E210 Series

maestro
empowering wireless

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

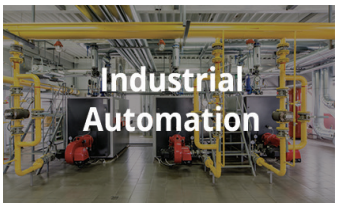
State-of-the-art load balancing, multiple VPN tunneling schemes including IPsec, cellular / WAN / Wi-Fi failover scheme

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



D2SPHERE™

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 (mm) $92^{.5}$ x $57^{.2}$ x $22^{.5}$ without connectors

Weight (g) Approx. 150

Temperature & humidity ranges
- ✓ *Operating*: -20 °C ~ +60 °C; up to 95% RH
- ✓ Storage: -40 °C ~ +85 °C; up to 95% RH

CPU
- ✓ 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)

Power consumption (W) All figures worst-case (60 °C, 32 V, all subsystems fired on, etc.)
- ✓ Idle: $0^{.96}$ (E215); $1^{.10}$ (E214); $1^{.10}$ (E218)
- ✓ Standby: $2^{.31}$ (E215); $2^{.63}$ (E214); $2^{.63}$ (E218)
- ✓ Communication (Tx max.): $5^{.54}$ (E215); $6^{.18}$ (E214); $6^{.18}$ (E218)

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.

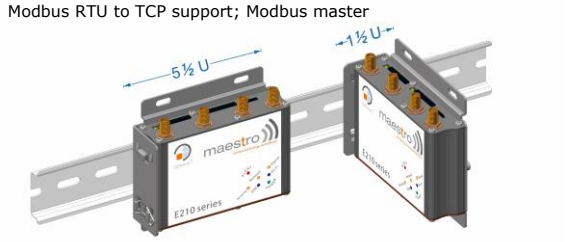
Security Zone-based firewall, VLAN, DMZ, HTTPS local and remote connection, SIM PIN

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
- ✓ 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 header

10/100BASE-T Ethernet One LAN port and one WAN port, user-reconfigurable as second LAN port; via RJ-45 headers fitted with two LEDs

Wi-Fi IEEE 802.11b/g/n; via an RP-SMA antenna connector

Cellular *(details in the table below)*
One- or two-antenna models as:
- ✓ LTE-M1 E213G; 3G E215[G]; via an SMA antenna connector
- ✓ LTE cat. 1 E214[G]; LTE cat. 4 E218[G]; via two SMA antenna connectors (main and diversity)

Dual SIM Dual SIM / Single standby ("DSSS"); via two mini-SIM held in trays

Location services Concurrent GPS and GLONASS (E213G, E215G); IZat™ gen. 8C gpsOne (E214G, E218G); via a dedicated SMA antenna connector

Data storage via a user-accessible microSD card (not provided)

Operating status LEDs Seven as green for (i) Power; blue for (ii) SIM; (iii) Wi-Fi; amber for (iv) Activity; (v) Network; (vi) Signal; red for (vii) Alert

FACTORY OPTIONS (subject to MOQ and other considerations)

"XTR" -30 °C ~ +70 °C operating temperature range

DDR2 SDRAM Doubled to 256 MB

Alternate data storage 64 MB [resp. 1 GB] of internal Flash memory, arranged in 512- [resp. 2,048-] byte pages, substituted for the standard microSD card holder

MFF SIM(s) Combination of (i) 'MFF + mini'; or (ii) 'mini + MFF'; or (iii) 'MFF + MFF' SIMs, substituted for the standard two mini-SIM trays

Location services IZat™ gen. 8C gpsOne (E214#02, E214#078, E218#04 only); via a dedicated SMA antenna connector

ADD-ON

Snap Cap™ A 9-pin male sub-D plug that 'snappily' converts any E210 unit into an isolated, half- or full-duplex (user-selectable via a slide switch) RS-485 unit via a 5-pin, $3^{.5}$ mm pitch, COMBICON header

ESSENTIAL ACCESSORIES

Power cords ACC-CA10 or ACC-CA10-F; the latter with two stripped wires for I/Os

Remote, adhesive, cellular and cellular / GNSS antennas All IP67-rated, except for ACC-A31 (IP33) and ACC-A31H (N/A)
- ✓ ACC-A31 or ACC-A31H LTE: E215
- ✓ ACC-A14 or ACC-A14H '2-in-1' LTE + GNSS: E213G, E215G
- ✓ ACC-A32 or ACC-A32H '2-in-1' LTE x 2: E214, E218
- ✓ ACC-A33 or ACC-A33H '3-in-1' LTE x 2 + GNSS: E214G, E218G

