O and port.

3

Selection of other options  
Power supply, SD card, serial port selections are made here. Option codes may vary depending on the board type.



## DM100-E2N-GC3-B1000

**Product Family;**  
DM100

**Ethernet Port;**  
E1: 1 Port (GC0)  
E2: 2 Port (GC3)

**Wireless;**  
N: No Wireless

**Board Type;**  
GC0  
GC3

**Power;**  
B: 24 V DC

**SD Card;**  
1: Yes

**Isolation;**  
000: No Isolation (GC0, GC3)  
008: Yes (GC3)  
00C: Yes (GC0)

## DM100 ORDER CODE

## MODEL-COM-BOARD-OPTIONS

COM	ETHERNET	WIRELESS	SUPPORTED BOARD TYPE	MINIMUM ORDER QUANTITY
E1N	1		GC0	8
E2N	2		GC3	16

## MODEL-COM-BOARD-OPTIONS

BOARD	RS232	RS485	MINIMUM ORDER QUANTITY
	(ESD Protection 8kV Contact / 15 kV Air)	(ESD Protection 8 kV Contact / 15 kV Air)	
GC0	1	2	8
GC3		2	8

## MODEL-COM-BOARD-OPTIONS

OPTIONS	SUPPORTED BOARD TYPE	POWER	SD CARD	RS232 ISOLATION	RS485 ISOLATION	MINIMUM ORDER QUANTITY
B1000	GC0, GC3	24V DC	✓			8
B1008	GC3	24V DC	✓		✓	16
B100C	GC0	24V DC	✓	✓	✓	16

# RTU300 SERIES



Compact RTU



NTP Time Synchronization



Integrated GSM 4G LTE



Multiple Connection



Memory Card Data Logging



Up to 1024 I/O Expansion



## </> Programming

- ▶ IEC61131-3 Programming Interface : FBD (Function Block Diagram) LD (Ladder)
- ▶ Configuration & Programming : Type B USB Ethernet 10/100 Mbps
- ▶ Programming Editor : Teledialogram
- ▶ Teledialogram Editor Protocol Support: IEC 61850, IEC 60870-5-101/103/104, DNP3, MQTT & MODBUS
- ▶ Live Process Data with Online Monitoring Monitoring / Response
- ▶ Remote Programming over TCP/IP
- ▶ Remote Project Upload / Download and Firmware Update
- ▶ PID and ON-OFF Control Function Library
- ▶ NTP Time Synchronization



## Environmental Conditions

- ▶ Operating Temperature: -25 / +75° C
- ▶ Storing Temperature : -30 / +80° C
- ▶ Case : Plastic, IP20



## Communication Protocols

- ▶ MODBUS TCP Master/Slave
- ▶ MODBUS RTU Master/Slave
- ▶ MODBUS GATEWAY
- ▶ MQTT
- ▶ DNP3
- ▶ IEC61850
- ▶ IEC60870-5-101/103/104
- ▶ IEC62056-21, DLMS/COSEM
- ▶ IP Protocols: TCP, UDP, NTP, SNTP, HTTP, TFTP, DHCP, DNS



## Input / Output

- ▶ Internal I/O : GA1 / GA4; 16DI, 8DO, 4AI, 2AO, 4RELAY GA6 / GA7; 16DI, 8DO, 4AI GA2 : 16DI, 8DO, 8AI GA5 : 16DI, 8DO, 4RELAY
- ▶ Expansion : Max. 1024 I/O (XIO211)



## Data Logger / Data Recording Feature

- ▶ Programmable Data Log Trigger Blocks



## Communication Port

- ▶ Ethernet : 1 Port 10/100 Mbps
- ▶ Serial Port : GA1/GA5/GA6; 1 Port RS232 & 1 Port RS485 GA2 : 1 Port RS232 & 2 Port RS485 GA4/GA7 : 2 Port RS485
- ▶ ESD Protection: 8kV Contact / 15kV Air



## Options

- ▶ Integrated GSM : SMS DTMF GPRS/LTE
- ▶ SD Card Support : Micro SD Card
- ▶ Serial Port Selection: RS232-RS485



## Event Logging

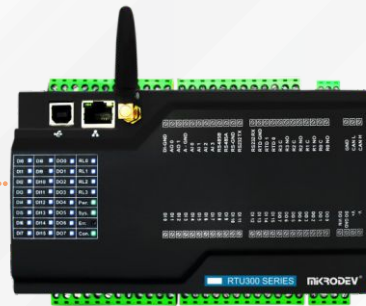
- ▶ Time Stamped Event Logging
- ▶ Event Logging Time Resolution: 1 ms
- ▶ Max Event Log : 20000

# RTU300 SERIES

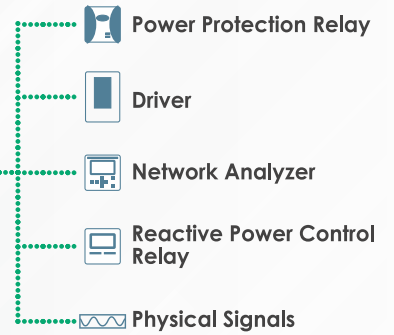
## ViewPLUS SCADA



IEC IEC60870-5-101  
IEC IEC60870-5-104  
MODBUS TCP  
MQTT  
DNP3  
SNMP



IEC IEC62056-21  
IEC IEC61850  
IEC IEC60870-5-103  
MODBUS TCP / RTU  
DNP3



## Real Time Clock & Calendar

- ▶ RTC : Lithium Battery, 3 Years Battery Life
- ▶ WDT: Software Watch Dog Timer
- Timing Functions:
  - Weekly / Annual Programming
  - Astronomical Timing
- ▶ NTP Client Support
- ▶ Battery Status / Level Reading Functions
- ▶ Time Synchronization via MODBUS



## Supply

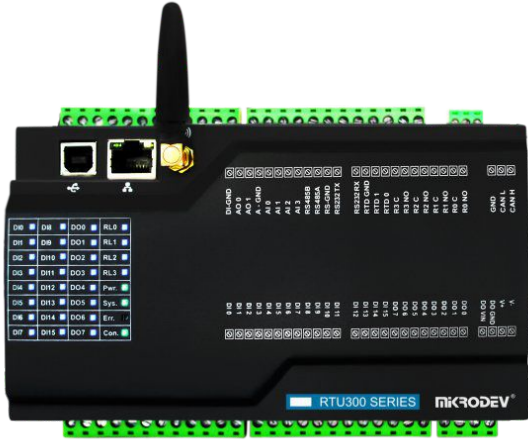
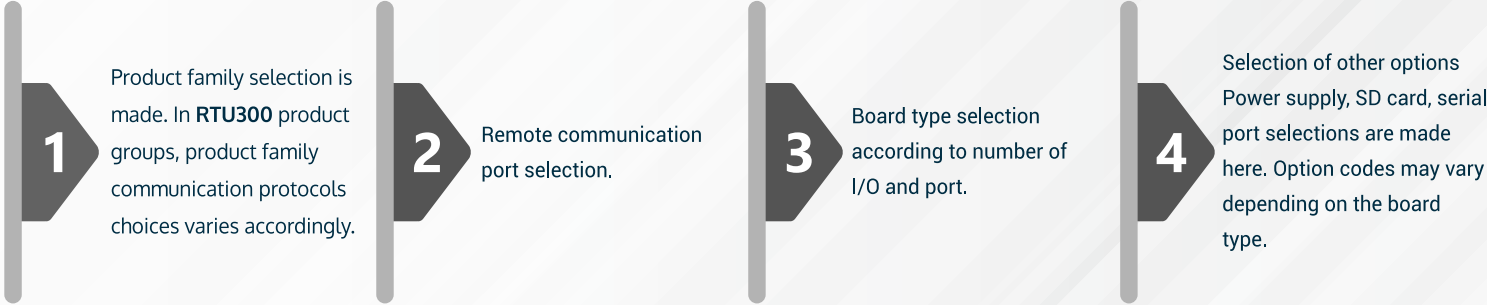
- ▶ Supply Voltage: 12-50 VDC
- ▶ Supply Current : 100 mA @ 24 VDC



