MRX3
MRX5
Modular industrial router

INSYS icom

Flexible. High-performance. Future-proof.

MRX - the flexible power
Powerful and versatile for individual solutions

The modularity of the MRX routers makes it possible to put together a customised router for each individual application. With extensive routing functionality and high IT security, the MRX is well suited for remote access to critical infrastructures and machinery. Thanks to the plug & play connection to cloud services and applications, remote access and monitoring can be implemented quickly and easily.

Flexibility of design
Modular design enables customised routers for different scenarios

Easy remote access & device updates
Plug & play - connection of VPN service and central device management

Flexible expandability
Simple and future-proof addition of interfaces with plug-in cards (MRcards)

Extensive routing functions
Multiple local IP networks, RSTP and connection with parallel VPN

Universal WAN technologies
Internet access via 4G/DSL/LAN and fibre optics, can also be combined as a failover

High security levels
Hardened operating system, extensive monitoring and security functions

Many application interfaces
Up to 17 Ethernet ports; serial interfaces; digital and analogue I/Os

IoT-ready
Local data processing as well as connection to IoT platforms and cloud systems

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MRX (Basic Variants)
Technical Data

Mobile communication (only MRX LTE)	
Frequency bands	4G/LTE*: 800, 900, 1.800, 2.100, 2.600 MHz (bands 1, 3, 7, 8, 20); LTE Cat. 3 (DL: 100 Mbps, UL: 50 Mbps)
	3G/UMTS/HSPA: 900, 1.800, 2.100 MHz (Bänder 1, 3, 8); UMTS, HSPA+ (DL Cat. 24, UL Cat. 6)
	2G/GPRS/EDGE: 900, 1.800 MHz; GPRS/EDGE Class 12
Antenna connection	2x SMA female (2G/3G/4G: Main, 3G: Rx Diversity, LTE: MIMO)
SIM	Slot for 1 Mini-SIM card (2FF), locked
Dual APN	Splitting of mobile data traffic over 2 APNs, e.g. separation of user and management data
Mobile phone status	Signal field strength, RSSI, RSCP / Ec/No, RSRP / RSRQ, Cell-ID, Location-ID

VDSL/ADSL (only MRX DSL)	
DSL standards	MRX DSL-A (Annex A):
	- VDSL2 G.993.2 Profile 8b, 8c, 8d, 12a, 12b, 17a. 30a, VDSL2 Vectoring G.993.5
	- ADSL/ADSL2/ADSL2+ G.992.1 Annex A, G.992.3. Annex A/L/M, G.992.5 Annex A and M, T1.413
	MRX DSL-B (Annex B):
	- VDSL2 G.993.2 Profile 8a, 8b, 8c, 8d, 12a, 12b, 17a. 30a, VDSL2 Vectoring G.993.5
	- ADSL/ADSL2/ADSL2+ G.992.1 Annex B, G.992.3. Annex B, G.992.5 Annex B and J
DSL connection	RJ45 connector

Hardware interfaces	
Ports	5 x RJ45, 10/100 MBit/s, Full/half duplex, Auto MDI-X, 1.5 kV isolation voltage
Function	Assignment to IP network freely configurable per port, link up/down detection, configuration port
Inputs	2 digital inputs (available in all basic variants), status can be monitored:
	1x low active, connection to GND, 1x high active, connection to 10...24 VDC, as per EN 61131-2, type 1
Displays (LEDs)	Power, WAN (Internet connection), Info (configurable), Signal (for mobile radio), DSL (for DSL)
Further interfaces	Optional addition of MRcards (modular design)

Network	
Network functions	5 local IP networks, IP static/DHCP,TCP, UDP, IPv4, IPv6, NTP, DHCP, DNS, HTTP/S, ARP, SSH,
	802.1Q VLAN incl. tags and trunk ports
Service	DHCP Server v4/v6 per IP network, DHCP relay, NTP server, DNS, DynDNS, IPv6 Router Advertiser
Routing	Static routing, routing priority, RSTP, dynamic routing (OSPF, BGP, RIPv1, RIPv2, RIPng)
WAN redundancy/failover	Several WAN connections configurable also in parallel operation, fallback level for connection breakdown (failover), event-based WAN changeover (see events)
Connection check	Periodic, ping/icmp, DNS request, link up/down
DSL	PPPoA (MRX3/5 DSL und MRcard PD-A/B); external DSL modems: PPPoE
NAT/PAT	SNAT/DNAT (masquerade, netmapping, port forwarding, IP forwarding)