Wi-Fi antennas L-shaped, hinged, ACC-A24 (while stocks last) or ACC-A21

DIN Rail clip ACC-DIN-E210: dual mount 5½ U or 1½ U; mounting bracket too

Model name	Territories or Operator(s)	Cellular type [1]	Bands [2]	Fallback mode(s) [1]	Bands [2]	Location services	Planned / Obtained certifications [3]	Planned / Made FCS [4]	Order code
E215	EMEA; South Asia; South-East Asia	3G [ζ1]	8/1	2G [λ1]	8/3	×	CE [7]	Aug. '18	E215#02
E214	ANZ; Thailand	LTE cat. 1	28/5/8/3	3G [ζ2]	5/8/1		**RCM**; **NBTC**		E214#358S#158
	EMEA; Malaysia		28/20/8/3/1/7	3G [ζ3]; 2G [λ3]	8/1; 8/3	*IZat™ gen. 8C gpsOne*	**CE** [7]; **SIRIM**		E214#02
	China; Indonesia; India		5/8/3/1; TDD 40/41[a]				CCC, SRRC, CTA; Postel	Dec. '18	E214#078
E218	Brazil; ANZ; Thailand; Malaysia; Singapore	LTE cat. 4	28/5/8/3/1/7		5/8/1; 8/3		Anatel; RCM; NBTC; SIRIM; IMDA		E218#04
	ANZ; Taiwan		28/3/7	×	N/A	×	NCC	*TBD*	E218#37S
	NTT docomo		19/21/1				JRF, JPA		E218#1JL
	KDDI		18/11/1						E218#1BI
	LG U+		5/3/1/7				KC, LG U+		E218#1357
E215G	World	3G [ζ1]	5/8/2/1	2G [λ1]	5/8/3/2	Concurrent GPS and GLONASS [6]	*TBD*	*TBD*	E215G
E213G		LTE-M1 [5]	12[b]/28/13/14/20/27/26[c]/8/3[d]/66[e]/25[f]/1	×	N/A			Oct. '19	E213G-NN
				2G [?]	8/3			Apr. '20	E213G
E214G	Verizon Wireless	LTE cat. 1	13/4	×	N/A	IZat™ gen. 8C gpsOne	**FCC** [8], **Verizon Wireless**	Nov. '18	E214G#01
	AT&T Wireless, T-Mobile USA, Sprint		12[b]/5/4/2	3G [ζ3]	5/4/2		**ISED**; **FCC** [8], **PTCRB**, **AT&T Wireless**		E214G#00
	North America		12[b]/13/14/5/66[e]/2				E214G#01's and #00's	Apr. '20	E214G#010
E218G	Japan	LTE cat. 4	18/19/8/11/21/3[d]/1		6/19/1		JRF, JPA	Oct. '19	E218G#05

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

[1] *Uplink / Downlink maximum data rates*
- *2G: [λ1] $85^{.6}$ / $236^{.8}$; or $236^{.8}$ / [λ2] $236^{.8}$; or [λ3] 296 kbps*
- *NB-IoT: $62^{.5}$ / $27^{.2}$ kbps*
- *LTE-M1: 375 / 300 kbps*
- *LTE cat. 1: 5 / 10 Mbps (FDD); $3^{.1}$ / $8^{.96}$ Mbps (TDD)*
- *3G: $5^{.76}$ / [ζ1] $7^{.2}$; or [ζ2] $10^{.1}$; or [ζ3] $42^{.2}$ Mbps*
- *LTE cat. 4: 50 / 150 Mbps (FDD); 35 / 130 Mbps (TDD)*

[2] *Ranked by increasing frequencies*
- [a] *More precisely, B41's 2535 MHz ~ 2655 MHz subset, suited to China's three operators and incl. TDD B38*
- [b] *incl. North America's ("NorAm's") B17*
- [c] *incl. KDDI's B18 as well as NorAm's B5, the latter incl. NTT docomo's B19, itself incl. Japan's B6 (3G)*
- [d] *incl. Japan's B9*
- [e] *incl. NorAm's B10, itself incl. NorAm's B4*
- [f] *incl. NorAm's B2*

[3] *Besides **MIL-STD-810H***
[4] *First customer shipment [date of]*
[5] *LTE-M1 (E213G-NN); dual mode LTE-M1 / NB-IoT (E213G)*
[6] *Either Sony's CXD5603-based (E213G) or Qualcomm's SiRFstarV-based (E215G)*
[7] *Based on compliance with RED; EN 60950-1; etc.*
[8] *Also, Class I Division 2 for use in explosive atmospheres, as a factory option subject to MOQ and other considerations*

14 June 2019

Maestro Wireless Solutions Limited
Units A & B, 9th Floor, Wing Cheong Factory Building
121 King Lam Street, Cheung Sha Wan, Kowloon
Hong Kong

Tel.: +852 3955 0222
Fax: +852 3568 4833
contact@maestro-wireless.com
http://www.maestro-wireless.com

Mumbai **Pune** **Bangkok** **Shenzhen** **Hong Kong** **Beaverton** **Mataró** **Ilmenau** **Vienna**

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for RF Modules ***category:***

Click to view products by Maestro Wireless Solutions ***manufacturer:***

Other Similar products are found below :

HMC-C009 HMC-C011 nRF24L01P-MODULE-PCB HMC-C021 HMC-C024 XB9XT-DPRS-721 XBP9B-DMUTB022 nRF24L01P-MODULE-SMA CMD-KEY2-418-CRE XM-C92-2P-UA XB9XT-DPUS-721 V640-A90 HMC-C583 MAAM-008818-TR3000 MTSMC-H5-U SIMSA868-PRO SIMSA915C-PRO SIMSA868C-PRO SIMSA433C-PRO SIMSA915-PRO XBP9B-DMUT-042 HMC-C582 HMC-C022 XBP9B-DPST-041 XBP9B-DMWT-042 SM-MN-00-HF-RC HMC-C031 MT-02 M1002GB 702-W SIMSA868C-N-PRO SIMSA433C-N-PRO SIMSA915C-N-PRO ADP-R202-00B PEPPER WIRELESS C1 USB S2-1050J-Z0K4J S2-10732-Z1T61 S2-107XB-Z2356-Z2352 S2-10672-Z1L85 S2-10686-Z1L1D S2-10688-Z1L1T S2-106BA-Z1P20 S2-1060C-Z1F0A S2-106R4-Z1Q6F-Z1Q6Q S2-106R4-Z1Q6J-Z1Q6Q S2-106R4-Z1Q67-Z1Q6Q S2-106RB-Z1Q6V-Z1Q6Q S2-107DR-Z1Y5B SU60-2230C-PU RC-TFSK3-868