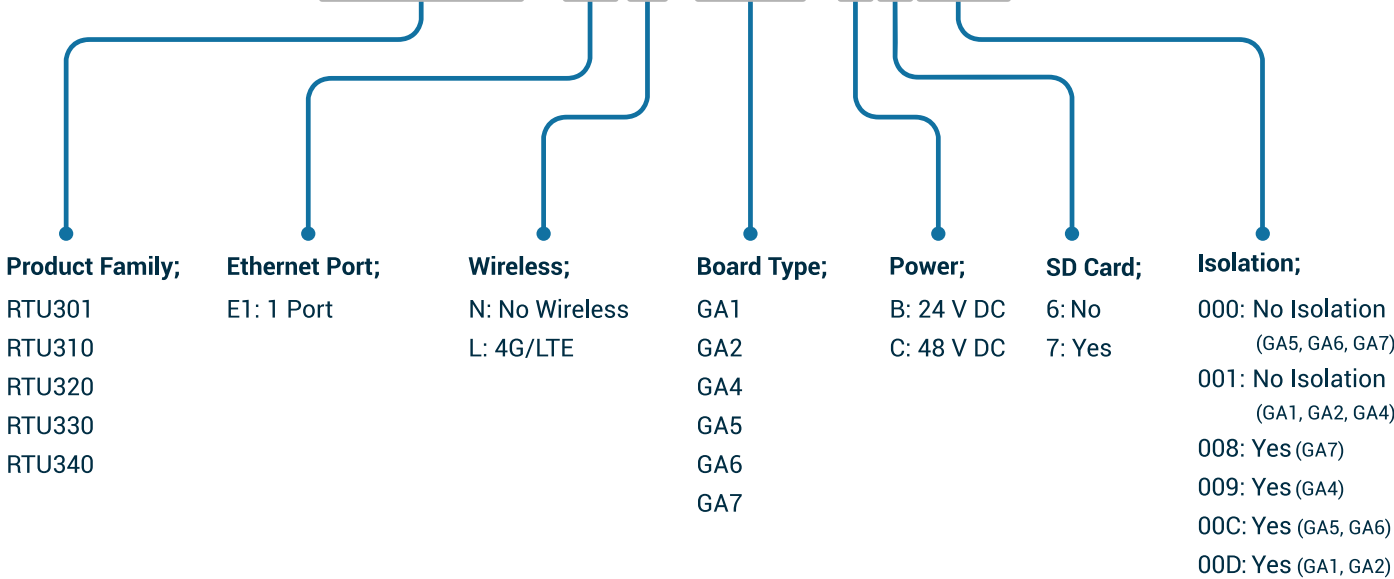
## Standards

- ▶ IEC 61000-4-2 : 6 kV Direct, 8 kV Air Discharge
- ▶ IEC 61000-4-6 : Rf field Effected by 10 Vrms (150kHz - 80MHz)
- ▶ IEC 61000-4-18: 2.5 kV (1 Mhz Electromagnetic Wave 400/s Repeat)

# RTU300 ORDER CODE



## RTU301-E1L-GA1-B6001





# RTU300 ORDER CODE

## MODEL-COM-BOARD-OPTIONS

MODEL	MODBUS	MQTT	DNP3	IEC60870-5-101	IEC60870-5-103	IEC60870-5-104	IEC61850
RTU301	✓	✓				✓	
RTU310	✓	✓					
RTU320	✓	✓	✓				
RTU330	✓	✓		✓	✓	✓	
RTU340	✓	✓		✓		✓	✓

## MODEL-COM-BOARD-OPTIONS

COM	ETHERNET	WIRELESS	MINIMUM ORDER QUANTITY
E1N	1		8
E1L	1	LTE/4G	8

## MODEL-COM-BOARD-OPTIONS

BOARD	DIN	DOUT	RELAY	AIN	AOUT	RS232	RS485	MINIMUM ORDER QUANTITY
	Channel Number	Channel Number	Channel Number	Channel Number	Channel Number	(ESD Protection 8kV Contact / 15 kV Air)	(ESD Protection 8kV Contact / 15 kV Air)	
GA1	16	8	4	4	2	1	1	16
GA2	16	8		8		1	2	24
GA4	16	8	4	4	2	0	2	16
GA5	16	8	4			1	1	32
GA6	16	8		4		1	1	8
GA7	16	8		4		0	2	8

## MODEL-COM-BOARD-OPTIONS

OPTIONS	SUPPORTED BOARD TYPE	POWER	AIN		AOUT		SD CARD	RS232 ISOLATION	RS485 ISOLATION	MINIMUM ORDER QUANTITY
			Resolution	Signal Type	Resolution	Signal Type				
B6000	GA5, GA6, GA7	24V DC	12 Bit	0-20ma (GA6, GA7)						8
B6001	GA1, GA2, GA4	24V DC	16 Bit	0-20ma	12 Bit	0-20ma (GA1, GA4)				8
B6008	GA7	24V DC	12 Bit	0-20ma					✓	24
B6009	GA4	24V DC	16 Bit	0-20ma	12 Bit	0-20ma			✓	24
B600C	GA5, GA6	24V DC	12 Bit	0-20ma (GA6)				✓	✓	24
B600D	GA1, GA2	24V DC	16 Bit	0-20ma	12 Bit	0-20ma (GA1)		✓	✓	24
B7000	GA5, GA6, GA7	24V DC	12 Bit	0-20ma (GA6, GA7)			✓			8
B7001	GA1, GA2, GA4	24V DC	16 Bit	0-20ma	12 Bit	0-20ma (GA1, GA4)	✓			8
B7008	GA7	24V DC	12 Bit	0-20ma			✓		✓	24
B7009	GA4	24V DC	16 Bit	0-20ma	12 Bit	0-20ma	✓		✓	24
B700C	GA5, GA6	24V DC	12 Bit	0-20ma (GA6)			✓	✓	✓	24
B700D	GA1, GA2	24V DC	16 Bit	0-20ma	12 Bit	0-20ma (GA1)	✓	✓	✓	24
C6000	GA5, GA6, GA7	48V DC	12 Bit	0-20ma (GA6, GA7)						24
C6001	GA1, GA2, GA4	48V DC	16 Bit	0-20ma	12 Bit	0-20ma (GA1, GA4)				24
C6008	GA7	48V DC	12 Bit	0-20ma					✓	32
C6009	GA4	48V DC	16 Bit	0-20ma	12 Bit	0-20ma			✓	32
C600C	GA5, GA6	48V DC	12 Bit	0-20ma (GA6)				✓	✓	32
C600D	GA1, GA2	48V DC	16 Bit	0-20ma	12 Bit	0-20ma (GA1)		✓	✓	32
C7000	GA5, GA6, GA7	48V DC	12 Bit	0-20ma (GA6, GA7)			✓			24
C7001	GA1, GA2, GA4	48V DC	16 Bit	0-20ma	12 Bit	0-20ma (GA1, GA4)	✓			24
C7008	GA7	48V DC	12 Bit	0-20ma			✓		✓	32
C7009	GA4	48V DC	16 Bit	0-20ma	12 Bit	0-20ma	✓		✓	32
C700C	GA5, GA6	48V DC	12 Bit	0-20ma (GA6)			✓	✓	✓	32
C700D	GA1, GA2	48V DC	16 Bit	0-20ma	12 Bit	0-20ma (GA1)	✓	✓	✓	32

