

QUAD BAND FREEDOM IOT GATEWAY

TECHNICAL DATA SHEET



ORDER CODE: GTW-200
CATEGORY: Gateways

Uninterrupted connectivity, anytime, anywhere – powered by 4 wireless bands for reliable connectivity

PRODUCT OVERVIEW

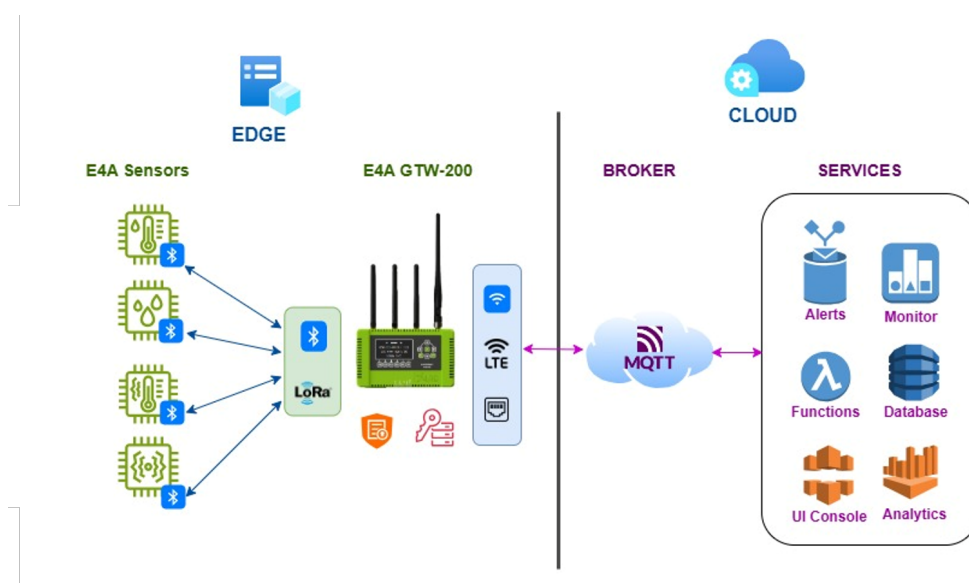
General Description

E4A's Quad Band Gateway is designed to meet the increasing demand for LTE connectivity in rural industrial sites, such as power generation utilities, mining, forestry, construction, and many others. Many of these remote operations and facilities do not have corporate Local Area Network (LAN) coverage, which can hinder communication with remote wireless sensors. By enabling LTE connectivity, E4A's gateway ensures reliable communication between sensors at these sites and the central corporate network, facilitating seamless data transmission to the central repository.



SYSTEM DIAGRAM

The system diagram illustrates the seamless flow of data from our Bluetooth 5.0-enabled IoT sensors to the central gateway, which serves as the hub for multi-band communication. Each sensor transmits real-time data wirelessly to the gateway via BLE 5.0, ensuring low power consumption and reliable performance. The gateway is equipped with four powerful wireless communication bands—900 MHz LoRa, Wi-Fi, BLE 5.0, and LTE. Once received, the sensor data is forwarded via MQTT protocol to a database, which can be hosted on a local server or in the cloud. This robust data pipeline supports real-time evaluation, analytics, monitoring dashboards, and automated alerts, enabling intelligent decision-making across industrial and remote environments.



FEATURES

✓ Gateway Sensors

Includes sensors for ambient temperature, humidity, and 6-axis accelerometer to monitor environmental conditions and movement.

✓ Connectivity & Communication

Multiple connectivity options including LTE Cat 1, LoRa 900MHz, Wi-Fi, and secure communication protocols like AES 128-bit encryption over BLE and TCP/IP

✓ Microcontrollers & Processing

Equipped with powerful 32-bit Arm Cortex-M4F MCUs, the GTW-200 ensures efficient wireless processing and communication

Power & Circuit Protection

Features Power over Ethernet (PoE), multi-rail power management, and robust circuit protection against over-voltage, over-current, reverse polarity, and thermal shutdown

✓ Inputs/Outputs and Mounting

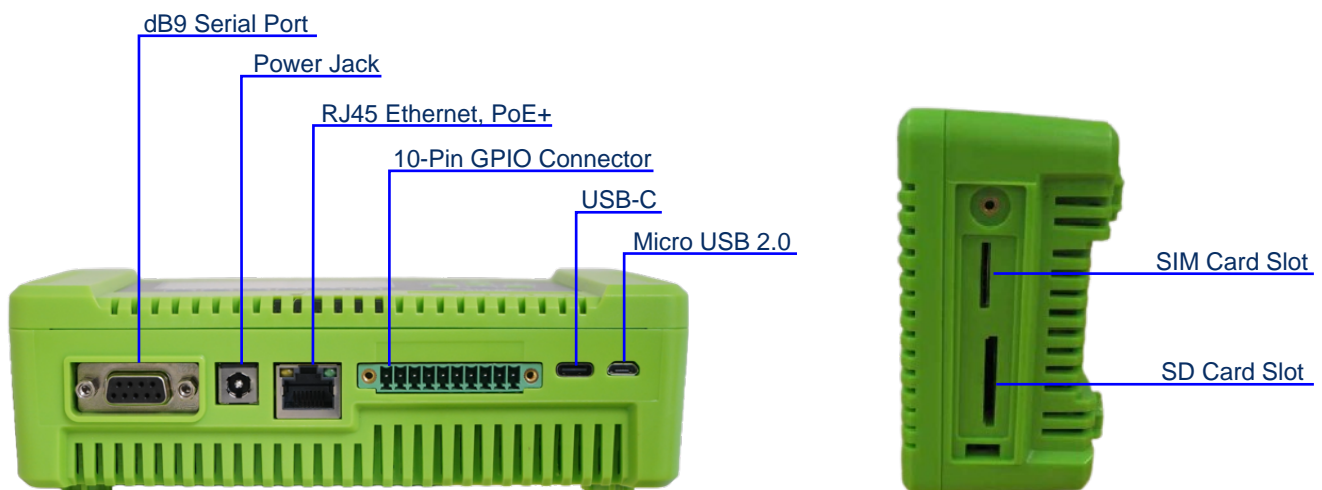
Offers a variety of inputs and outputs including analog and digital ports, SD card slot, SIM card slot, and is designed for flexible wall and DIN rail mounting

