EDG 4200 SMART GATEWAY MODEM

PRIVATE BROADBAND FOR CRITICAL INFRASTRUCTURE

Today's Critical Infrastructure enterprises require robust communications to watch over and control their far-flung physical plant and remote equipment.

Whether it is an electric utility that needs to securely monitor its reclosers and instantly respond to downed power lines; a city water department that needs to communicate with its AMI smart meters; or an energy producer keeping track of fluid levels, pressure sensors and emissions — they all require fast, reliable, secure broadband connectivity.

Delivering this connectivity will require a new class of broadband equipment, including edge devices that operate on Critical Infrastructure frequencies, can connect across multiple network technologies, aggregate data from IoT endpoints, and offer enough processing power to enable time-critical intelligence and decision making directly at the edge. That's why we built the EDG 4200 Smart Gateway Modem.

The customizable EDG 4200 Smart Gateway Modem is a secure, multi-purpose device for Critical Infrastructure deployments. Certified intrinsically safe (UL Class 1, Div 2), it can serve as:

- Secure IoT gateway
- Data aggregator
- LTE modem
  - 900 MHz
  - Public carrier LTE
  - CAT-M1, CAT-NB1
- CBRS modem

With support for up to three radio modules and a Freescale ARM® Cortex™ A9 microprocessor, the EDG 4200 is a powerful, modular computing platform that not only provides outstanding data connectivity, but also allows intelligence to be securely distributed to the edge.

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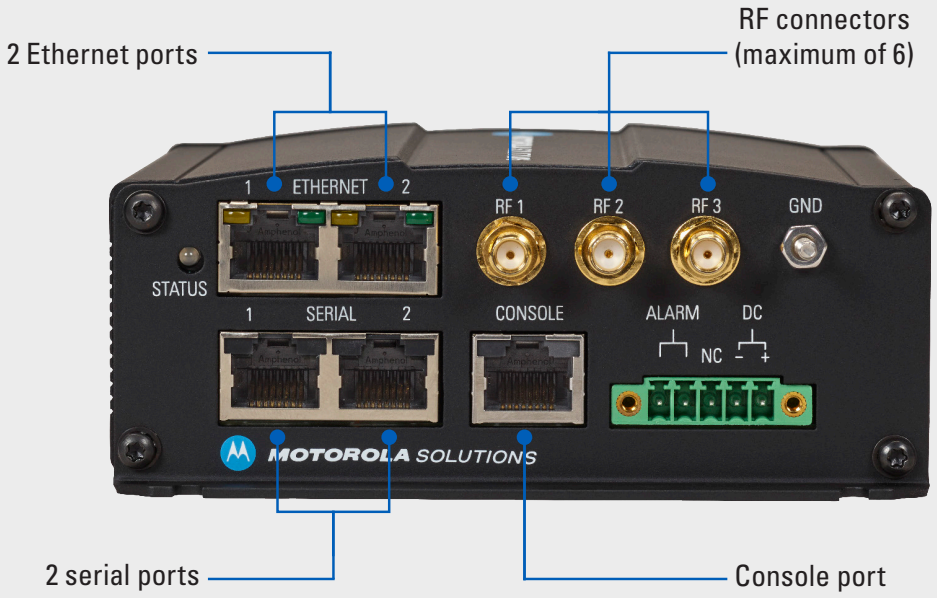
SPECIFICATIONS

NETWORK INTERFACES	
RF connectors	Up to 6 SMA connectors, 50 Ohm
Communications modules	Select 1, 2, or 3 modules: • LTE/CBRS • Cat-M/NB-IoT • Wi-Fi 802.11 a/b/g/n/ac
SIM support	2-3 SIM card slots, with network failover
LTE support	Verizon, AT&T and FirstNET 900 MHz (897.5-900.5 / 936.5-939.5) CBRS Band 48 Cat-M1/NB1 (Carrier and 900MHz)
CBRS	OnGo certified
Wi-Fi	802.11 ac/a/b/g/n 2.4 GHz and 5 GHz
Serial ports	1 RS-232/RS-422/RS-485 1 RS-232 only
Ethernet ports	2 RJ-45 ports (10/100/1000 Mbps) with 802.3af PoE PD
Console	1 console port
Digital Interfaces	GPIO UART I2C (Optional)

