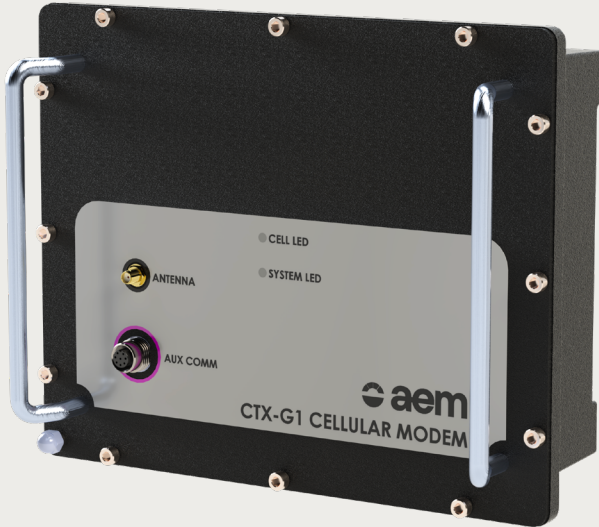


Cellular Modem: CTX-G1



The CTX-G1 is a rugged cellular telemetry modem purpose-designed for remote environmental monitoring applications. Featuring a sealed IP65-rated enclosure and ultra-low power consumption, the CTX-G1 provides reliable cellular connectivity for data loggers in harsh outdoor environments. The modem integrates seamlessly with Axiom Data Loggers through a single M12 connection that provides both power and data, eliminating the need for additional power infrastructure. CTX-G1 mounts directly to standard Remote Automated Weather Station (RAWS) backplates or integrates into Quick Deploy (QD RAWS) enclosures and transmits data directly to AEM Elements® 360.

Product Models:

- CTX-G1
- CTX-G1-QD

Key Features:

- LTE Cat M1/NB-IoT cellular connectivity with 2G fallback
- Ultra-low power design optimized for battery and solar applications
- Sealed IP65 enclosure for outdoor environmental durability
- Single-cable installation (M12 connector provides power and data)
- Integrated with Axiom Data Logger power system
- Direct integration with Axiom Data Loggers for operational feedback and troubleshooting
- Compatible with cellular antennas pre-installed in Axiom field enclosures
- SMA antenna connector
- Operating temperature range: -40°C to +60°C
- Full FCC, PTCRB, and carrier certifications included

*Preliminary specifications – details may change prior to final release.

CELLULAR TECHNOLOGY	
Network Technology	• LTE Cat M1 (primary) • NB-IoT (NB2) • 2G GSM/GPRS (fallback)
Supported Bands	• 4G LTE: B1, B2, B3, B4, B5, B8, B12, B13, B18, B19, B20, B25, B26, B27, B28, B66, B71, B85 • 2G Fallback: B2, B3, B5, B8
Region	Global
Compatible Carriers	• AT&T (certified) • Verizon (certified) • Other carriers
SIM	3FF Micro-SIM
Network Provisioning	• User-supplied SIM cards supported • AEM-supplied SIM cards available • Dynamic or static IP addressing supported
Network Requirements	• LTE Cat M1

SYSTEM INTEGRATION	
Axiom Data Logger Integration	• Automatic identification by Axiom Data Loggers • Operational parameters displayed on data logger • Troubleshooting feedback on data logger display • Field-swappable without configuration changes
Cloud Connectivity	• Direct transmission to AEM Elements 360 cloud platform
Status Indicators	• Dual-color LED for system status • Dual-color LED for cellular connection status

CONNECTIONS AND INTERFACE	
Data/Power	• M12 8-pin connector (female, A-coded) • Single shielded cable provides power and data • 1-meter cable standard
Serial Interface	• RS-232, full-duplex (RXD/TXD) • Baud rate: 115,200 bps (default)
Antenna Connection	• SMA female connector for cellular antenna • Compatible with cellular/GNSS antennas pre-installed in Axiom systems • Supports specialized directional or omnidirectional antennas

MECHANICAL SPECIFICATIONS	
Dimensions	10 x 8 x 5.7 inches (25.5 x 20.3 x 14.4 cm) (Preliminary)
Case Materials	• Corrosion resistant • Powder-coated, aluminum front plate • 33% Glass-reinforced, injection-molded polyamide enclosure
Connectors	M12, 8-pin
Weight	5 lbs (2.3 kg)

ENVIRONMENTAL SPECIFICATIONS	
Operating Temp	-40°C to 60°C
Operational Humidity	10–90% RH, Condensing
Sealing	IP65, O-ring seals
Impact	MIL-STD 810G, Method 516.6, Procedure VI, Section 4.6.7.3 (bench handling)
Shipping	ISTA 1A compliant

ELECTRICAL SPECIFICATIONS	
Power Input	• Provided through Axiom Data Logger M12 connector. • 12 VDC nominal, 7 VDC to 24 VDC
Idle Current	< 5 mA
Receive Current	20 mA Average
Peak Transmit Current	250 mA

*Preliminary specifications – details may change prior to final release.