

TinyGateway WiFi Outdoor Wirepas

Wirepas Mesh 2.4GHz gateway

Data sheet



Key features

- Low-power and low-cost Wirepas gateway
- WiFi connectivity based on ESP32 SoC (IEEE 802.11 b/g/n)
- Wirepas Sink based on Nordic nRF52832
- Compliant with Wirepas remote MQTT(S) APIs
- Compact robust waterproof IP65 enclosure
- 2-port connector power-supply

Key features

Outdoor rugged low-power Wirepas gateway with WiFi connectivity with full support of Wirepas gateway drivers for MQTT connection

Supported Wirepas stack: 5.x (up to 5.3)

Operating modes: Wirepas Sink device

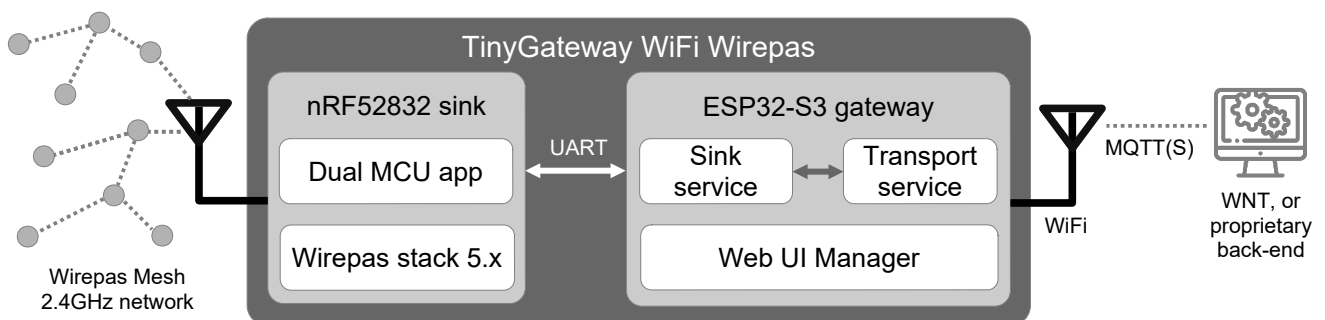
Network interface: Wireless LAN

Compatible with Wirepas Network Tool (WNT) backend or with custom back-end, cloud or on-premises

Fully compliant with Wirepas remote MQTT(S) APIs

Web UI manager dashboard and HTTP APIs for configuration and management

TinyGateway WiFi Outdoor Wirepas: 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	WiFi (802.11), Wirepas Mesh 2.4GHz (v5.x)
User interfaces	(internal) Power-on LED, Wirepas LED, WiFi RGB LED, factory-reset button
WiFi specifications	
Core module	Espressif Systems ESP32-S3
Protocol	IEEE 802.11 b/g/n
Frequency band	2.412 to 2.484 GHz
Channel spacing	20 MHz (802.11 b/g/n), 40MHz (802.11n)
Sensitivity	-98 dBm (802.11b, 1 Mbps)
TX Power	20.5dBm (max., 802.11b, 1 Mbps)
Antenna type	Meander Planar Inverted F-antenna
Antenna gain	0dBi
Wirepas Mesh specifications	
Core module	Nordic Semiconductor nRF52832 SoC, 32-bit ARM Cortex-M4
Protocol	Wirepas Mesh 2.4GHz, v5.x (up to 5.3)
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	4.5 to 30 Vdc (internal 2-port)
Power connector	Internal 2-port: pluggable connector, Würth series 301/3157 compatible. Cable-gland for cable entry
Current	130 mA @12Vdc (max., with 802.11b, 1 Mbps, @20.5 dBm)
Mechanical specifications	
Material	Polycarbonate (PC) plastic
Color	Light grey
Size	105 x 105 x 45 mm (excluding flanges)
Weight	200 gr
Protection	IP65
Assembly	Lid with screw lock (4 screws included)
Mounting options	Screws for rear flanges
Environmental specifications	
Operating temperature	-40°C to +65°C
Storage temperature	-40°C to +105°C

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