

# TECHNICAL SPECIFICATION

Industrial LTE/GSM Modem  
with GNSS and DIV antenna

**AM-201**



## Features

- 4G LTE CAT1 with fallback to 3G and GPRS
- GNSS optional
- SMS support
- USB, RS232, RS485 interfaces
- USB drivers for Linux and Windows systems
- Wide power supply range up to 36V
- DIN rail mounting
- Aluminium enclosure

This is 4G LTE Cat1 modem for use in industrial environment. It communicate to host by USB, RS485 and RS23. The modem has diversional and GNSS antenna options. For use in IoT systems, industrial

control systems, electrical panels and distribution systems, public display controllers, remote monitoring for agriculture and industrial IoT.

Description	Parameter
<b>Cellular specification</b>	
<b>Cellular bands</b>	Refer Cellular specification chart
<b>SIM card</b>	3V/1.8V
<b>SIM card holder</b>	MicroSIM, push-pull type holder
<b>Antenna Connector</b>	SMA female
<b>DIV antenna</b>	SMA female <sup>1</sup>
<b>USB</b>	
<b>USB port number</b>	1
<b>USB</b>	2USB 2.0
<b>Connector</b>	USB type B
<b>Protection</b>	IEC 61000-4-2 level 4: - 15 kV (air discharge) - 8 kV (contact discharge)
<b>Serial RS485</b>	
<b>Port number</b>	1
<b>Interface Type</b>	RS485
<b>Data Rate</b>	4800, 9600, 19200, 38400, 57600,

<sup>1</sup> GL model only

Description	Parameter
	115200, 230400, 460800 and 921600 bps baud rates The default is 115200 bps
<b>Signals</b>	A, B and common ground
<b>Connector</b>	Pluggable screw socket
<b>Protection</b>	IEC 61000-4-2 level 4: - 15 kV (air discharge) - 8 kV (contact discharge)
<b>Serial RS232</b>	
<b>Port number</b>	1
<b>Data Rate</b>	4800, 9600, 19200, 38400, 57600, 115200, 230400, 460800 and 921600 bps baud rates, The default is 115200 bps
<b>Signals</b>	RX, TX and common ground
<b>Connector</b>	Pluggable screw socket
<b>Protection</b>	ESD Protection Exceeds ±15 kV Using Human-Body Model (HBM)
<b>GNSS<sup>2</sup></b>	
<b>GNSS Systems</b>	GPS, BAIDOU (GPS / GLONASS /

Description	Parameter
<b>GNSS</b>	
	BDS / Galileo )
<b>Antenna Connector</b>	SMA female
<b>Antenna type</b>	Active 3.3V antenna support
<b>System Functions Indicators</b>	
<b>Indicators</b>	ON, ACT, LTE (GNSS antenna power in GL version)
<b>System</b>	
<b>To work on USB</b>	Linux, Windows
<b>To work by serial</b>	All systems by AT commands
<b>Power Supply</b>	
<b>Power Voltage range</b>	8-36V DC
<b>Power consumption</b>	1W average
<b>Connector</b>	2 pin (+, -) pluggable screw socket
<b>Protection</b>	Reverse polarity, surge
<b>Physical Characteristics</b>	
<b>Installation</b>	DIN-Rail, clamp
<b>Housing</b>	Aluminium
<b>Weight</b>	190g
<b>Dimensions</b>	88mm x 65mm x 35mm
<b>Environmental Specification</b>	
<b>Operating temp.</b>	-20 ~ 65°C (-4 ~ 149°F)
<b>Storage temp.</b>	-40 ~ 85°C (-40 ~ 185°F)
<b>Ambient RH</b>	5% to 95% (non-condensing)

2 GL model only

### Cellular specification of IN (India) version of Modem

EU version of gateway	Cellular network interface details	
<b>Band LTE FTD</b>	B1/B3/B5/B8	
<b>Band LTE TDD</b>	B34/B38/B39/B40/B41	
<b>WCDMA</b>	B1/B5/B8	
<b>Band GSM/EDGE</b>	B3/B8	
<b>GPRS slot</b>	Multi-slot class 12/10	
<b>Bandwidth</b>	1.4/ 3/ 5/ 10/ 15/ 20 MHz	
<b>Output power</b>	LTE-FDD	Class 3 (23 dBm ±2 dB)
	LTE-TDD	Class 3 (23 dBm ±2 dB)
	EGSM900	Class 4 (33 dBm ±2 dB)
	DCS1800	Class 1 (30 dBm ±2 dB)
<b>Maximum data rate LTE</b>	LTE-FDD	150 Mbps (DL)/Max. 50 Mbps (UL)
	LTE-TDD	130 Mbps (DL)/Max. 30 Mbps (UL)
<b>Maximum data rate UMTS</b>	DC-HSDPA	21 Mbps (DL)/ 5.76 Mbps (UL)
	WCDMA	384 kbps (DL)/Max. 384 kbps (UL)
<b>Maximum data rate GSM</b>	EDGE	236.8kbps (DL)/Max. 236.8 kbps (UL)
	GPRS	85.6 kbps (DL)/Max. 85.6 kbps (UL)
<b>Power</b>	Compliant to GSM phase 2/2+	
	– Class 4 (2 W 900MHz)	
	– Class 1 (1 W 1800MHz)	

### Cellular specification of GL (global) version of Modem

GL version of gateway	Cellular network interface details	
<b>Band LTE FTD</b>	B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28	
<b>Band LTE TDD</b>	B38/B39/B40/B41	
<b>Band WCDMA</b>	B1/B2/B4/B5/B6/B8/B19	
<b>Band GSM</b>	B2/B3/B5/B8	
<b>Output power</b>	GSM850	Class 4 (33 dBm ±2 dB)
	EGSM900	Class 4 (33 dBm ±2 dB)
	DCS1800	Class 1 (30 dBm ±2 dB)
	PCS1900	Class 1 (30 dBm ±2 dB)
	GSM850 8-PSK	Class E2 (27 dBm ±3 dB)
	EGSM900 8-PSK	Class E2 (27 dBm ±3 dB)
	DCS1800 8-PSK	Class E2 (26 dBm ±3 dB)
	PCS1900 8-PSK	Class E2 (26 dBm ±3 dB)
	WCDMA	Class 3 (24 dBm +1/-3 dB)
	LTE-FDD	Class 3 (23 dBm ±2 dB)
	LTE-TDD	Class 3 (23 dBm ±2 dB)
<b>Maximum data rate LTE</b>	LTE-FDD	150 Mbps (DL)/Max. 50 Mbps (UL)
	LTE-TDD	130 Mbps (DL)/Max. 30 Mbps (UL)
<b>Maximum data rate UMTS</b>	DC-HSDPA	42 Mbps (DL)
	HSUPA	5.76 Mbps (UL)
	WCDMA	384 kbps (DL)/Max. 384 kbps (UL)
<b>Maximum data rate GSM</b>	EDGE	296 kbps (DL)/Max. 236.8 kbps (UL)
	GPRS	107 kbps (DL)/Max. 85.6 kbps (UL)

## Standard model list

Model	Hardware Options			GNSS	More information
	Cellular Network				
AM-201	GPRS	3G	LTE		
AM-201-IN	✓	✓	✓		
AM-201-GL	✓	✓	✓	✓	

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**Atreyo Research  
& Development LLP**

**+91 9727741417  
info@atreyo.in**

414, Sunrise Mall, Mansi Circle,  
Ahmedabad, Gujarat, India