NEW

# DM500 SERIES



Rack Mounting



Hot Stand By Redundant CPU



GPS, 4G-LTE



Hot Swap



SD Card



Redundant Power Supply



## Product Features

- ▶ Module Name: DM500 CPU Module
- ▶ Mounting Type: Rack
- ▶ Connection : CANBUS Based, 1 MBit Speed
- ▶ ID Address Assignments: Automatic (via Rack Panel)
- ▶ Run/Stop Code
- ▶ Hot Swap
- ▶ Real Time Via WEB Server
- ▶ Offline Simulation Possibility
- ▶ Installing Programs over TCP / IP / Download
- ▶ Firmware Update via Remote Connection
- ▶ Password Defined Software Protection
- ▶ IP Filtering Feature
- ▶ Communication Opportunity with IoT Platforms
- ▶ CPU Redundancy (Hot-Standby Redundant)
- ▶ Redundant Communication Ports



## Expansion Capability

- ▶ Compatible Expansion Module: DM500 I/O Series
- ▶ Total Number of I/O : Variable (Rack Panel & I/O Module According to Your Choice)



## Communication Protocols

- ▶ MODBUS TCP Master/Slave
- ▶ MODBUS RTU Master/Slave
- ▶ MODBUS GATEWAY
- ▶ MQTT
- ▶ DNP3
- ▶ IEC61850
- ▶ IEC60870-5-101/103/104
- ▶ IP Protocols: TCP, UDP, NTP, SNTP, HTTP, TFTP, DHCP, DNS, SNMP, TLS 1.2, RESTful API



## Communication Port

- ▶ Ethernet : 2 Port 10/100 Mbps  
1.5 kVrms Galvanic Isolation
- ▶ Serial Port : 2 port RS232  
2 port RS485  
8kV Contact / 15kV Air



## Electrical Wiring

- ▶ Serial Ports : RJ45 Socket
- ▶ I/O Inputs & Outputs : D-Sub Connector (37 Pin Male)
- ▶ Rack Expansion Connection: D-Sub Connector (37 Pin Male)



## Event Logging

- ▶ SD Card Support : micro SD
- ▶ Permanent Memory Capacity : 128 Block / Register Type
- ▶ Event Logging Time Resolution : 1 ms
- ▶ Programmable Data Logging Triggering Functions
- ▶ Protection of Process Data in Case of Power Outage
- ▶ Time Tagged Event Recording



## Real Time Clock & Calendar

- ▶ RTC : Lithium Battery, 3 Years Battery Life
- ▶ WDT: Software Watch Dog Timer
- ▶ Timing Functions: Weekly/Annual Programming  
Astronomical Timing
- ▶ NTP Server/Client Support
- ▶ Battery Status/Level Reading Functions
- ▶ Time Synchronization via MODBUS



## Programming

- ▶ IEC61131-3 Programming Interface: FBD (Function Block Diagram)  
LD (Ladder)

## DM500 MODULES



### DM500 PSU Power Supply Module

#### PS0 Module

- ▶ **Product Features:**  
Module Name; DM500 PSU Module  
Connection ; CANBUS Based, 1 MBit  
Speed  
ID Setting ; Automatic (via Rack Panel)
- ▶ **Electrical Wiring :**  
Primary PSU & Digital Input; Demountable  
Terminal Block with Screw, (pitch 3.81 mm)  
Power Supply Input ; Demountable  
Terminal Block with Screw, (pitch 3.81 mm)
- ▶ **LED Signals :**  
Power ; 1 LED Green  
Running ; 1 LED Green  
Digital Input ; 1 LED Green  
Primary PSU ; 1 LED Green  
24 V DC Out ; 1 LED Green  
Connection ; 1 LED Green  
Warning/Error; 1 LED Red
- ▶ **Power Supply :**  
Power Supply Input ; 48 VDC  
Input Tolerance Range ; -20%...  
+20%  
Total Output Power (Backplane); 15 W

#### PS1 Module

- ▶ **Product Features:**  
Module Name; DM500 PSU Module  
Connection ; CANBUS Based, 1 MBit  
Speed  
ID Setting ; Automatic (via Rack Panel)  
Redundant Operation Support
- ▶ **Electrical Wiring :**  
Primary PSU&Digital Input; Demountable  
Terminal Block with Screw, (pitch 3.81 mm)  
Power Supply Input ; Demountable  
Terminal Block with Screw, (pitch 3.81 mm)
- ▶ **LED Signals :**  
Power ; 1 LED Green  
Running ; 1 LED Green  
Digital Input ; 1 LED Green  
Primary PSU ; 1 LED Green  
24 V DC Out ; 1 LED Green  
Connection ; 1 LED Green  
Warning/Error; 1 LED Red
- ▶ **Power Supply:**  
Power Supply Input ; 48 VDC  
Input Tolerance Range ; -20%...  
+20%  
Total Output Power (Backplane); 15 W

### DM500 Analog Input Module

#### IO1 Module

- ▶ **Product Features:**  
Module Name; 12 Channel Rack Mounting  
Analog Input Expansion Module  
Connection ; CANBUS Based, 1 MBit Speed  
ID Setting ; Automatic (via Rack Panel)  
Hot Swap
- ▶ **Electrical Wiring :**  
Inputs and Outputs; D-Sub Connector  
(37 Pin Male)
- ▶ **Board Type :**  
Analog Input; 12 Channel, 16 Bit Resolution  
AIN Range ; 0-20 mA, 4-20 mA
- ▶ **LED Signals :**  
Power ; 1 LED Green  
Running ; 1 LED Green  
Analog Inputs; 12 LED Green  
Warning/Error; 1 LED Red

## DM500 MODULES



### • DM500 Analog Output Module

#### IO3 Module

- ▶ Product Features:
  - Module Name; 12 Channel Rack Mounting Analog Output Expansion Module
  - Connection ; CANBUS Based, 1 MBit Speed
  - ID Setting ; Automatic (via Rack Panel)
  - Hot Swap
- ▶ Electrical Wiring :
  - Inputs and Outputs; D-Sub Connector (37 Pin Male)
- ▶ Board Type :
  - Analog Output; 12 Channel, 16 Bit Resolution
  - AOUT Range ; 0-20 mA, 4-20 mA
- ▶ LED Signals :
  - Power ; 1 LED Green
  - Running ; 1 LED Green
  - Analog Outputs; 12 LED Green
  - Warning/Error ; 1 LED Red

### • DM500 Digital Input Module

#### IO0 Module

- ▶ Product Features:
  - Module Name; 32 Channel Rack Mounting Digital Input Expansion Module
  - Connection ; CANBUS Based, 1 MBit Speed
  - ID Setting ; Automatic (via Rack Panel)
  - Hot Swap
- ▶ Electrical Wiring :
  - Inputs and Outputs; D-Sub Connector (37 Pin Male)
- ▶ Board Type :
  - Digital Input ; 32 Channel, 16 Bit Resolution
  - DIN On Voltage; 12..30 VDC
  - DIN Off Voltage; 0..5VDC
- ▶ LED Signals :
  - Power ; 1 LED Green
  - Running ; 1 LED Green
  - Digital Inputs ; 17 LED Green
  - Warning/Error; 1 LED Red

