

E210 SERIES



Cost-effective, rugged LTE routers

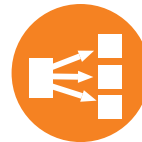
With WAN, LAN, Wi-Fi and serial connectivity, the E210 Series of M2M routers is designed for mission-critical industrial applications



**MULTIPLE
LTE
OPTIONS**

Not only LTE cat. 4 but also LTE cat. 1 and dual mode LTE-M1 / NB-IoT, which are suited better to applications requiring low data throughput but high resilience and reliability

**ADVANCED
ROUTING
FEATURES**



State-of-the-art load balancing, multiple VPN tunneling schemes including IPsec, cellular / WAN / Wi-Fi failover scheme



**Industrial
Automation**



**Sales
&
Payment**



**MULTIPLE
INTERFACES**

To connect easily to any legacy or modern equipment with RS-232, LAN, WAN and Wi-Fi

SNAP CAP™



Snappily converts E210 Series' RS232 port into an isolated, half- or full-duplex, RS-485 port



**Infrastructure
&
Transportation**



D2SPHERE™ device management services let you monitor, diagnose, control and update your Maestro and FALCOM devices. Information such as signal strength, geographic location, battery state, temperature, device firmware and software versions can be remotely monitored, stored and presented to help you to manage quality of service and prevent downtime.

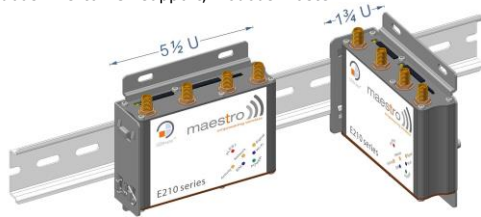
E210 SERIES SPECIFICATIONS

HARDWARE

MATERIAL	Brushed aluminium alloy
DIMENSIONS	92.5 x 57.2 x 22.5 mm without connectors
WEIGHT	Approx. 150 g
TEMPERATURE & HUMIDITY RANGES	<ul style="list-style-type: none"> ✓ *Operating*: -20 °C ~ +60 °C; up to 95% RH ✓ Storage: -40 °C ~ +85 °C; up to 95% RH
CPU	<ul style="list-style-type: none"> ✓ MIPS32® 24KEc™ CPU running at 580 MHz ✓ Built-in 64 KB [resp. 32 KB] instruction [resp. data] cache
SPI FLASH MEMORY	32 MB
DDR2 SDRAM	128 MB
POWER-OFF TIMEKEEPING	RTC with an approx. 100-day data retention period; courtesy of a 15 mWh lithium manganese battery (not functional below -20 °C on "XTR" models)
POWER CONSUMPTION	Data pending...

ePACK SOFTWARE SUITE

ADMINISTRATION AND NETWORK PROTOCOLS	Web-based user interface, setup wizard, console log viewer, save / load configuration, NTP, SMS / OTA remote configuration, TR-069 capable
REDUNDANCY	Ethernet, Cellular, Wi-Fi – configurable as failover or load balancing
RESILIENCE	Network connectivity watchdog (configurable), internal application watchdog
WI-FI	Client or Access point (approx. 40-user), multiple SSID, WEP, WPA, WPA-PSK / WPA2-PSK security modes
DEVICE MANAGEMENT SERVICES	via either our own D2SPHERE™ platform or third-party platforms such as TrinitySMART, Thingworx, Thing+, Cumulocity, etc.
SECURITY	Zone-based firewall, VLAN, DMZ, HTTPS local and remote connection, SIM PIN
PERFORMANCE AND FAULT MANAGEMENT	Real time processor load and interface (WAN / LAN / Wi-Fi), traffic analysis, ICMP, trace-route, NS lookup
ROUTING	DHCP, static routing, port forwarding, traffic routing, static / dynamic DNS, DNS proxy, NAT, STP
VPN	PPTP client, L2TP, OpenVPN client / server / passthrough, GRE, IPsec
INDUSTRIAL PROTOCOLS	Modbus RTU to TCP support, Modbus master



OPERATION AND CONTROLS

POWER	8 V dc ~ 32 V dc with SLOW START; via the upper row of a dual row, 4-pin, Micro-Fit™ 3.0 header
I/Os	Two digital I/Os; via the lower row of the same header <ul style="list-style-type: none"> ✓ INPUT: 0 V dc ~ 1 V dc → ZERO; 1.4 V ~ 36 V dc → ONE ✓ OUTPUT: open collector; 100 mA max.; 36 V dc max.
RESET BUTTON	Short (2 s ≤ < 10 s) / Long (≥ 10 s) press for Soft / Hard Reset
RS-232	Full implementation; via a 9-pin sub-D connector
10/100BASE-T ETHERNET	One LAN port and one WAN port, user-reconfigurable as second LAN port; via RJ-45 connectors fitted with two LEDs
CELLULAR (details in the table below)	One- or two-antenna models as: <ul style="list-style-type: none"> ✓ dual mode LTE-M1 / NB-IoT (E213[G]); or 3G (E215); via an SMA antenna connector; or ✓ 3G (E216); or LTE cat. 1 (E214[G]); or LTE cat. 4 (E218); via two SMA antenna connectors
DUAL SIM	Dual SIM / Single standby ("DSSS"); via two mini-SIM held in trays
LOCATION SERVICES	IZat™ gen. 8C gpsOne; via an SMA antenna connector (E21xG models only)
WI-FI	IEEE 802.11b/g/n; via an RP-SMA antenna connector
DATA STORAGE	via a user-accessible microSD card (not provided)
OPERATING STATUS LEDS	Seven as (i) green for POWER; blue for (ii) SIM; (iii) Wi-Fi; amber for (iv) Activity; (v) Network; (vi) Signal; (vii) red for ALERT