VPN	
icom Connectivity Suite	Supports VPN service for remote maintenance, remote access and M2M-communication
OpenVPN	Client/server, several parallel tunnels, server with up to 20 clients, tls-auth/tls-crypt, dead peer detection (DPD)
OpenVPN encryption	Blowfish 128 Bit, DESX 192 Bit, DES 64 Bit, DES EDE 128 Bit, DES EDE3 192 Bit, AES 128-256 Bit, RC2 40-128 Bit, IDEA 128, CAST5 128 Bit, SHA1, SHA 224-512
IPsec	IKEv1, IKEv2 (automatic, fix), several parallel tunnels, pre-shared keys, certificates, tunnel mode, transport mode, dead peer detection (DPD)
IPsec encryption	DES EDE3 192 Bit, AES 128-256 CBC/GCM, SHA1, MD5, SHA 256-512, DH-Group 1-31 (Diffie-Hellman 768 - 25519), ChaCha20-Poly1305
GRE	GRE via IPsec, point-to-point, multipoint
PPTP	PPTP client/server; PAP/CHAP/MS CHAP/MS CHAP V2; MPPE 40-128
Dynamic VPN	Dynamic multipoint VPN (GRE, IPsec, NHRP, EIGRP, OSPF, RIPv1/v2, BGP)

MRX (Basic Variants)
Technical Data

IT security	
Authentication	Pre-shared key, X.509 certificates, RADIUS, access rights (read, write, status)
Firewall / netfilter	IP filters (stateful firewall) also in VPN tunnel; packet filter: TCP, UDP, ICMP, ESP, AP, GRE; MAC filter; pre-defined firewall rules can be activated
Security	Booting signed firmware, HTTP/HTTPS attack prevention; response upon events: configuration change, link up/down, restart, login attempt, netfilter violation, password hashing

IoT and Cloud (icom Data Suite, license required)	
Function icom Data Suite	Machine connection and data processing; connection to cloud and SCADA Systems; arithmetic & logic functions; data logger; dashboard
Data acquisition	CODESYS, Modbus TCP/RTU, MQTT, Siemens S7, OPC UA Client, IEC 60870-5-101, digital input, analogue input (if present)
Data transmission	MQTT, OPC UA Server, IEC 60870-5-104, Modbus TCP/RTU, e-mail, SMS, SFTP, digital input, analogue input (if present)
IoT platforms	MQTT compatibility: Thingsboard, Cumulocity, AnyViz, Azure IoT Hub, Bosch IoT Suite, AWS IoT Core

Events & Actions	
Event & Action Handler	Notification, alarming, diagnosis, attack detection, fault handling, operation and commissioning logic
Events / alarms (selection)	Change: digital input, Ethernet port, WAN chain, profile status, supply input (with MRX/MRO), cellular field strength; timer expired, firewall violation, login attempt detection, pulse sequence on digital input, counter, netfilter rule
Event-triggered actions (selection)	Messages via e-mail, SMS (only cellular variant), SNMP traps, MCIP; switch profile, switch connection, change modem state, start timer, switch output or pulse sequence, activate firmware, reset, restart container

Programming environment/scripting	
Container environment	Installation of several application containers, container with own IP end point, assignment to IP networks - full firewall and routing transparency; access control, SDK available
Lua scripting	Lua interpreter for own scripts

Monitoring and Management	
Monitoring	SNMP traps and agent, configurable system logs, remote syslog, link up/down detection, netfilter violation
Certificate management	SCEP, CRL
icom Router Management	Supports central router management for FW updates, configuration management, connection monitoring, container updates, mass rollout, certificate management, available as public/private cloud (server) installation or onPremises