### • DM500 Digital Output Module

#### IO2 Module

- ▶ Product Features:
  - Module Name; 32 Channel Rack Mounting Digital Output Expansion Module
  - Connection ; CANBUS Based, 1 MBit Speed
  - ID Setting ; Automatic (via Rack Panel)
  - Hot Swap
- ▶ Electrical Wiring :
  - Inputs and Outputs; D-Sub Connector (37 Pin Male)
- ▶ Board Type :
  - Digital Output; 32 Channel, PNP
  - DOUT Range ; 2A@24VDC
- ▶ LED Signals :
  - Power ; 1 LED Green
  - Running ; 1 LED Green
  - Digital Outputs; 17 LED Green
  - Warning/Error ; 1 LED Red

ViewPLUS SCADA

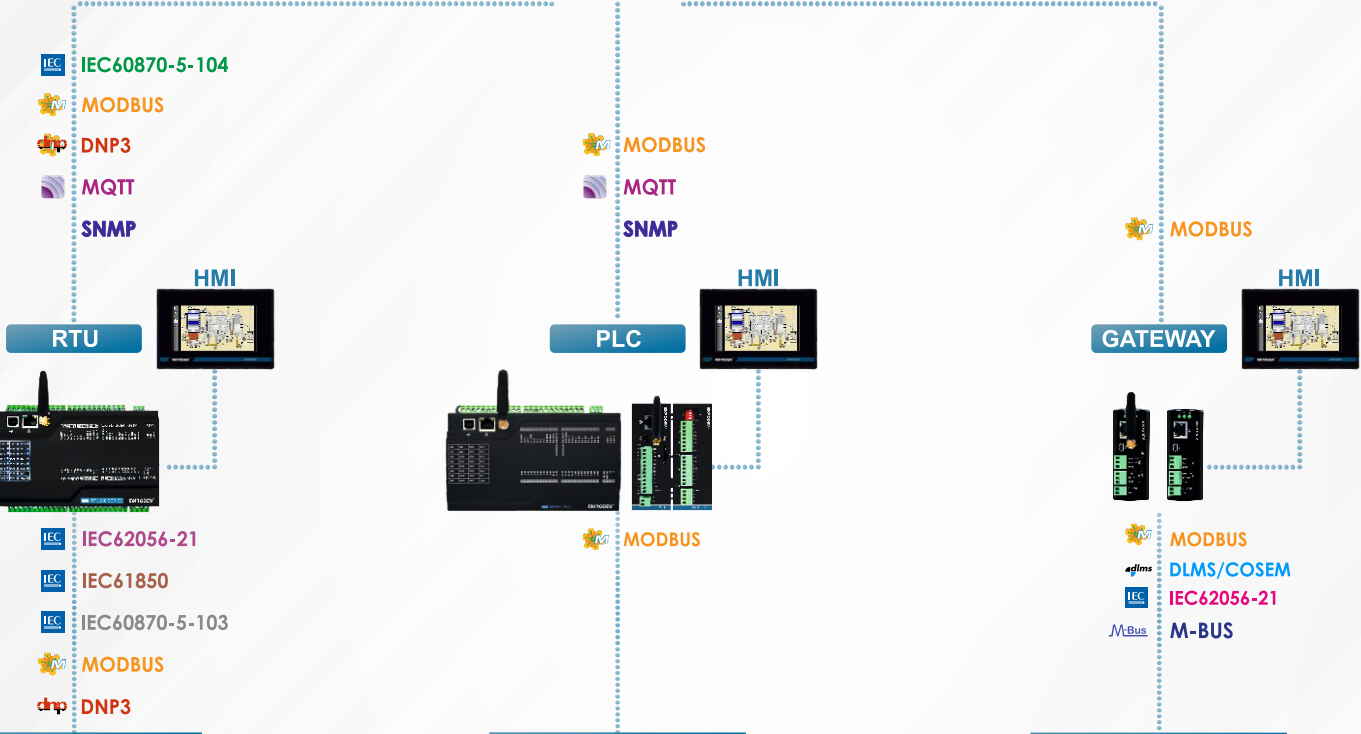


1. Workstation ..... n. Workstation

IEC IEC60870-5-101 IEC IEC60870-5-104 MODBUS MQTT DNP3 DLMS/COSEM



DM500 DM500 (Redundant)



Power Protection Relay, Quality Analyzer,  
Flowmeter, Soft Starter, Inverter  
Analog Signals, Digital Signals,  
Resistive Signals

Flowmeter, Soft Starter,  
Inverter, Analog Signals,  
Digital Signals, Resistive Signals

Electricity Meter, Water meter,  
Calorimeter, Flowmeter,  
Natural Gas Meter, Inverter, Soft Starter

# IOT SOLUTIONS





MODBUS Gateway

Serial Device Server

M-Bus MODBUS Gateway

DLMS MODBUS Gateway

Assistant Configuration Software

# MODBUS GATEWAY



RS232,  
RS485



MODBUS  
GATEWAY



Ethernet,  
GSM or WiFi



## Configuration & Management

- ▶ User-friendly Configuration Software (Assistant)
- ▶ Configuration:
  - Type C USB
  - Ethernet 10/100 Mbps
- ▶ Network Device Search Feature
- ▶ Remote Firmware Update



## Integrated Communication Ports

- ▶ Serial Port:
  - GC2; 1 Port RS232 & 1 Port RS485
  - GC3; 2 Port RS485
- ▶ ESD Protection 8 kV Contact / 15 kV Air



## LED Signals

- ▶ Power : 1 LED Steady Green
- ▶ System : 1 LED 1Hz Green
- ▶ Connection: 1 LED 2Hz Green



## Protocols & Cross-Networking

- ▶ MODBUS TCP Master with RS485/RS232 MODBUS RTU Slave
- ▶ MODBUS TCP Slave with RS485/RS232 MODBUS RTU Master
- ▶ MODBUS RTU over TCP (MODBUS TUNNEL)



## TCP Socket Extra Features

- ▶ Connection Control and Automatic Reconnection



## Communication Protocols

- ▶ MODBUS TCP Master/Slave
- ▶ MODBUS RTU Master/Slave



## Maximum Number of Connections

- ▶ Number of Server Sockets : 2
- ▶ Number Of Client Sockets Per Server: 16
- ▶ RS485 Line Device Number : Limited by Hardware



## Optional Communication Ports

- ▶ Entegre GSM / LTE
- ▶ Ethernet 10/100 Mbps
- ▶ Wi-Fi
- ▶ Serial Port Selection: RS232 - RS485



## Supply

- ▶ Supply Voltage: 9-36VDC
- ▶ Supply Current : 50mA @ 24VDC



# MBS100 ORDER CODE

1

Remote communication port selection.

2

Board type selection according to number of I/O and port.

3

Selection of other options Power supply, SD card, serial port selections are made here. Option codes may vary depending on the board type.