FACTORY OPTIONS (subject to MOQ and other considerations)

"XTR"	-30 °C ~ +70 °C operating temperature range
DDR2 SDRAM	Doubled to 256 MB
LOCATION SERVICES	IZat™ gen. 8C gpsOne; via an SMA antenna connector (E213, E214#02 and E214#078 models only)
ALTERNATE DATA STORAGE	64 MB [resp. 1 GB] of internal NAND Flash memory, arranged in 512-byte [resp. 2,048-byte] pages, substituted for the standard microSD card holder
MFF SIM	Substitution of an (i) 'MFF + mini'; or (ii) 'mini + MFF'; or (iii) 'MFF + MFF' duo for the standard 'mini-SIM + mini-SIM' duo

ACCESSORIES (besides power adapters, antennas, etc.)

SNAP CAP™	A 'magic' 5-pin, 3.5 mm pitch, COMBICON plug that converts E210 series' RS-232 operation to isolated, half- or full-duplex (user-selectable via a slide switch), RS-485 operation
DIN RAIL CLIP	Dual 5 1/2 U / 1 3/4 U mounting; doubling as a mounting bracket; optional blocking up of the microSD and two mini-SIM cards

MODEL NAME	TERRITORIES OR OPERATOR(S)	CELLULAR TYPE ¹	BANDS ²	FALLBACK MODE(S) ¹	BANDS ²	LOCATION SERVICES	PLANNED CERTIFICATIONS ³	FCS ⁴	ORDER CODE
E213	World	Dual mode LTE-M1 / NB-IoT	12 ^a /28/13/20/26 ^b /8/3 ^c /4/2/1	2G ^{A2}	5/8/3/2	same as E214G's	TBD	Sep. '18	E213
E214	EMEA	LTE cat. 1	28/20/8/3/1/7	3G ^{G3} ; 2G ^{A3}	8/1; 8/3	*	CE ⁵ , GCF	Jul. '18	E214#02
	Australia & New Zealand; Thailand		28/5/8/3	3G ^{G2}	5/8/1		RCM; NBTC		E214#358S#158
	China; Indonesia; India		5/8/3/1/TDD 40/41 ^d	3G ^{G3} ; 2G ^{A3}	8/1; 8/3	same as E214G's	CCC, NAL, SRRC; Postel; WPC	Sep. '18	E214#078
E214G	Verizon Wireless		13/4	*	N/A	IZat™ gen. 8C gpsOne	FCC ⁶ , Verizon Wireless		E214G#01
	AT&T Wireless, T-Mobile USA, Sprint		12 ^a /5/4/2	3G ^{G3}	5/4/2		ISED; FCC ⁶ , PTCRB, AT&T Wireless		E214G#00
E215	EMEA, [most of] Asia Pacific	3G ^{G1}	8/1	2G ^{A1}	8/3	*	CE ⁵ , GCF; WPC	Jul. '18	E215#02
E218	Asia Pacific	LTE cat. 4	28/5/8/3/1/7	3G ^{G3}	5/8/1	same as E214G's	RCM; NCC; NBTC; SIRIM; IDA	Sep. '18	E218#04
	NTT docomo		19/21/1	*	N/A	*	JPA, JRF	Jul. '18	E218#1JL
	KDDI		18/11/1						E218#1BI

Please consult us regarding the models or features shown in grey, which are subject to MOQ and other considerations

¹ Uplink / Downlink maximum data rates

- 2G: ^{A1} 85.6 / 236.8; or 236.8 / ^{A2} 236.8; or ^{A3} 296 kbps
- NB-IoT: 65 / 27 kbps
- LTE-M1: 375 / 300 kbps
- LTE cat. 1: 5 / 10 Mbps (FDD); 3.1 / 8.96 Mbps (TDD)
- 3G: 5.76 / ^{G1} 7.2; or ^{G2} 10.1; or ^{G3} 42.2 Mbps
- LTE cat. 4: 50 / 150 Mbps (FDD); 35 / 130 Mbps (TDD)

² Ranked by increasing frequencies

- ^a Also North America's B17 subset
- ^b Also KDDI's B18 and North America's B5 subsets, the latter containing NTT docomo's B19 subset, itself containing Japan's B6 subset
- ^c Also Japan's B9 subset
- ^d In fact, the 2535 MHz ~ 2655 MHz subset of B41

³ Besides MIL-STD-810G

⁴ First customer shipment [date of]

⁵ Also EN 60950-1

⁶ Also Class I Division 2 for use in explosive atmospheres as a factory option subject to MOQ and other considerations

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M&F Technologies Limited
Units A & B, 9th Floor, Wing Cheong Factory Building
121 King Lam Street, Cheung Sha Wan, Kowloon
Hong Kong

Hong Kong, Shenzhen, Mumbai, Langewiesen, Mataró, Beaverton

We reserve the right to modify the devices and services offered at any time and without prior notice as well as to modify or discontinue any of the associated accessories

Tel.: +852 3955 0222

Fax: +852 3568 4833

contact@maestro-wireless.com

http://www.maestro-wireless.com