✓ Special Features

Includes an internal memory card, QR code labeling for easy identification, and the ability to monitor operational data securely

A LoRa interface can be used to link gateways together when a network connection is not available in a specific location

INTERFACING CONNECTORS



E4A IOT MANAGER

Unlock the full potential of your sensor network with E4A's IoT Manager — a powerful, web-based platform designed for real-time monitoring, control, and analysis of your IoT devices.

- 01 Real-Time Sensor Dashboard
- 02 Advanced Data Analytics
- 03 Customizable Alarm Thresholds
- 04 Remote Setpoint Configuration
- 05 Historical Data Review
- 06 Plus Much More!

SIGN UP HERE!



Don't Have an Account? No Problem!

Just scan the QR code and follow the prompts. Once you contact us, we'll handle the setup and get you connected — quick and hassle-free.

TECHNICAL SPECIFICATIONS

Power Supply

AC/DC Adapter	12VDC @ 2A (24W)
DC Input Jack	5.5mm OD, 2.5mm ID center pin positive
Power over Ethernet	PoE+, IEEE 802.3at, Mode A and B
USB-C	USB type C / USB 3.0 PD sink, 15W
Typical Power Consumption	2.1W (Bluetooth, LCD, Ethernet active)

Operating Specifications

Operating Temperature	-20°C to +60°C (supplied by PoE+ or USB-C) 0°C to +40°C (supplied by AC adaptor)
Operating Humidity	20-85% (operating and storage)
Altitude	2000m
Ingress Protection Rating	IP30
Pollution Degree	2

Measurement Characteristics

Relay Outputs	30VDC/2A, 60VDC/0.9A IEC 61131-2 Type 1, Type 3
Digital Inputs	IEC 61131-2 Type 1, Type 3 (x2)
Current Input	4mA to 20mA (x2)
Voltage Input	±10VDC (x2)
Resolution	24-bit resolution
Temperature Measurement	-20°C to +60°C (±0.5°C accuracy)
Humidity Measurement	20-85% relative humidity (±3.5% accuracy)
Acceleration Measurement	6-axis accelerometer
Ambient Light Detection	16-bit ambient light sensor

User Interface

OLED	Graphic LCD Display Module White OLED 2.7" (68.58mm) 128 x 64 Pixel Resolution
Push Buttons	6 Function Keys
LED	7 keys for menu navigation 6 status LED

Physical Characteristics

Housing Material	ABS plastic
Physical Dimensions	Height: 100mm / 3.9 inches Width: 54.5mm / 2.1 inches Depth: 170mm / 6.7 inches
Weight	550g
Mounting	Universal DIN rail 35mm width Magnetic mount

Device Level Communication

Wireless Module	2.4GHz Bluetooth 5.0 transceiver LoRa 900MHz
Communication Range	300m line of sight (for Bluetooth)
Communication Interval	User programmable
Output Power	Up to +5dBm with temp. compensation
Receiver Sensitivity	-105dBm, 125kbps

Cloud Level Communication

Wireless Module	802.11b /g/n Wi-Fi Module LTE Cat 1 2G/3G/4G
Wired Network	AES 128 symmetric encryption
Telemetry Protocol	MQTT v5.0 over TCP-IP
Encryption	RSA 2048 encryption for key exchange

System Interface

USB-C	Gateway configuration
RS-232	Custom serial communication integration
10-Pin Terminal Header	Analog and digital inputs, relay outputs
SD Card	Firmware upgrade
SIM Card	Cloud communication over LTE

CONTACT US!

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SPARE PARTS AND ACCESORIES

Part Description	E4A Part Number
AC/DC Adapter	E4A-PWS-00001-01
DIN Rail Mounting Clip	E4A-ENC-00008-00
Magnetic Mounting Feet	E4A-FAS-00048-00
10-Pin Terminal Block Plug	E4A-CON-00035-01

CERTIFICATIONS

FCC	2AXVKGTW02
Industry Canada	26661-GTW02
Safety	UL 61010-1 3rd Edition: 2023 CSA C22.2 No. 61010-1-12 UL 61010-2-030 Ed. 2: 2018 CSA C22.2 No. 61010-2-030:18



DISTRIBUTORS