## MBS100-E0L-GC3-B0000

**Product Family;**  
MBS100

**Ethernet Port;**  
E0: No Port  
E1: 1 Port

**Wireless;**  
N: No Wireless (E1)  
G: 2G (E0)  
L: 4G/LTE (E0)  
W: WiFi (E0)

**Board Type;**  
GC2  
GC3

**Power;**  
B: 24 V DC

**SD Card;**  
0: No

**Isolation;**  
000: No Isolation (GC2, GC3)  
008: No (GC3)  
00C: No (GC2)

# MBS100 ORDER CODE

MODEL- <b>COM</b> -BOARD-OPTIONS			
MODEL	ETHERNET	WIRELESS	MINIMUM ORDER QUANTITY
E1N	1		8
E0G		2G	8
E0L		LTE/4G	8
E0W		WiFi	8

MODEL-COM- <b>BOARD</b> -OPTIONS			
BOARD	RS232 (ESD Protection 8kV Contact / 15 kV Air)	RS485 (ESD Protection 8kV Contact / 15 kV Air)	MINIMUM ORDER QUANTITY
GC2	1	1	8
GC3		2	8

MODEL-COM-BOARD- <b>OPTIONS</b>					
OPTIONS	SUPPORTED BOARD TYPE	POWER	RS232 ISOLATION	RS485 ISOLATION	MINIMUM ORDER QUANTITY
B0000	GC2, GC3	24V DC			8
B0008	GC3	24V DC		✓	16
B000C	GC2	24V DC	✓	✓	16

# SERIAL DEVICE SERVER



## Configuration & Management

- ▶ Configuration:
  - Type C USB
  - Ethernet 10/100 Mbps
- ▶ Network Device Search Feature
- ▶ Remote Firmware Update
- ▶ Transparent Communication
- ▶ Multi-Link
- ▶ Bidirectional Access over Serial Port & TCP/IP

## TCP Socket Extra Features

- ▶ TCP Socket Type: Server or Client
- ▶ Connection Control & Automatic Reconnection

## Supply

- ▶ Supply Voltage: 9-36VDC
- ▶ Supply Current : 50mA @ 24VDC

## Optional Communication Ports

- ▶ Integrated GSM / LTE
- ▶ Ethernet 10/100 Mbps
- ▶ Wi-Fi
- ▶ RF: 868 MHz Free Frequency Bands, TX Power Up To 0.5W

## Integrated Communication Ports

- ▶ Serial Port: 1 Port RS232 & 1 Port RS485
- ▶ ESD Protection 8 kV Contact / 15 kV Air

## Maximum Number of Connections

- ▶ Number of Server Sockets : 2
- ▶ Number Of Client Sockets Per Server: 16
- ▶ RS485 Line Device Number : Limited by Hardware

## LED Signals

- ▶ Power : 1 LED Steady Green
- ▶ System : 1 LED 1Hz Green
- ▶ Connection: 1 LED 2Hz Green

# SERIAL DEVICE SERVER

1

Remote communication port selection.

2

Board type selection according to number of I/O and port.

3

Selection of other options Power supply, SD card, serial port selections are made here. Option codes may vary depending on the board type.



## SC100-E0R-GC2-B0000

**Product Family;**  
SC100

**Ethernet Port;**  
E0: No Port  
E1: 1 Port

**Wireless;**  
N: No Wireless (E1)  
G: 2G (E0)  
L: 4G/LTE (E0)  
W: WiFi (E0)  
R: RF (E0)

**Board Type;**  
GC2

**Power;**  
B: 24 V DC

**SD Card;**  
0: No

**Isolation;**  
000: No Isolation  
00C: Yes

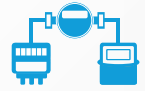
# SC100 ORDER CODE

MODEL-COM-BOARD-OPTIONS			
COM	ETHERNET	WIRELESS	MINIMUM ORDER QUANTITY
E1N	1		8
E0G		2G	8
E0L		LTE/4G	8
E0W		WiFi	8
E0R		RF	16

MODEL-COM-BOARD-OPTIONS			
BOARD	RS232 (ESD Protection 8kV Contact / 15 kV Air)	RS485 (ESD Protection 8kV Contact / 15 kV Air)	MINIMUM ORDER QUANTITY
GC2	1	1	8

MODEL-COM-BOARD-OPTIONS					
OPTIONS	SUPPORTED BOARD TYPE	POWER	RS232 ISOLATION	RS485 ISOLATION	MINIMUM ORDER QUANTITY
B0000	GC2	24V DC			8
B000C	GC2	24V DC	✓	✓	16

# M-BUS MODBUS GATEWAY



Multi Counter



Ethernet,  
GSM or  
WiFi



Primary &  
Secondary  
Addressing



## Configuration & Management

- ▶ User-Friendly Configuration Software
- ▶ Configuration:
  - Type C USB
  - Ethernet 10/100 Mbps
- ▶ Network Device Search Feature
- ▶ Remote Firmware Update
- ▶ M-BUS Via Configuration Software
  - Device Identification
- ▶ Primary Addressing
- ▶ Secondary Addressing
- ▶ Setting a Reading Period
- ▶ MODBUS Table with M-bus Address Map Pairing



## Integrated Communication Ports

- ▶ 1 Port M-Bus
- ▶ 1 Port RS485 ESD Protection 8 kV Contact / 15 kV Air



## Communication Protocols

- ▶ Master Communication Protocols; M-BUS EN1434-3
- ▶ Slave Communication Protocols; MODBUS TCP



## Optional Communication Ports

- ▶ Entegre GSM / LTE
- ▶ Ethernet 10/100 Mbps
- ▶ Wi-Fi



## LED Signals

- ▶ Power : 1 LED Steady Green
- ▶ System : 1 LED 1Hz Green
- ▶ Connection: 1 LED 2Hz Green



## TCP Socket Extra Features

- ▶ Connection Control & Automatic Reconnection



## Maximum Number of Connections

- ▶ Number of Server Sockets : 1
- ▶ Number Of Client Sockets Per Server : 16
- ▶ M-BUS Line Max. Number of Counters: 32



## Supply

- ▶ Supply Voltage: 9-36VDC
- ▶ Supply Current : 50mA @ 24VDC

# MMS100 ORDER CODE

1

Remote communication port selection.

2

Board type selection according to number of I/O and port.

3

Selection of other options Power supply, SD card, serial port selections are made here. Option codes may vary depending on the board type.



## MMS100-E1N-GC1-B0002

**Product Family;**  
MMS100

**Ethernet Port;**  
E0: No Port  
E1: 1 Port

**Wireless;**  
N: No Wireless (E1)  
G: 2G (E0)  
L: 4G/LTE (E0)  
W: WiFi (E0)

**Board Type;**  
GC1

**Power;**  
B: 24 V DC  
0: No

**SD Card;**  
0: No

**Isolation;**  
0: No Isolation  
2: Yes

**Max. Counters**  
02: 2 Counter  
08: 8 Counter  
16: 16 Counter  
32: 32 Counter

# MMS100 ORDER CODE

MODEL- <b>COM</b> -BOARD-OPTIONS			
<b>COM</b>	ETHERNET	WIRELESS	MINIMUM ORDER QUANTITY
E1N	1		8
E0G		2G	8
E0L		LTE/4G	8
E0W		WiFi	8

MODEL-COM- <b>BOARD</b> -OPTIONS			
<b>BOARD</b>	M-BUS (M-BUS EN1434-3)	RS485 (ESD Protection 8kV Contact / 15 kV Air)	MINIMUM ORDER QUANTITY
GC1	1	1	8

MODEL-COM-BOARD- <b>OPTIONS</b>					
<b>OPTIONS</b>	SUPPORTED BOARD TYPE	POWER	RS485 ISOLATION	NUMBER OF COUNTERS	MINIMUM ORDER QUANTITY
B0002	GC1	24V DC		2	8
B0008	GC1	24V DC		8	8
B0016	GC1	24V DC		16	8
B0032	GC1	24V DC		32	8
B0202	GC1	24V DC	✓	2	16
B0208	GC1	24V DC	✓	8	16
B0216	GC1	24V DC	✓	16	16
B0232	GC1	24V DC	✓	32	16



# DLMS MODBUS GATEWAY



Automatic Counter Read



Ethernet, GSM or WiFi



OBIS Code Descriptions with Automatic MODBUS Addressing



## Configuration & Management

- ▶ User-Friendly Configuration Software
- ▶ Configuration:
  - Type C USB
  - Ethernet 10/100 Mbps
- ▶ Network Device Search Feature
- ▶ Remote Firmware Update
- ▶ Easy Meter with Configuration Software Adding and Adjusting
- ▶ OBIS Codes to be Read from the Meter Choosing
- ▶ Putting the Meter in Programming Mode & Sending Special Commands
- ▶ OBIS Codes & Modbus Addresses Pairing
- ▶ Ability to Work as MODBUS Gateway



