

# E220 SERIES



## Highly versatile, reliable and rugged routers

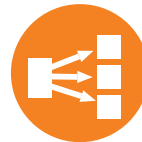
Available in 3G and LTE and with WAN, LAN, Wi-Fi and serial connectivity, the E220 series of M2M routers is designed for mission-critical enterprise applications.



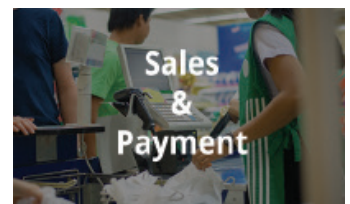
### Advanced Failover

Maximise uptime by seamlessly switching between multiple Internet interfaces

### Advanced Load Balancing



Spread or bind your data traffic across the multiple Internet interfaces, based on data type, source or destination and the relative WAN connectivity costs



### Multiple Tunnelling Schemes

Secure your data using a variety of VPN tunnelling schemes, including PPTP, L2TP, OpenVPN, GRE and IPsec

### RS-485 Operation



Integrate sensors and third-party devices over the RS-485 serial port to provide seamless connectivity to IP networks



## E220 Series specifications

### HARDWARE

<b>Material</b>	Brushed aluminium alloy, DIN Rail mountable
<b>Dimensions</b>	61.25 x 85.75 x 24.5 mm without connectors
<b>Weight</b>	Approx. 152 g
<b>Operating status LED x 6</b>	Alert / Power / Cellular signal, network and activity / Wi-Fi
<b>Operating temperature range</b>	All Lite models: -20°C ~ +55°C All other models: -30°C ~ +70°C
<b>SDRAM</b>	All Lite models: 512 Mbit All other models: 1 Gbit

### SOFTWARE

<b>Administration / Network Protocols</b>	Web-based user interface, set-up wizard, console log viewer, save / load configuration, NTP, SMS / OTA remote configuration, TR-069 capable
<b>Redundancy</b>	Ethernet, cellular, Wi-Fi - configurable as failover or load-balancing
<b>Resilience</b>	Network connectivity watchdog (configurable), internal application watchdog
<b>Wi-Fi</b>	Client or Access Point (approx. 40-user), multiple SSID, WEP, WPA, WPA-PSK / WPA2-PSK security modes
<b>M2M services</b>	Compatible with D2SPHERE™ device management services
<b>Security</b>	Zone-based firewall, VLAN, DMZ, HTTPS local and remote connection, SIM PIN
<b>Performance / Fault Management</b>	Real time processor load and interface (WAN / LAN / Wi-Fi), traffic analysis, ICMP, trace-route, NS lookup
<b>Routing</b>	DHCP, static routing, port-forwarding, traffic routing, static/dynamic DNS, DNS proxy, NAT, STP
<b>VPN</b>	PPTP client, L2TP, OpenVPN client / server / pass-through, GRE, IPsec

### INTERFACES

<b>LAN</b>	RJ45 connector with Tx / Rx LEDs
<b>RS-485</b>	Full- and half-duplex, 6 kV contact, 8 kV air discharge protection / 5-pin, 2.5 mm pitch COMBICON connector
<b>Wi-Fi</b>	IEEE 802.11b/g/n 2T2R 2.4 GHz (max. 300 Mbps throughput) / RP-SMA antenna connector (50 Ω) x 2
<b>WAN</b>	RJ45 connector with Tx / Rx LEDs; switchable to LAN 2
<b>Cellular</b>	SMA antenna connector x 1 (E225 models) or x 2 (E224 and E228 models)
<b>SIM</b>	Mini SIM 1.8 V / 3.0 V Optional dual SIM operation via a factory-fitted MFF SIM
<b>Location Services*</b>	Either IZat™ gen. 8C gpsOne (Mk II model) or Concurrent GPS, Galileo and either GLONASS (factory setting) or Beidou (other models)
<b>Digital I/O x 2</b>	Input - detection, 5 V ~ 48 V DC Output - open collector, max. output 200 mA / 3-pin, 2.5 mm pitch COMBICON connector with common ground

### POWER

<b>Main Source</b>	Roadworthy** 9 V ~ 60 V DC on a 2-pin Micro-Fit™ 3.0 female connector
<b>Alternate source***</b>	Class 3 PD-PoE with seamless fall-back onto the main source
<b>Last Gasp*</b>	Approx. 5-minute via two 96 mWh Li-ion batteries (not functional below -10°C)

\*Not available on Lite model  
\*\*Compliant with ISO 7637-2:2011 and 2004 as well as ISO 21848:2005  
\*\*\* Not available on Lite and Mk II models

MODEL NAME	TERRITORIES OR OPERATOR(S)	CELLULAR TYPE	BANDS	FALLBACK MODE(S)	BANDS	GNSS	PLANNED CERTIFICATIONS	FCS (*)	ORDER CODE
E225 Lite	EMEA, [most of] Asia Pacific	3G <sup>a</sup>	1/8	2G	3/8	*	RED, GCF		E225LITE#02
E224	EMEA Asia Pacific	LTE cat. 1	3/8/20 3/5/8/28						3G <sup>b</sup>
E225	EMEA, [most of] Asia Pacific World	3G <sup>a</sup>	1/8 1/2/5/8	2G	3/8 2/3/5/8	same as E228's	RED, GCF		E225#02 E225
E228 Mk II	EMEA Asia Pacific	LTE cat. 4	1/3/7/8/20/28 1/3/5/7/8/28	3G <sup>c</sup> ; 2G 3G <sup>c</sup>	1/8; 3/8 1/5/8		IZat™ gen. 8C gpsOne		RED, GCF
E228	AT&T Wireless, Rogers User-configurable to Verizon Wireless*** Asia Pacific		2/4/5/17 3/7/28	3G <sup>c</sup> *	2/5 N/A	Concurrent GPS, Galileo and either GLONASS (factory setting) or Beidou		FCC, PTCRB, AT&T Wireless, Verizon Wireless	E228#245DH#25
	NTT docomo		1/19/21	*	N/A		RCM, NCC	E228#37S E228#1JL	
	KDDI		1/11/18	*	N/A		JPA, JRF	E228#1BI	
	South Korea		1/3/5/7	*	N/A		KCC	E228#1357	

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

Uplink / Downlink maximum data rates – 3G: 5.76 / <sup>(a)</sup> 7.2; or <sup>(b)</sup> 10.1; or <sup>(c)</sup> 42.2 Mbps;  
LTE cat. 1: 5 / 10 Mbps; LTE cat. 4: 50 / 150 Mbps

\* First customer shipment