

Customisable IoT gateway

AG-1115



Features

- 4G LTE and GSM connectivity
- Dual SIM support
- 3 independent NO relay outputs
- Opto-isolated RS485
- 4 opto-isolated digital inputs
- Analogue input
- GNSS for accurate time and location
- Battery/superCAP backup option
- Indicators and SIM accessible from the front
- Aluminium compact size casing
- Panel mounting

AG-1115 is a gateway designed for a customers who requires low cost gateway with custom software for their application. The gateway has opto-isolated RS485, digital inputs and outputs, one analog input and LTE/GPRS communication with SMS support. Gateway software is created according to specific customer

requirements. The gateway is designed to monitor and control the remote energy switches, electricity meters, etc. It can be adapted to control any RS485 / Modbus based device. Atreyo offers software development services in accordance with the client's requirement.

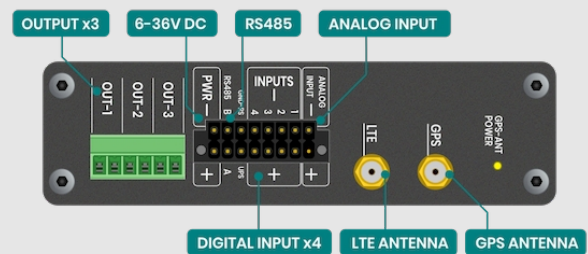
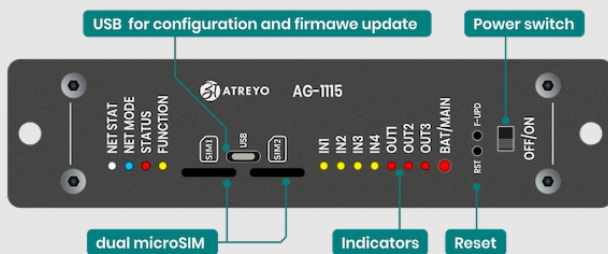
Description	Parameter
Processor	
Type	ARM Cortex A5
Clock	500 Mhz
RAM memory	
Memory size	16 MB
Storage	
Internal flash	8 MB (only for system and application)
MicroSD	Optional (inside of the enclosure)
Serial interface	
Port number	1

Description	Parameter
Interface type	RS485
Data Rate	2400 – 19200
Signals	A and B
Connector	Pluggable push-in socket
Protection	Opto-isolated 2.5 kV RMS per UL 1577
	IEC 61000-4-2 level 4: – 15 kV (air discharge) – 8 kV (contact discharge)
	Fail-safe receiver for bus open, short and idle

Description	Parameter
Ethernet	
Number	2
Type	10/100M port
Connector	RJ45 with LED indicators
PoE	Spare pair on ETH-1
WiFi	
WiFi type	2.4GHz
WiFi standard	IEEE 802.11/a/b/g/n, Access Points
Antenna connector	SMA female
Cellular modem¹	
Band	Please refer table of cellular network on page 3 and 4.
SIM card	2 x nanoSIM, tray to prevent cards falling out
	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
Configuration	Separate IN-GND
Connector	Pluggable push-in
Max v_{in}	30V DC
Logic 1 voltage	3.5V to max v_{in}
System functions indicators	
Indicators	ACT – activity
	NET status
	NET mode

Description	Parameter
	Digital output active indicators
	Digital input active indicator
	Custom use
Configuration and System	
Configuration method	USB
	SMS ³
Power supply	
Power supply	8-36V DC
Power consumption	3W average
Connector	Pluggable push-in socket
Protection	Reverse polarity, over voltage
Battery backup	
Battery type	Li-Ion (18650)
Battery voltage	3.7V
Backup time	24h (approx, with relay off)
Battery protection	Over voltage, low battery
SuperCAP backup	
Backup time	10min approx
Physical characteristics	
Installation	Panel mount
Housing	Aluminium
Weight	360g (without battery model)
Dimensions	135×38×75mm
Environmental specification	
Operating temp.	-25 ~ 75°C (-13 ~ 167°F) (without battery model)
Storage temp.	-40 ~ 85°C (-40 ~ 185°F) (without battery model)
Ambient RH	5% ~ 95% (non-condensing)

Gateway



- 1 Apply to LT models. Refer model selection chart. LTE/GSM Bands are mentioned for in Cellular table section on page 3 and 4.
- 2 Apply to LT models. Refer ordering chart.
- 3 Can be implemented.

Cellular modem specification of IN (India) version

IN version of gateway	Cellular network modem details	
Band LTE FTD	B1/ 3/ 5/ 8	
Band LTE TDD	B34/ 38/ 39/ 40/ 41	
Band GSM	B3/ 8 (900/1800MHz)	
GPRS slot	Multi-slot class 12/10	
Bandwidth	1.4/ 3/ 5/ 10/ 15/ 20 MHz	
Output power	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)
Maximum data rate	LTE-FDD	10 Mbps (DL)/ 5 Mbps (UL)
	LTE-TDD	8.96 Mbps (DL)/ 3.1 Mbps (UL)
	GPRS	85.6 Kbps (DL)/85.6 Kbps (UL)

Cellular modem specification of EU (Europe and India) version

EU version of gateway	Cellular network modem details	
Band LTE FTD	B1/3/5/7/8/20/28	
Band LTE TDD	B38/ 40/ 41	
Band GSM	B2/3/5/8 (900/1800MHz)	
GPRS slot	Multi-slot class 12/10	
Bandwidth	1.4/ 3/ 5/ 10/ 15/ 20 MHz	
Output power	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)
Maximum data rate	LTE-FDD	10 Mbps (DL)/ 5 Mbps (UL)
	LTE-TDD	8.96 Mbps (DL)/ 3.1 Mbps (UL)
	GSM	85.6 kbps (DL)/ 85.6 kbps (UL)
Power	Compliant to GSM phase 2/2+	
	– Class 4 (2 W 900MHz)	
	– Class 1 (1 W 1800MHz)	

Standard model list

These are models in regular production. Other models are only made on order with a minimum order quantity. Please [contact us](#) if you require a custom order.

Model	Hardware Options			Backup		More information
	GPRS	LTE	GNSS	Battery	SuperCAP	
AG-1115-IN	✓	✓	✓			
AG-1115-IN-BAT	✓	✓	✓	✓		Battery backup
AG-1115-IN-SC	✓	✓	✓		✓	SuperCAP backup

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**Atreyo Research
& Development Pvt. Ltd.**

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

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