## TCP Socket Extra Features

- ▶ Connection Control & Automatic Reconnection



## Integrated Communication Ports

- ▶ Seri Port:
  - GC2; 1 Port RS232 & 1 Port RS485
  - GC3; 2 Port RS485
- ▶ ESD Protection 8 kV Contact / 15 kV Air



## Optional Communication Ports

- ▶ Entegre GSM / LTE
- ▶ Ethernet 10/100 Mbps
- ▶ Wi-Fi



## Maximum Number of Connections

- ▶ Number Of Client Sockets Per Server :16
- ▶ RS485 Line Max. Number of Counters : 32
- ▶ RS232 Line Max. Number of Counters :1



## Communication Protocols

- ▶ Master Communication Protocols: IEC62056-21, DLMS/COSEM
- ▶ Slave Communication Protocols : MODBUS TCP



## LED Signals

- ▶ Power : 1 LED Steady Green
- ▶ System : 1 LED 1Hz Green
- ▶ Connection: 1 LED 2Hz Green



## Supply

- ▶ Supply Voltage: 9-36VDC
- ▶ Supply Current : 50mA @ 24VDC

# MDC100 ORDER CODE

1

Remote communication port selection.

2

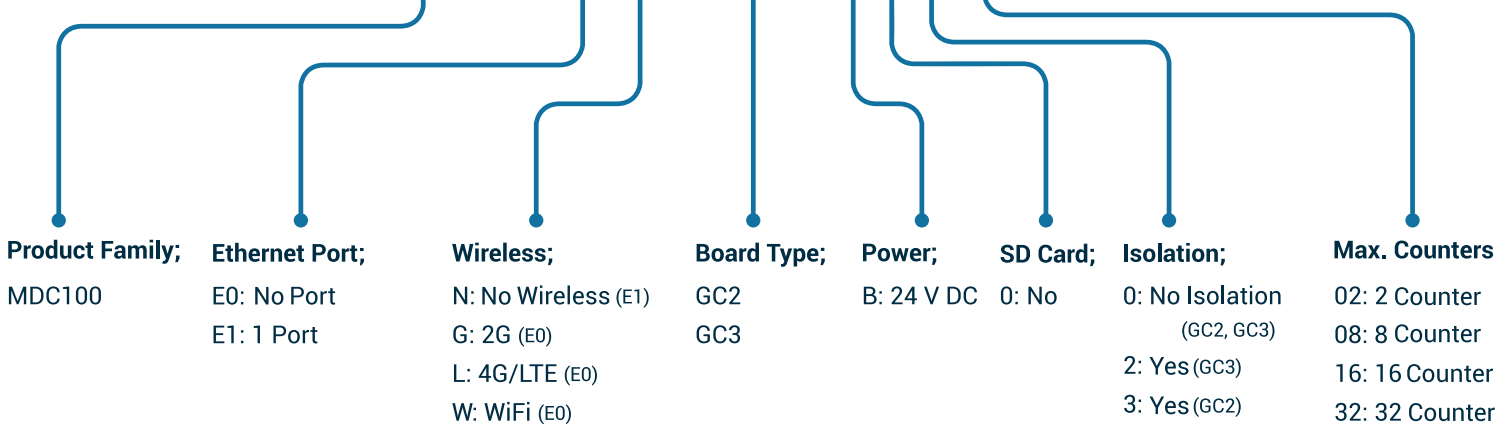
Board type selection according to number of I/O and port.

3

Selection of other options Power supply, SD card, serial port selections are made here. Option codes may vary depending on the board type.



## MDC100-E1N-GC2-B0002



# MDC100 ORDER CODE

MODEL- <b>COM</b> -BOARD-OPTIONS			
<b>COM</b>	ETHERNET	WIRELESS	MINIMUM ORDER QUANTITY
E1N	1		8
E0G		2G	8
E0L		LTE/4G	8
E0W		WiFi	8

MODEL-COM- <b>BOARD</b> -OPTIONS			
<b>BOARD</b>	RS232 (ESD Protection 8kV Contact / 15 kV Air)	RS485 (ESD Protection 8kV Contact / 15 kV Air)	MINIMUM ORDER QUANTITY
GC2	1	1	8
GC3		2	8

MODEL-COM-BOARD- <b>OPTIONS</b>						
<b>OPTIONS</b>	SUPPORTED BOARD TYPE	POWER	RS232 ISOLATION	RS485 ISOLATION	NUMBER OF COUNTERS	MINIMUM ORDER QUANTITY
B0002	GC2, GC3	24V DC			2	8
B0008	GC2, GC3	24V DC			8	8
B0016	GC2, GC3	24V DC			16	8
B0032	GC2, GC3	24V DC			32	8
B0202	GC3	24V DC		✓	2	16
B0208	GC3	24V DC		✓	8	16
B0216	GC3	24V DC		✓	16	16
B0232	GC3	24V DC		✓	32	16
B0302	GC2	24V DC	✓	✓	2	16
B0308	GC2	24V DC	✓	✓	8	16
B0316	GC2	24V DC	✓	✓	16	16
B0332	GC2	24V DC	✓	✓	32	16

# ASSISTANT

Free of Charge



## ★ General Features

- ▶ Mikrodev Devices in the Network Auto Discovery
- ▶ TCP to Products on the Internet Remote Access Possibility via
- ▶ You can use multiple settings by saving the Settings List Possibility to Send to Device
- ▶ Easy to Connect to Products with Standard USB Cables & Practical Access
- ▶ Define Offline Configuration Saving Feature
- ▶ Configuration Export/Import Feature
- ▶ English or Turkish Language Options
- ▶ Operating Modes for Each Product Family Quick Identification Interfaces

## ★ MODBUS RTU/TCP GATEWAY

- ▶ Operating Mode Selection Screens
- ▶ MOD-1: MODBUS TCP SLAVE - MODBUS RTU MASTER
- ▶ MOD-2: MODBUS RTU Master over TCP - MODBUS RTU SLAVE
- ▶ MOD-3: MODBUS TCP MASTER - MODBUS RTU SLAVE

## M-Bus M-BUS/MODBUS GATEWAY

- ▶ Multiple Water, Natural Gas, Calorimeter Meter Configuration Screens
- ▶ Query Mode by Serial Numbers Configuration Possibility (Secondary addressing)
- ▶ Query Mode According to Slave Id Information Configuration Possibility (Primary Addressing)
- ▶ Modbus Addresses with Meter Information Auto Pairing
- ▶ Defining a Meter Inquiry Period Interfaces

