

G2021ES-MBC Product Specifications

G2021ES Multi Service Gateway for IoT

The “G2021ES” is a purpose built, cost effective, multi-technology gateway hosted with edge analytics capability with rich set of wired and wireless communication channels and protocols.

The product design and form factors suitable for industrial extended vibrations and temperature ranges. Used in building and factory automation, OEM asset management in automotive, industrial and mining sectors.



Product Specifications

Specification	Description
Processor	AM3352, 800 MHz, ARM® Cortex™-A8, 32 bit
Memory	<ul style="list-style-type: none"> • 512 MB DDR3 RAM • 4GB eMMC storage memory • Micro SD slot for additional storage
Wireless Communications	Wi-Fi: 802.11 b/g/n Wireless LAN Bluetooth: 4.0 BLE Cellular: 3G global cellular module with integrated GPS
Wired Communications	Ethernet: <ul style="list-style-type: none"> • 1x 10/100 Mbps Ethernet port USB: <ul style="list-style-type: none"> • 2x USB 2.0 host ports for general purpose use • 1x USB 2.0 client port Serial: <ul style="list-style-type: none"> • 2x RS232/485 configurable serial ports • 1x Serial port for debug/OS console • 1x Serial EEPROM for device configuration data CAN: <ul style="list-style-type: none"> • 2x CAN ports
LED Indicators	<ul style="list-style-type: none"> • 4x User configurable LEDs • 1x Power LED • 1x Cellular activity LED
Inputs and Outputs	<ul style="list-style-type: none"> • 2x insulated digital inputs • 2x insulated digital outputs
Buttons	<ul style="list-style-type: none"> • Reset pushbutton • Programmable pushbutton
RTC	RTC with an accuracy of 25 minutes per year @ 25 °C
Watchdog	Watchdog/supervisor IC, external to the CPU
Software	<ul style="list-style-type: none"> • Linux distribution • Embedded Device Framework • Supports Galaxy 2021
Power Supply	<ul style="list-style-type: none"> • Nominal voltage: 24 V DC • Voltage range: 9 to 36 V DC with transient protection • Peak demand: < 15W
Mechanical Dimensions	139 x 95 x 48 mm (L x W x H) (antenna SMA connectors included)
Weight	160 g
Color	Black
Operating Temperature	-20°C to +70°C

Product Specifications (continued)

Storage Temperature	-40°C to +80°C
Relative Humidity	Up to 90% @ +45°C non-condensing
Compliance and Certifications	<ul style="list-style-type: none"> • Reduction of Certain Hazardous Substances (ROHS) • CE Mark • Wi-Fi and BT Radio: <ul style="list-style-type: none"> - CE - EN300 328 (2.4GHz ISM), EN50371 (EMI), EN301 489 (EMC) - FCC - 15.209 (General RF device), 15.247 & 15.249 (2.4GHz ISM) • Cellular Radio: <ul style="list-style-type: none"> - FCC PART 22, 24 & 27 and suitable GSM radio certifications • UL/EN 61010-1 Safety standard compliance • Product compliance with FCC part 15.21

Functional Specifications

- Rich in field communication protocols
- Data normalization and control engine
- Cloud-based device provisioning, management and configuration
- User programmable business rules and edge analytics
- Power optimization algorithms
- Optimized uplink/cellular bandwidth management
- Application driven secured Edge Device Communication Protocol which enable seamless and secure data flow between edge devices and the cloud
- Error correcting code (ECC) to avoid potential gateway crashes and data quality, data integrity
- Modular I/O structure designed to bridge all legacy serial connections (RS-232/485, CAN 2.0B), modern wireless networks (Wi-Fi, 802.15.4 mesh, ZigBee) and low power WAN networks for expansion capability
- The gateway G2021ES - ensures interoperability with fieldbus-based
 - Industrial networks, allowing data communication using Modbus RTU/TCP and Profibus protocols
 - SAE automotive interoperability with industry adopted SAE CAN J1939, J1708, J1587 protocols
 - BACnet MSTP/IP in building automation spectrum
- Ability to be mounted on the wall, pole mount and rail mount options and to operate in extreme temperatures like generators, air compressors, chillers and equipment operating in harsh environments like desert
- Extended and assured product life times and standard lead times
- Ease of deployment is native characteristic of the gateway and its accessories

To Order

Part Number	Description
G2021ES-MBC	TI335X/512MRAM/512MF/WiFi Global 3G Module with GPS, BT 4.0/RS/CAN/USB/ETH/DIO/Exclusive EXT ANT, Modbus RTU/TCP, BACnet MSTP/IP, SAE CAN J1939, J1708, J1587
G2021ES-ADR	Accessory: G2021ES accessory and connector kit, IO connectors + DIN rail mount clip
G2021ES-A2AK-2m	Antenna kit: Cellular/WiFi-BT 2in1, 2m coaxial cable length
G2021ES-A3AK-2m	Antenna kit: Cellular/WiFi-BT/GPS 3in1, 2m coaxial cable length
G2021ES-A3AK-10m	Antenna kit: Cellular/WiFi-BT/GPS 3in1, 10m coaxial cable length
CONN 9P-3m	Cable: 9 Pin Deutsch style pass through connector, 6mm dia 3m cable length
CONN 3P-3m	Cable: 3 Pin Deutsch style connector, 6mm dia 3m cable length
G2021ES-MBC-E/SM	Package: Wall mounted, IP 65/NEMA 4X, 250x200x180mm sheet metal enclosure
G2021ES-MBC-E/PVC	Package: UV protected, IP67 (EN 60529), gray color, 0.6kg, 180x180x45mm PVC enclosure
G2021ES-MBC-E/AL65	Package: Multipurpose, 150x200x50mm, aluminum, IP65 enclosure
G2021ES-MBC-E/AL67	Package: Aluminum die-cast, 212.6x212.6x55mm, gray color, IP67 enclosure

Contact us

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