Administration	
Configuration	Web Interface HTTP(S) with session management, command line interface (CLI), Telnet, SSH, configuration profiles as ASCII and binary file, ample configuration profiles event-triggered, REST API
Diagnosis tools	Ping/icmp, tcpdump, traceroute, DNS lookup, AT commands, port mirroring
FW update	Incremental, failsafe, update server (HTTP, FTP, HTTPS, FTPS), icom Router Management (WebSocket)
System time	NTP client and server, buffered real time clock
Help	Web interface: inline help, online help; example profiles, plausibility check, Configuration Guides

Supply		
Voltage	12 ... 24 V DC (± 20%), 2 supply connections with changeover detection	
Terminals	5-pin push-in terminal connectors (maintenance free), rigid/flexible conductors up to 2.5 mm²	
Power consumption (basic variants without further MRcards)	MRX DSL: typical approx. 6.5 W, max. 8.0 W	
	MRX LAN: typical approx. 2.0 W, max. 3.5 W	(depending on data throughput amongst others)
	MRX LTE: typical approx. 2.5 W, max. 8.0 W	

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MRX (Basic Variants)
Technical Data

Ambient conditions		
Dimensions	MRX3:	88 x 81 x 117 mm (WxDxH)
	MRX5:	88 x 136 x 117 mm (WxDxH)
weight	max. 280 g	
Mounting	DIN rail mounting	
Operating temperature	-30….+75°C [2] MRX LAN,MRX LTE	
	-25….+60°C [3] MRX DSL	
Humidity	0...95% (non-condensing)	
IP rating	Housing: IP40	
Approvals & Standards		
Certifications	CE, MRX LAN additionally: FCC Part 15 Class B, IC	
EMC	Emission: EN 55032 Class B, EN 61000-6-2; Immunity: EN 55024	
Safety	IEC/EN 60950, 62368	
Environmental	Vibration/shock as per PLC standard EN 61131-2 and EN 60068-2-6, EN 60068-2-27;	
conditions	Temperature tests as per EN 60068-2-1, EN 60068-2-2, EN 60068-2-14, EN 60068-30	

* Please check the availability of the LTE frequencies in the planned operating area.
   Above specified frequencies are currently used in Europe, Middle East, Africa and, to some extent, in the Asia-Pacific region and South America.
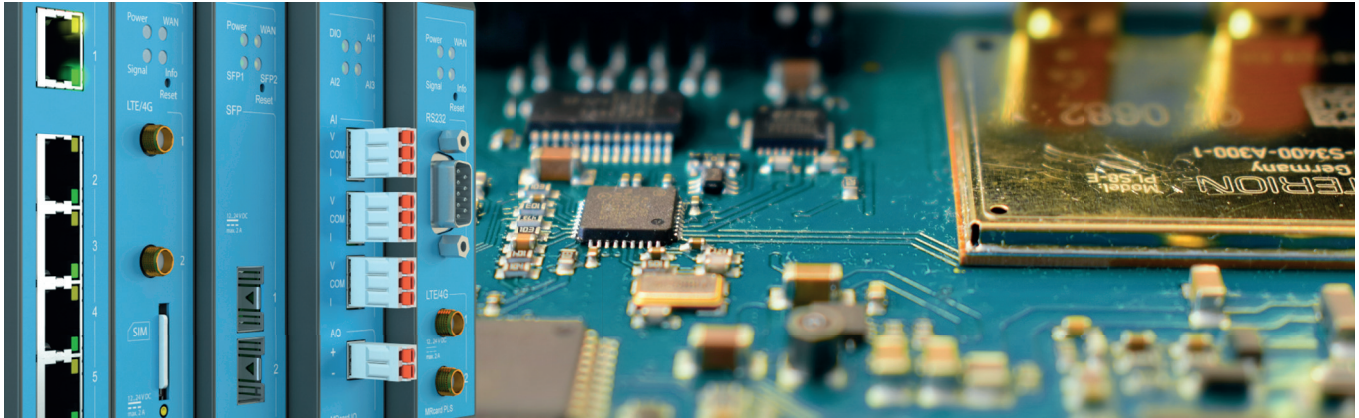

 [2] +70°C … +75 °C: extended temperature range (refer to www.insys-icom.com/en/extended/)

 [3] -25°C …. 0°C: extended temperature range (refer to www.insys-icom.com/en/extended/)

  +55°C … +60°C: without further MRcards PD or PL and extended temperature range (refer to www.insys-icom.com/en/extended/)

MRcards

Modular plug-in cards for MRX series routers

Individual functionality

Combine MRcards with different functions, exactly fitting for your application!

