

TECHNICAL SPECIFICATION

Programmable OpenWRT LTE IoT gateway with RS485, RS232 and I/O

AG-702



Features

- OpenWRT system
- Expanded memory for applications
- LTE, GSM, WiFi and dual ethernet
- GNSS
- 2 opto-isolated digital inputs
- 1 potential free relay output
- Opto-isolated RS485 and RS232
- USB host with storage support
- Cellular signal strength indicator
- Wide power supply range up to 60V
- DIN rail mounting
- Aluminium enclosure

Industrial IoT Gateway AG-702 powered by the OpenWRT system. With OpenWRT, you gain access to an expansive repository of over 6000 ready-to-use applications, along with the freedom to integrate your own custom solutions. This cutting-edge gateway, AG-702 features opto-isolated RS485

and RS232 ports, coupled with two digital inputs and a relay output. Boasting enhanced built-in memory and RAM, the Gateway unlocks limitless programming potential, empowering your projects like never before.

Description	Parameter
Processor	
MIPS	MIPS24KEc 580MHz
RAM	
Memory size	256MB DDR2
Memory speed	1066max
Storage	
Internal flash	32MB+512MB ExtRoot support (overlay)
USB	
USB port number	1
USB type	USB 2.0, host with storage support
Connector	USB type A
Protection	IEC 61000-4-2 level 4: - 15 kV (air discharge) - 8 kV (contact discharge)
USB overload	500mA

Description	Parameter
Serial RS485	
Port number	1
Interface Type	RS485
Data Rate	600 - 460800 bps
Signals	A and B
Connector	Pluggable push-in
Protection	Opto-isolated 2.5kV RMS per UL 1577
	IEC 61000-4-2 level 4: - 15 kV (air discharge) - 8 kV (contact discharge)
	MIL STD 883C-method 3015-6: class 3. (human body model)
	Fail-safe receiver for bus open, short and idle

Description	Parameter
Serial RS232	
Port number	1
Interface type	RS232
Data rate	300 – 230400 bps
Signals	RX, TX, RTS, CTS
Connector	Pluggable push-in
Protection	Opto-isolated 2.5kV RMS per UL 1577
	IEC 61000-4-2 level 4: – 15 kV (air discharge) – 8 kV (contact discharge)
	MIL STD 883C-method 3015-6: class 3. (human body model)
Ethernet	
Number	2
Type	10/100M port
PoE	PoE (spare pare on one connector)
Ethernet connector	RJ45 with LED indicators
PoE	Spare pare on ETH-1 (14-60V)
WiFi	
WiFi type	2.4GHz
WiFi standard	IEEE 802.11/a/b/g/n
Antenna connector	SMA female
LTE/GSM Interface¹	
Band LTE FTD	B1/B3/B5/B8
Band LTE TDD	B34/B38/B39/B40/B41
Band GSM	900/1800MHz
GPRS slot	Multi-slot class 12/10
Link	GPRS class 12: max. 85.6 kbps (downlink/uplink)
Power	Compliant to GSM phase 2/2+ – Class 4 (2 W 900MHz) – Class 1 (1 W 1800MHz)
SIM card	Dual nanoSIM, tray type anti-loss holder
	3V/1.8V
Antenna connector	SMA female
GNSS²	
GNSS systems	GPS, BDS, Galileo, GLONASS, QZSS
Antenna connector	SMA female
Digital Inputs	
Input number	2
Input type	Opto-isolated 2.5kV

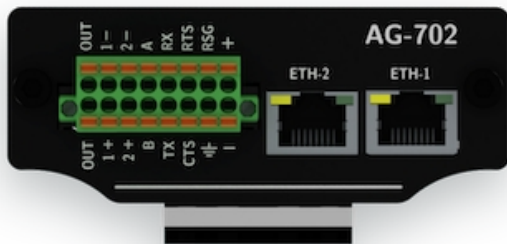
¹ Apply to LT models. Refer model selection chart. LTE/GSM Bands are mentioned for IN version of LTE modem. For EU and GL please contact support.

² Apply to LT models. Refer ordering chart.

Description	Parameter
Configuration	Separate IN-GND
Connector	Pluggable push-in
Max v_{in}	30V DC
Logic 1 Voltage range	3.5V to max v_{in}
Relay Outputs	
Output number	1
Output type	NO (normal open)
Load _{max}	3A 160V AC or 3A 30V DC
Connector	Pluggable push-in
System Functions Indicators	
Indicators	ACT – activity
	LTE signal level – 4 LED
	RS232 and RS485 (or custom use)
	Out enable
	LTE
	WiFi
	IN-1 and IN-2
	SIM-1 and SIM-2
System	
Operating systems	OpenWRT 23.05, Kernel 5.15.71, Atreyo Environment V1.01.02
Booting source	Flash memory
Power Supply	
Power Voltage range	14-60V DC (or 8-36V DC ³)
Power consumption	1.6W (24V without LTE and relay on)
Connector	Pluggable push-in (+, -, earthing)
Protection	Reverse polarity, over voltage
Physical Characteristics	
Installation	DIN-Rail, clamp
Housing	Aluminium
Weight	240g
Dimensions	88mm x 35mm x 87mm
Environmental Specification	
Operating temp.	-20 ~ 65°C (-13 ~ 131°F)
Storage temp.	-40 ~ 85°C (-40 ~ 176°F)
Ambient RH	5% to 95% (non-condensing)

³ Apply to V36 models. Refer ordering chart.

Gateway



Selected model list

Models		Hardware Options			More Info
Model		Cellular Network		GNSS	
AG-702	GPRS	3G	LTE		
AG-702					Without LTE module
AG-702-LT-IN	✓		✓	✓	Model for India
AG-702-LT-EU	✓		✓	✓	Model for India and EU
AG-702-LT-GL	✓	✓	✓	✓	Global model

Table with model structure for ordering

Model Structure	
Model structure example	AG-702- LT- EU-V60
Base model name	
AG-702	
Cellular communication modem	
LT (LTE communication module present)	
LTE/GSM module regional information	
IN (certification of LTE module for India)	
EU (certification of LTE module for India and Europe)	
GL (global certification of LTE module)	
Power supply range	
V60 (from 14V to 60V DC)	
V36 (from 8V to 36V DC)	

For more details
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