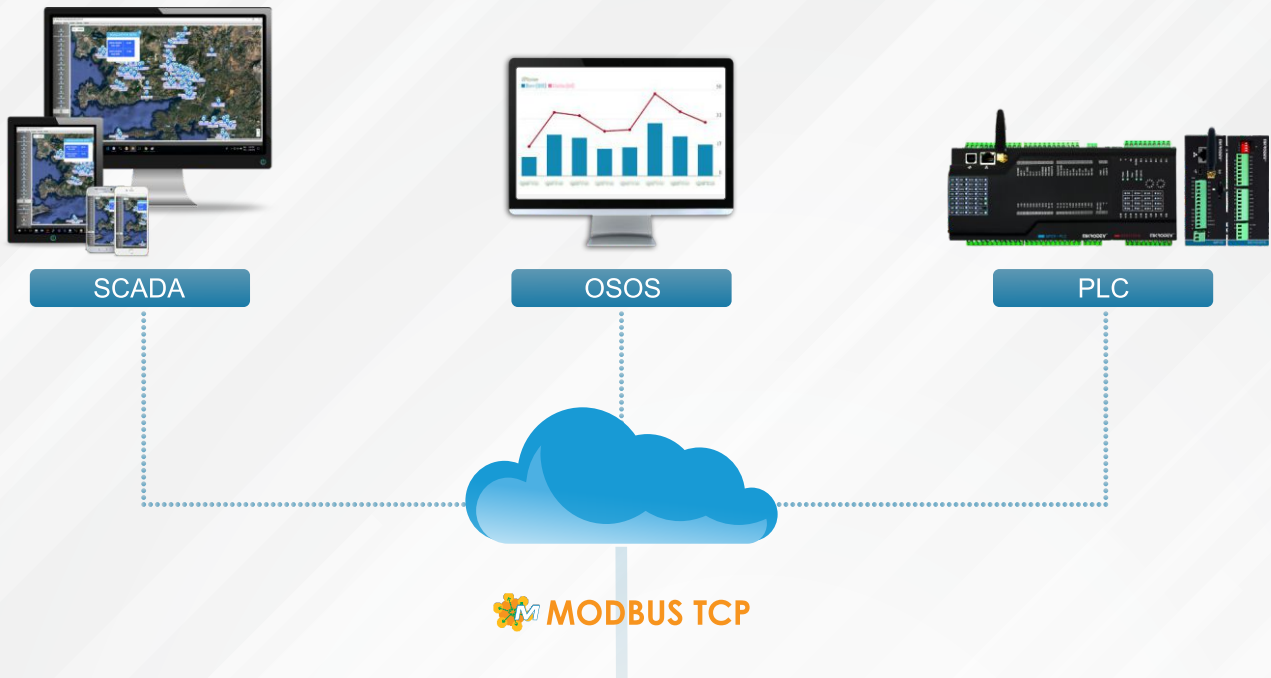
## SC100 / SERIAL DEVICE SERVER

- ▶ Transparent Communication
- ▶ Multi Connection
- ▶ Bidirectional over Serial Port & TCP/IP Access



## DLMS/MODBUS GATEWAY

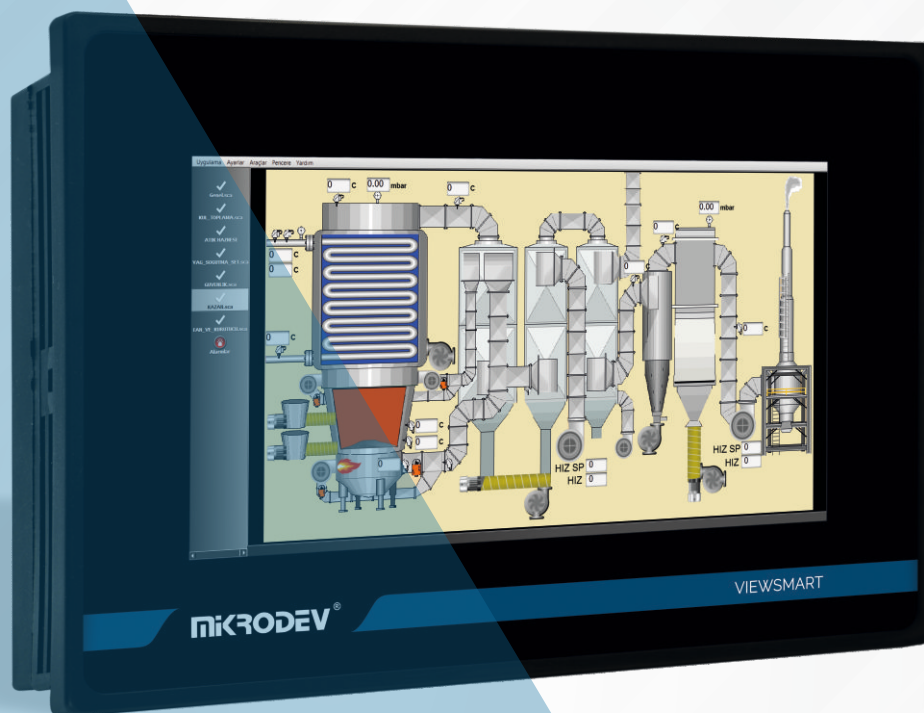
- ▶ Reading Multiple Electricity Meters Configuration
- ▶ OBIS Codes to be Read Remotely Identification Interfaces
- ▶ MODBUS with Selected OBIS Codes Matching Addresses
- ▶ Defining Custom Query Commands Possibility
- ▶ Data Retrieval/query Period Definition Interfaces
- ▶ Ability to Work as Modbus Gateway



• n: There is no limitation on the number of devices to be connected to the RS485 port. Limited by hardware.

NEW

# OPERATOR CONTROL & MONITORING SYSTEMS





HMI (ViewSMART)  
SCADA (ViewPLUS)

## HMI



High Speed  
Processor &  
Graphics Abilities



Multitouch  
Resistive LCD  
Screen



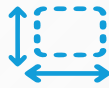
Fast  
Beginning



Symbol  
library



Animated &  
Graphical Data  
Views



7" LCD  
Screen



### ★ General features

- ▶ Connectivity with Many Different Devices
- ▶ Remote Monitoring via Mobile Devices
- ▶ Multiple Connections over Ethernet
- ▶ Program via USB and ETHERNET Installation and Update
- ▶ Ftp Server Feature
- ▶ Mikrodev Expansion Via Canbus
- ▶ Integration with I/O Cards
- ▶ Viewplus SCADA Projects Fast & Easily Transfer
- ▶ Ability to Connect with Viewplus Operator Client
- ▶ Programmable with Microdiagram
- ▶ MDScript Support
- ▶ Data Recording with USB Host Feature
- ▶ Log Recording via SD Card
- ▶ Alarm Monitoring & Analysis
- ▶ Easy Installation: Panel Mount
- ▶ Power Isolation
- ▶ Low Energy Consumption
- ▶ Ability to Be Used in High Vibration Environments
- ▶ Full Sealing Feature
- ▶ CE Certified

### 📄 System Information

- ▶ Processor : ARM Cortex-A8 with 1GHz 3D Graphics Core
- ▶ SD Card Slot
- ▶ 1 Ghz high CPU & Graphics Capabilities
- ▶ Memory Amount: 96 MB Flash Disk
- ▶ 512 MB RAM
- ▶ 256 MB ROM

### 📺 Screen

- ▶ Screen Ty : 7" TFT LCD
- ▶ Color : 65536
- ▶ Resolution : 800x480
- ▶ Touch Panel Type : 4 Wired Capacitive
- ▶ Video Format Pad: MPEG1, MPEG2
- ▶ WMV
- ▶ Multi Touch - Capacitive LCD Screen
- ▶ Large & Bright Screen
- ▶ Quick Start
- ▶ High strength
- ▶ Data Visualization with Animations & Charts
- ▶ Large Symbol Library
- ▶ Horizontal / Vertical Screen Support

### 🔌 Communication Ports

- ▶ 2 Port Ethernet: 1 Gbit Speed
- ▶ 1 Port type B mini USB
- ▶ 2 Port RS485 3 Kv ESD Protection Galvanic Insulation
- ▶ 1 Port RS232
- ▶ 2 Port CANBUS

### ✂ Size Information

- ▶ 7"
- ▶ External Dimensions (GxYxD): 8,2" x 5,5" x 1,3"
- ▶ Cutting Dimensions (GxY) : 7,5" x 4,8"
- ▶ Case : Plastic, Smoked
- ▶ Weight : 250,5 gr (Without Processor)