Fail-safe internet connection

Combine any combination of DSL, mobile telephony and fiber optics and thus realize all necessary fallback options.

All in one device

By bundling several functions, you save costs and space in the control cabinet. The administration of your systems also becomes more efficient, uniform and secure.

Efficient upgrades

If changes are required, you can add desired MRcards directly in your application. You keep the MRX device with the known configuration. Even future technology upgrades remain efficient: e.g. a switch to 5G mobile radio.

MRcard **PL**

- Cellular radio
- 2 digital inputs

MRcard **PD**

- VDSL2
- ADSL/2/2+
- 2 digital inputs
- 2 variants (-A, -B)

MRcard **ES**

- 4-port switch (10/100 MBit)

MRcard **SI**

- RS232
- RS485
- 2 digital inputs
- 2 switch outputs

MRcard **PLS**

- Cellular radio
- incl. US variant
- RS232
- 2 digital Inputs
- 1 digital output

MRcard **IO**

- 3 analogue inputs
- 1 analogue output
- 4 digital inputs
- 4 digital outputs

MRcard **Fiber**

- 2x Gigabit SFP
- 2 digital inputs

MRcards
Technical Data

MRcard PL (Cellular radio)

Mobile communication	
Frequency bands	4G/LTE*: 800, 900, 1.800, 2.100, 2.600 MHz (bands 1, 3, 7, 8, 20); LTE Cat.3 (DL: 100Mbps, UL: 50Mbps)
	3G/UMTS/HSPA: 900, 1.800, 2.100 MHz (bands 1, 3, 8); UMTS, HSPA+ (DL Cat.24, UL Cat.6)
	2G/GPRS/EDGE 900/1.800 MHz; GPRS/EDGE Class 12
Antenna connection	2x SMA female (2G/3G/4G: Main, 3G: Rx Diversity, LTE: MIMO)
SIM	Slot for 1 Mini-SIM card (2FF), locked
Indications (LEDs)	Power, WAN (Internet connection), Signal (cellular radio), Info (configurable)
Inputs	
Inputs	2 digital inputs for configurable actions, 1x low-active, 1x high-active (as per EN 61131-2, Type 1)
Supply / environmental conditions	
Voltage	Supplied via MRX, 2 further supply connections optional (redundancy) 12 ... 24 V DC (± 20%)
Power consumption	Typical approx. 1.0 W, max. 5.0 W
Operating temperature	-30 ... +75 °C²
Weight	80 g
Certifications	CE

MRcard PD (VDSL/ADSL)

Wire-bound VDSL/ADSL communication	
DSL standards	MRcard PD-A (Annex A):
	- VDSL2 G.993.2 Profile 8a, 8b, 8c, 8d, 12a, 12b, 17a. 30a, VDSL2 Vectoring G.993.5
	- ADSL/ADSL2/ADSL2+ G.992.1 Annex A, G.992.3. Annex A/L/M, G.992.5 Annex A und M, T1.413
	MRcard PD-B (Annex B):
	- VDSL2 G.993.2 Profile 8a, 8b, B13 8d, 12a, 12b, 17a. 30a, VDSL2 Vectoring G.993.5
	- ADSL/ADSL2/ADSL2+ G.992.1 Annex B, G.992.3. Annex B, G.992.5 Annex B und J
DSL connection	RJ45 socket
DSL Function	PPPoE, PPPoA
Indications (LEDs)	Power, WAN (Internet connection), Info (configurable), DSL
Inputs	
Inputs	2 digital inputs for configurable actions, 1x low-active, 1x high-active (as per EN 61131-2, Type 1)
Supply / environmental conditions	
Voltage	Supplied via MRX, 2 further supply connections optional (redundancy) 12 ... 24 V DC (± 20%)
Power consumption	Approx. 5.0 W
Operating temperature	-25 ... +60 °C³
Weight	80 g
Certifications	CE

MRcard ES (Ethernet Switch)