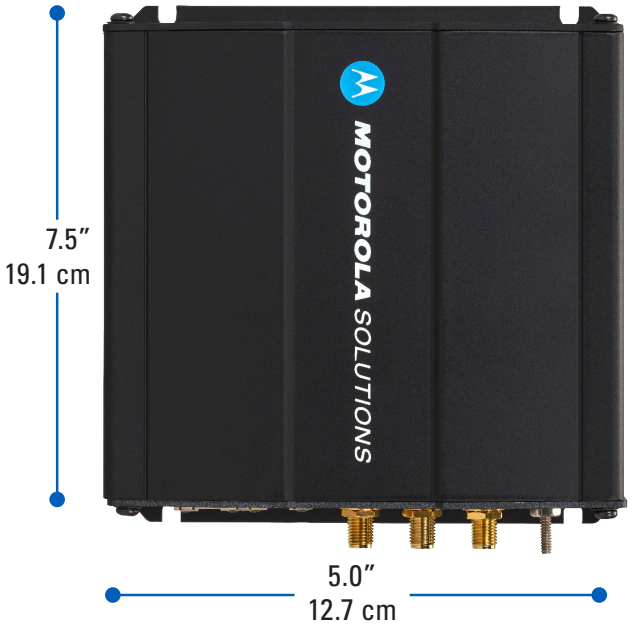
COMPUTING	
Processor	Dual-core Freescale ARM Cortex A9 SoC
Memory	1 GB DDR3 SDRAM
Storage	8 GB eMMC
Firmware	Serial configuration EEPROM
Operating system	Linux OpenWRT
Development environment	Node.js, Node-RED Docker containers LXC containers
Expansion	Mini-PCIe and m.2 expansion card slots
Self-test functions	Power-on test, CPU and register check, interrupt test, memory integrity check, DMA controller test, device interface test, transmit and receive tests, loopback interface test, system error/overload tests, system reset/reboot tests

ROUTER AND GATEWAY	
Bridging/Switching	Fully managed switch support (802.1q)
Routing protocols	BGP, MPLS, RIPv2, EIGRP, LDP, IS-IS, OSPF
Network and Transport Layer protocols	IPv4 (RFC 791, 826, 1918) IPv6 (RFC2460) IPv6-to-IPv4 and IPv4-to-IPv6 UDP (RFC 768) TCP (RFC 793) DHCP IPv6/IPv4 relay/client/server
Service and Application Layer protocols	MODBUS over TCP/UDP/Serial DNP3 over TCP/UDP/Serial IEC 60870-S-101/104 protocol translation
Quality of Service (QoS)	3GPP TS 23.203 and 23.207 802.1p

SECURITY AND ENCRYPTION	
Coprocessor	Onboard cryptographic coprocessor with secure key storage
Encryption	AES encryption (FIPS 197) FIPS 140 Capable NIST-certified hardware-based cryptographic calculation algorithms
VPN	GRE tunnels IPSec DMVPN
Authentication	X.509 certificate support 802.1x (Radius)
Embedded sensors	External tamper switch with message alerts GPS with PPS 9-axis accelerometer with gyroscope



REGULATORY COMPLIANCE	
Radio frequency	FCC 47 CFR Part 15
Environmental	RoHS
Safety	• UL 60950-1, Information Technology Equipment – Safety • UL Class 1, Div 2 Intrinsic Safety
Utility	IEEE 1613 C37.90 high-voltage impulse
DEVICE MANAGEMENT	
Protocols supported	SNMP v1, v2c and v3 CoAP MQTT
Local management	Supported
Remote management	Supported
User interface	Web browser-based GUI
PHYSICAL	
Size (WxDxH)	With 3 expansion slots, no larger than 5" x 5" x 2" (12.7 x 12.7 x 5.1 cm) With 4 expansion slots, no larger than 5" x 7.5" x 2" (12.7 x 19.1 x 5.1 cm)
Weight	Less than 1 lb (454 g)
Input Voltage	9-60 VDC or 802.3af PoE PD
Power	12W max
Power consumption	Typical: 2-4 W Sleep mode: 400 mW Peak: 12 W
Temperature	-13°F to 158°F (-25°C to + 70°C) with type test from -40°F to 185°F (-40°C to + 85°C) for 16 hours
Humidity	5% to 95% non-condensing



For more information, visit: motorolasolutions.com/PrivateBroadband

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