


TinyGateway WiFi Wirepas Wirepas Mesh 2.4GHz gateway

Data sheet

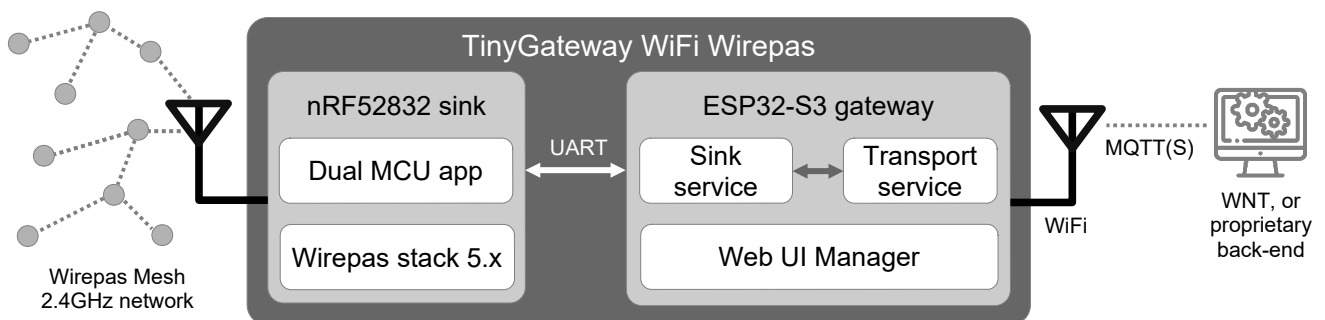


Key features

- 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 light-weight plastic enclosure
- Dual power-supply: USB-C or internal connector

Key features
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 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	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	<ul style="list-style-type: none"> • 5 Vdc (USB) • 4.5 to 30 Vdc (internal 2-port)
Power connector	<ul style="list-style-type: none"> • USB: USB-C connector • Internal 2-port: pluggable connector, Würth series 301/3157 compatible. Rear knockout for cable entry (20mm diameter)
Current	300 mA @5Vdc (max., with 802.11b, 1 Mbps, @20.5 dBm)
Mechanical specifications	
Material	Recyclable ABS plastic (flame-resistant UL94V-0)
Color	White
Size	74 x 74 x 25.5 mm
Weight	50 gr
Protection	IP40
Assembly	Front and back clip together construction (tool required for disassembly once mounted)
Mounting options	Dual-adhesive or screws
Environmental specifications	
Operating temperature	-40°C to +65°C
Storage temperature	-40°C to +105°C

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