Ethernet switch	
Ports	4 x RJ45, 10/100 MBit/s, full/half duplex, Auto MDI-X, 1.5 kV isolation voltage
Function	Each port can be freely assigned to the IP networks, link-up/down detection
Supply / environmental conditions	
Voltage	Supplied via MRX

MRcards

Technical Data

Power consumption	Typical approx. 1.0 W, max. 1.5 W
Operating temperature	-30 ... +75 °C
Weight	70 g
Certifications	CE, FCC Part 15 Class B, IC

MRcard SI (serial)

Serial interface	
RS232 (Serial1)	1 x RS232 / D-Sub-9 (m)
RS485 (Serial2)	Terminal connector (D+, D-, GND), termination and bias via DIP switch
Functions	Serial-Ethernet gateway (incoming and outgoing connections, Modbus TCP/RTU gateway, modem emulation, editable AT answer list, phone number conversion to IP addresses)
USB 2.0	Prepared, USB 2.0 host, socket type A, output current max. 200 mA
Inputs / Outputs	
Digital inputs	2 digital inputs, monitorable status, high active, as per EN 61131-2, type 1, push-in terminal connectors
Digital outputs	2x via terminals, potential-free change-over relay, switchable via action
Indications (LEDs)	Condition of digital inputs and outputs
Supply / environmental conditions	
Voltage	Supplied via MRX
Power consumption	Typical approx. 1.0 W, max. 2.5 W
Operating temperature	-30 ... +75 °C
Terminals	Push-in terminal connectors (maintenance free), rigid/flexible conductors up to 2.5 mm2 Inputs/outputs: 2x 5-pin, RS485: 3-pin
Weight	75 g
Certifications	CE, FCC Part 15 Class B, IC

MRcard PLS (Cellular radio / serial)

Mobile communication	
Frequency bands (MRcard PLS)	4G/LTE*: 800, 900, 1.800, 2.100, 2.600 MHz (bands 1, 3, 7, 8, 20); LTE Cat. 3 (DL: max. 100 Mbps, UL: max. 50 Mbps) 3G/UMTS/HSPA: 900, 1.800, 2.100 MHz (bands 1, 3, 8); UMTS, HSPA+ (DL Cat. 24, UL Cat.6) 2G/GPRS/EDGE: 900/1.800 MHz; GPRS/EDGE Class 12
Frequency bands (MRcard PLS-US)	4G/LTE: 700, 850, 1.700/2.100 (AWS), 1.900 MHz; LTE Cat.3 (DL: max.100 Mbps, UL: max. 50 Mbps) 3G/UMTS/HSPA: 850, 1700/2100 (AWS), 1.900 MHz; UMTS, HSPA+ (DL: Cat. 24, UL: Cat. 6) 2G/GPRS/EDGE: 850, 900, 1.800, 1.900 MHz; GPRS/EDGE Class 12
Antenna connection	2x SMA female (2G/3G/4G: Main, 3G: Rx Diversity, LTE: MIMO)
SIM	Slot for 1 Mini-SIM card (2FF), locked
Indications (LEDs)	Power, WAN (Internet connection), Signal (cellular radio), Info (configurable)
Serial interface	
RS232	1 x RS232 / D-Sub-9 (m)
Functions serial interfaces	Serial-Ethernet gateway (incoming and outgoing connections, Modbus TCP/RTU gateway, modem emulation, editable AT answer list, translation of phone numbers to IP addresses)
Inputs / Outputs	
Digital inputs	2 digital inputs, 1x contact input (active), 1x voltage-sensitive (passive, as per EN 61131-2, Type 1)
Digital outputs	1 open collector output

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MRcards
Technical Data

Supply / environmental conditions	
Voltage	Supplied via MRX, 2 further supply connections optional (redundancy) 12 … 24 V DC (± 20%)
Power consumption	Typ. 2,5 W, max. 5 W
Operating temperature	-30 … +75 °C²
Weight	95 g
Certifications	CE (MRcard PLS), FCC part 15 class B, IC (MRcard PLS-US)

