

TinyGateway PoE Outdoor BLE

Bluetooth Low Energy gateway

Data sheet



Key features

- Low-power and low-cost outdoor gateway
- Ethernet connectivity based on ESP32 SoC (IEEE 802.3af)
- Based on Nordic nRF52832 for BLE
- Network communication protocols: HTTP(S), MQTT(S), UDP, TCP
- Compact robust IP65 enclosure
- RJ45 PoE power-supply connector

Key features

Outdoor rugged low-power Bluetooth Low Energy gateway with Ethernet (PoE) connectivity

Supported Bluetooth LE stack: 4.x and 5.x

Operating modes: Bluetooth LE Scanner, Bluetooth LE Advertiser

Network interface: Ethernet (PoE 802.3af)

Support of the following set of connection protocols: HTTP(S), MQTT(S), UDP, TCP

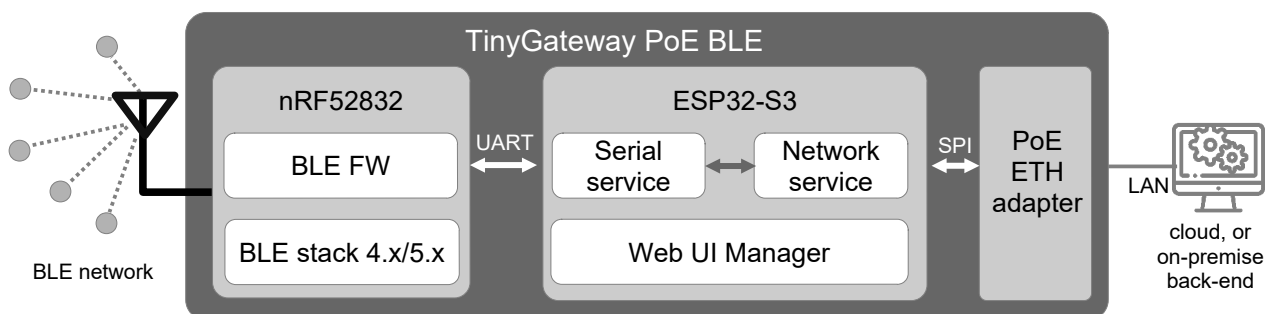
Multiple data encoding options: JSON, ASCII, raw-data

Easy-to-use web UI manager dashboard for configuration and management

Complete remote configurability via HTTP or MQTT API

Possibility to operate simultaneously in scanning mode (BLE receiver) and advertising mode (BLE beacon)

TinyGateway PoE BLE: architecture and interfaces



Device specifications	
Hardware specifications	
Platform	Espressif Systems ESP32S3WROOM-1
Processor	ESP32-S3 series, Xtensa® dual-core 32-bit LX7 microprocessor, up to 240MHz
Memory	384 KB ROM, 512 KB SRAM, Up to 8 MB PSRAM
Connectivity	Ethernet (802.11), Bluetooth Low Energy (v4.x / 5.x)
User interfaces	(internal) Power-on LED, Bluetooth LE LED, Status LED, factory-reset button
Ethernet specifications	
Protocol	IEEE 802.3af (PoE)
Connector	RJ45
Bluetooth Low Energy specifications	
Core module	Nordic Semiconductor nRF52832 SoC, 32-bit ARM Cortex-M4
Protocol	Bluetooth Low Energy (v4.x / 5.x)
Frequency band	2.402 to 2.480 GHz
Channel spacing	2 MHz
Sensitivity	-96 dBm
TX power	4dBm (max)
Antenna type	Planar Inverted F-antenna
Antenna gain	2dBi
Power supply	
Power voltage	44 – 57Vdc (PoE Class 0)
Power connector	IP rated RJ45 connector (cable gland option on demand)
Current	40 mA typ. @48Vdc; 60mA max @48Vdc
Mechanical specifications	
Material	UV-protected Polystyrene (PS) Plastic
Color	Light grey
Size	185 x 185 x 65 mm
Weight	500 gr
Protection	IP65
Assembly	4x screws on back panel
Mounting options	Pole mounting kit included
Environmental specifications	
Operating temperature	-20°C to +65°C
Storage temperature	-40°C to +85°C
Certifications	
CE (RED), FCC	

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