### 🌡 Environmental Features

- ▶ Front Protection : IP66
- ▶ Rear Protection : IP20
- ▶ Operating Temperature: 0 / 50 C
- ▶ Storage Temperature : -20 / 60 C
- ▶ Moisture : 5 / 95 RH





CANBUS



XIO110



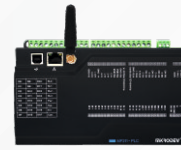
XIO211

ETHERNET / RS485-RS232

MODBUS TCP/RTU



MP110



MP211

PRODUCT	SIZE	ETHERNET	RS232	RS485	PLC FEATURE
ViewSMART700	7"	2	1	2	
ViewSMART710	7"	2	1	2	Var

# VIEWPLUS SCADA



Mobile APP



SQL Database



Windows, MacOS, Linux



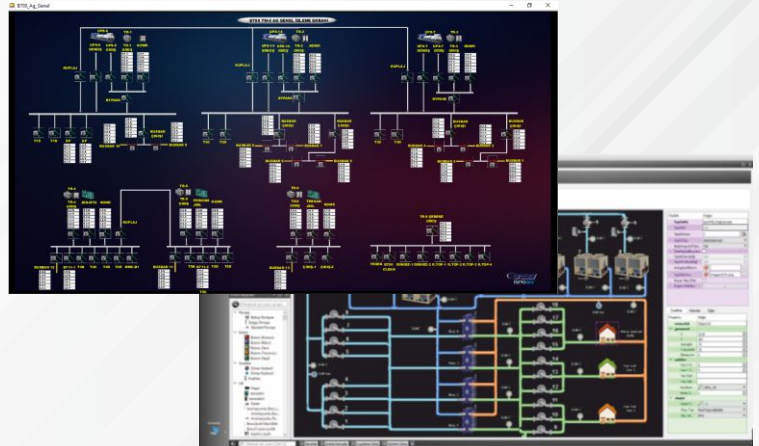
GIS Integration



Industrial Communication



OPC UA



## SCADA Server

- ▶ Compatible with Windows, Linux & MacOS platforms
- ▶ Oracle & PostgreSQL Support
- ▶ Secure SSL Connection Support with Operator Clients
- ▶ Unlimited Client Connection (Limited with Server Hardware)
- ▶ Wide Range Industrial & Distributed Network
- ▶ Communication Protocol Support (MODBUS, IEC104, DNP3 etc)



## Operator Client

- ▶ Windows, Linux, MacOS, Android & iOS Support
- ▶ Real-Time Charts
- ▶ Event & Alarm Monitoring
- ▶ Dynamic Adaptation for Different Screen Resolutions
- ▶ Multi-touch Support for Mobile Platforms
- ▶ Multiple Monitor Support
- ▶ Web Based Reporting Services
- ▶ Advanced Reporting Options



## SCADA Development Editor

- ▶ Integrated Graphic Object Library
- ▶ Ability To Create Custom Graphic Library Object
- ▶ Size, Position, Color, & Captions Of Objects, Associate with Tags
- ▶ Smart & Customized Object with Crypt Support
- ▶ Layered Object Architecture
- ▶ Different Layer Views for Different Zoom Levels
- ▶ Multi-User Development Infrastructure
- ▶ Real-time Graphics & Trend Plots
- ▶ Advanced Tag & Communication Channel Management Infrastructure
- ▶ Database with Instant Query Definition And Results Objectse Relating
- ▶ Page & Object-Based User Right
- ▶ GIS Integration with Google Maps



## User Management

- ▶ 256 Different User Authorization Levels
- ▶ User Groups with Different Authorization Levels
- ▶ Alarm Subscription for Users
- ▶ E-mail Notifications
- ▶ Guest, Administrator & Standard User Configurations



## Alarm Management

- ▶ Unlimited Alarms for Any Tag
- ▶ Alarm Acknowledge & Add Note
- ▶ Alarm History & Real-time Alarm Monitoring
- ▶ Show Alarm Notifications on Components
- ▶ Direct Link to the Relates Station from Alarms Page
- ▶ User Alarm Subscriptions
- ▶ Audio-Visual Alarm Notifications
- ▶ Alarm E-mail Notifications
- ▶ Coloring Alarms According to the Acknowledge State
- ▶ Adding Alarm Panels on Operatorclient Main Screen



## Component Management

- ▶ Png, Jpg, etc. Component Creation from Popular Formats
- ▶ Designing Animation
- ▶ Create Project-Specific Object Libraries

## OPERATOR CONTROL & MONITORING SYSTEM

		MDS-Lite	MDS-10C-150T	MDS-20C-500T	MDS-50C-2000T	MDS-100C-10000T	MDS Enterprise
Panel	Multi Platform Support (Windows, Linux, MacOS, Android, IOS)	Yes	Yes	Yes	Yes	Yes	Yes
	Integrated Symbol Object Count	100	100	100	100	100	100
	User Symbol Addition Interface	Yes	Yes	Yes	Yes	Yes	Yes
ViewPLUS SCADA Server	I/O Label Count	20	150	500	2000	10000	Unlimited*
	Virtual Label Count	20	150	500	2000	10000	Unlimited*
	Maximum Client Count	1	10	20	50	100	Unlimited*
	Maximum Alarm Count	20	150	500	2000	10000	Unlimited*
	JSON Message Support	Yes	Yes	Yes	Yes	Yes	Yes
	MSCADA Message Support	Yes	Yes	Yes	Yes	Yes	Yes
	SQLite Database	Yes	Yes	Yes	Yes	Yes	Yes
	PGSQL Database	Yes	Yes	Yes	Yes	Yes	Yes
	ODBC / MS SQL Database	-	-	-	Yes	Yes	Yes
	ODBC / MS SQL Database	Yes	Yes	Yes	Yes	Yes	Yes
	E-Mail Support	Yes	Yes	Yes	Yes	Yes	Yes
	Redundant SCADA	Double License Use					
Graphics	Page Count Addable	5	Unlimited*	Unlimited*	Unlimited*	Unlimited*	Unlimited*
	Number of Symbols Addable per Page	40	4000	4000	4000	4000	Unlimited*
Reporting	Server Side Reporting	40	4000	4000	4000	4000	Unlimited*
	Client Side Reporting	Yes	Yes	Yes	Yes	Yes	Yes
	Trend History	Yes	Yes	Yes	Yes	Yes	Yes
	Alarm Logs	Yes	Yes	Yes	Yes	Yes	Yes
	Event Logs	Yes	Yes	Yes	Yes	Yes	Yes
Development	Version Control Integration	Yes	Yes	Yes	Yes	Yes	Yes
	Script Support	MDVScript	MDVScript	MDVScript	MDVScript	MDVScript	MDVScript
	Recipes	-	-	-	-	-	Yes
Protocol Support	MikrodevBUS	Yes	Yes	Yes	Yes	Yes	Yes
	MODBUS	Yes	Yes	Yes	Yes	Yes	Yes
	OPC Server	***	***	***	***	***	***
	Web Server	***	***	***	***	***	***
	IEC 60870-5-101**	***	***	***	***	***	***
	IEC 60870-5-104**	***	***	***	***	***	***
	DNP 3**	***	***	***	***	***	***
SNMP**	***	***	***	***	***	***	

\*Processor Constraints might apply depending on available hardware elements such as power, memory.

\*\* MODBUS protocol support is delivered free of charge for all SCADA packages. Other protocols are provided separately than corresponding SCADA packages.

\*\*\*Please contact with our sales channels for price information.









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