MRcard IO

Inputs / Outputs	
Analogue inputs	3x on push-in terminal (3-pin), measuring range individually selectable: voltage 0 … 10 V / current 0 / 4 … 20 mA, accuracy: ± 0.3 % to range value ± 100 ppm/K, galvanic isolation, also between the inputs
Analogue outputs	1x o push-in terminal (2-pin), mode selectable: voltage 0 … 10 V / current 0 / 4 … 20 mA, accuracy: ± 0.3% to range ±100 ppm/K, resolution 12 bits
Digital inputs	4x on push-in terminal (5-pin), can be switched together: contact input (active) or voltage-sensitive (passive, level as per EN 61131, Type 1), galvanic isolation
Digital outputs	4x on push-in terminal (5-pin), relay normally open, load capacity max.3 A per output, altogether max.5 A
Indications (LEDs)	4x LEDs change of digital inputs, states of analogue inputs, change of digital outputs
Supply / environmental conditions	
Voltage	Supplied via MRX
Power consumption	Typ./max. 1,5 W
Operating temperature	-30 … +70 °C
Weight	95 g
Certifications	CE, FCC part 15 class B, IC

MRcard Fiber

SFP ports	
SFP-Ports	2x SFP cages for SFP transceiver modules as per SFP-MSA, 1000BASE-X, 100BASE-X
Indications (LEDs)	Power, WAN (internet connection), SFP1, SFP2 (SFP status and activity)
Inputs	
Inputs	2 digital inputs for configurable actions, 1x low-active, 1x high-active (as per EN 61131-2, Type 1)
Supply / environmental conditions	
Voltage	Supplied via MRX, 2 further supply connections optional (redundancy) 12 … 24 V DC (± 20%)
Power consumption	Typ./max. 4W (thereof 3 W MRcard Fiber + approx. 0.5W for each SFP module)
Operating temperature	-30 … +65 °C; in combination with MRX DSL or MRcard PD: -30 … +55 °C
Weight	85 g
Certifications	CE, FCC part 15 class B, IC

* Please check the availability of the LTE frequencies in the planned operating area.
  Above specified frequencies are currently used in Europe, Middle East, Africa and, to some extent, in the Asia-Pacific region and South America.

² +70°C … +75 °C: extended temperature range (refer to www.insys-icom.com/en/extended/)

³ -25°C …. 0°C: extended temperature range (refer to www.insys-icom.com/en/extended/)

  +55°C … +60°C: without further MRcards PD or PL and extended temperature range (refer to www.insys-icom.com/en/extended/)

MRX | MRcards

Order Numbers and Accessories

Available MRX Variants

Product description	Features	Art. nr.
MRX3 LAN	Modular LAN-to-LAN router, 5 Ethernet ports, 2 inputs, 1 free MRcard slot	10016582
MRX5 LAN	Modular LAN-to-LAN router, 5 Ethernet ports, 2 inputs, 3 free MRcard slots	10017036
MRX3 LTE	Modular 4G mobile router, Cellular radio (LTE/HSPA/UMTS/EDGE/GPRS), 5 Ethernet ports, 2 inputs, 1 free MRcard slot	10016583
MRX5 LTE	Modular 4G mobile router, Cellular radio (LTE/HSPA/UMTS/EDGE/GPRS), 5 Ethernet ports, 2 inputs, 3 free MRcard slots	10017037
MRX3 DSL-A	Modular VDSL/ADSL router, VDSL2, ADSL/2/2+, Annex A, 2 inputs, 5 Ethernet ports, 1 free MRcard slot	10019436
MRX3 DSL-B	Modular VDSL/ADSL router, VDSL2, ADSL/2/2+, Annex J/B, 2 inputs, 5 Ethernet ports, 1 free MRcard slot	10019437
MRX5 DSL-A	Modular VDSL/ADSL router, VDSL2, ADSL/2/2+, Annex A, 2 inputs, 5 Ethernet ports, 3 free MRcard slots	10019786
MRX5 DSL-B	Modular VDSL/ADSL router, VDSL2, ADSL/2/2+, Annex J/B, 2 inputs, 5 Ethernet ports, 3 free MRcard slots	10019787

