

# TECHNICAL SPECIFICATION

IoT Gateway – Embedded Computer

AG-1601



## Features

- LTE, GSM connectivity
- WiFi
- Support of Linux Debian, Ubuntu, Yocto etc.
- 2 opto-isolated digital inputs
- 2 potential free outputs NO/NC outputs
- Opto-isolated RS485
- Opto-isolated RS232
- 2 USB
- 1 HDMI
- 2 LAN with dual MAC
- Wide power supply range
- Internal Battery backup

The AG-1601 is multipurpose industrial gateway based on four core ARM processor. Support many types of Linux systems distributions. Very low power consumption, LTE

connectivity and battery backup make this gateway ideal for IoT applications and industrial control systems.

Description	Parameter
<b>Processor</b>	
ARM	Cortex-A7 quad core
L1 cache	32KB for data, 32KB for instruction
L2 cache	512KB, 8 ways
Target frequency	960MHz
multimedia processing	NEON engine with SIMDv2/VFPv4 ISA support
<b>RAM</b>	
Memory size	512MB DDR3
Memory speed	1066max
<b>Graphics</b>	
HDMI	TX 1.4, resolution up to 720P
<b>Storage</b>	
MicroSD card	up to 356Gb
eMMC	8Gb (optional 16 and 32Gb)
<b>USB</b>	
USB	2 USB2.0
USB overload	2A common to 2 port

Description	Parameter
USB boot	Support boot from USB
UVC	Support USB video class (UVC)
<b>Serial RS232</b>	
RS232 port number	1
Type	opto-isolated (common supply with RS485)
Signals	RX TX
baud rate max	921600 bps
<b>Serial RS485</b>	
RS485 port number	1
Type	opto-isolated (common supply with RS232)
baud rate max	921600 bps
<b>Digital Inputs</b>	
Input number	2
Input type	Opto-isolated 2.5kV
Configuration	separate IN-GND
Max V <sub>in</sub>	28V DC

Description	Parameter
Logic 1 Voltage range	3V to max Vin
<b>Potential free digital outputs</b>	
Output number	×2
Type	Potential free, relay NO/NC
V <sub>max</sub>	240V AC
A <sub>max</sub>	2A continues
<b>Ethernet</b>	
Number	2
Type	10/100M ports with RMII interface
Technology Support	Support full and half duplex
	Support Daisy Chain and NIC mode for different application scenarios
	Support MAC clone and MAC security
	Support 4 traffic classes (compatible with IEEE802.1D-2004)
PoE	PoE class A
<b>Security</b>	
Boot	External boot image verified by ED25519 algorithm
	External boot image will be signature-verified by internal ROM code and private/public key before loaded.
Crypto Engines	PKA Engine (RSA)
	Hash Engine (SHA3, MD5)
	Bulk Encryption/decryption Engine (AES)
<b>Storage</b>	
microSD	microSD card (SD 2.0) inside body
eMMC	4.41 DDR 104MB/s (optional 8Gb)
<b>Software</b>	
OS support	Ubuntu Linux, Kail Linux, Debian Linux, CentOS linux, Fedora-Mate, Mozilla IoT gateway, Yocto Linux
<b>Power supply</b>	
Power	12-36V DC
Connector type	3 pin screw connector
Power consumption	Up to 6W without battery charging ON (average 4W)
Battery	Battery 7.4V lithium 2200mAh
Backup time	Approx 2 hour
<b>Physical Characteristics</b>	
Installation	Clamp, DIN-Rail Mounting (optional)
Housing	Aluminium
Cooling	passive
Dimensions	134mm x 107mm x 50mm
Weight	

Description	Parameter
<b>Environmental Specification</b>	
Operating Temp.	-25 ~ 70°C (-13 ~ 158°F)
Storage Temp.	-40 ~ 85°C (-40 ~ 176°F)
Ambient RH	5% to 95% (non-condensing)



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