Available cards

Product description	Features	Art. nr.
MRcard PL	Cellular radio (LTE/HSPA/UMTS/EDGE/GPRS), 2 digital inputs	10017035
MRcard ES	4-port switch (10/100 Mbit)	10016584
MRcard PD-A	VDSL2, ADSL/2/2+, Annex A, 2 digital inputs	10019434
MRcard PD-B	VDSL2, ADSL/2/2+,Annex J/B, 2 digital inputs	10019435
MRcard SI	RS232, RS485, USB 2.0, 2 digital inputs, 2 switch outputs	10016585
MRcard PLS	Cellular radio (LTE/HSPA/UMTS/EDGE/GPRS), RS232, 2 digital inputs, 1 digital output	10022163
MRcard PLS-US	Cellular radio (LTE/HSPA/UMTS/EDGE/GPRS, US-frequencies, RS232, 2 digital inputs, 1 digital output	10022164
MRcard IO	3 analog inputs, 1 analog outputs, 4 digital inputs, 4 digital outputs (relay)	10022272
MRcard Fiber-Prototyp	2 SFP-Ports	10022271
MRcard WLAN-Prototyp	WLAN Access Point oder Station (Client), 2,4GHz und 5GHz	10022273

MRX | MRcards

Order Numbers and Accessories

Suitable accessories

Product description	Description	Art.-nr
Magnetic Antenna LTE/UMTS/GSM SMA	Magnet mounting, height 72 mm, 3 m cable, SMA (m), IP rating IP65	10019504
Outdoor Wall Antenna LTE/UMTS/GSM	Wall mounting incl. bracket, height 220 mm, 5 m cable, SMA (m), IP rating IP65	10020596
Allround Antenna 5G/LTE/UMTS/GSM SMA	Screw or wall mounting, incl. steel angle, height 82 mm, 5 m cable, SMA (m), protection class IP66	10022961
Roof mount antenna LTE/UMTS/GSM MIMO SMA	Height 1,5 cm, screw mounting, 3 m cable, SMA (m), IP rating IP67	10022309
Magnetic Antenna MIMO 5G/4G/3G/2G SMA	Dual antenna MIMO, magnetic mounting, height 61 mm, width 150 mm, 2x 5 m cable, SMA (m), protection class IP65	10022963
Outdoor Panel Antenna MIMO 5G/4G/3G/2G SMA	Dual antenna MIMO, wall- / pole- / desk mounting, heigt/width 155 mm, 2x 5 m cable, SMA (m), protection class IP65	10022962
Panel Antenna 4G/3G/2G MIMO SMA	Dual antenna MIMO, Montage mit Saugnäpfen, height 84 mm, width 184 mm, 2x 2 m cable, SMA (m), protection class IP67	10020565
Antenna extension cable 5 m SMA	Device connector: SMA (f), antenna connection: SMA (m)	10015193
Antenna extension cable 10 m SMA	Device connector: SMA (f), antenna connection: SMA (m)	10018607
Antenna extension cable 15 m SMA	Device connector: SMA (f), antenna connection: SMA (m)	10000735
Magnetic Antenna WLAN 2,4 GHz rev.SMA	Magnet mounting, height 72 mm, 1.5m cable rev.SMA(m), protection class IP67	10019797
Outdoor Wall Antenna WLAN (Wi-Fi) 2.4 GHz rev.SMA	Wall mounting, incl. bracket, height 270 mm, 2.5 m cable rev.SMA (m), protection class IP65	10022599
Antenna with hinge Wi-Fi 2.4 GHz rev. SMA	Mointing directly on device socket, length 137 mm, variable angle 0-90°	10000661
Power supply 24V 15W	Power supply unit for DIN rail, wide-range input voltage ACDC protection against short circuit / overload / over voltage	10022848
Wall power supply 24V 25W international	Power supply AC/DC with mains plug, suitable for desktop use, wide input, voltage range, protection against short circuit/overload/over voltage	10022849
icom Connectivity Suite - VPN	Supports VPN service for remote maintenance, remote access and M2M communication www.insys-icom.com/en-VPN/	various
icom Connectivity Suite - M2M SIM	Industrial SIM cards, multi-roaming, pooling, management portal www.insys-icom.com/en-SIM/	various
icom Router Management	Supports central router management for FW updates, configuration management, connection monitoring, container updates, mass rollout, certificate management; available as public/private cloud (server) installation or onPremises www.insys-icom.com/en-iRM/	various

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