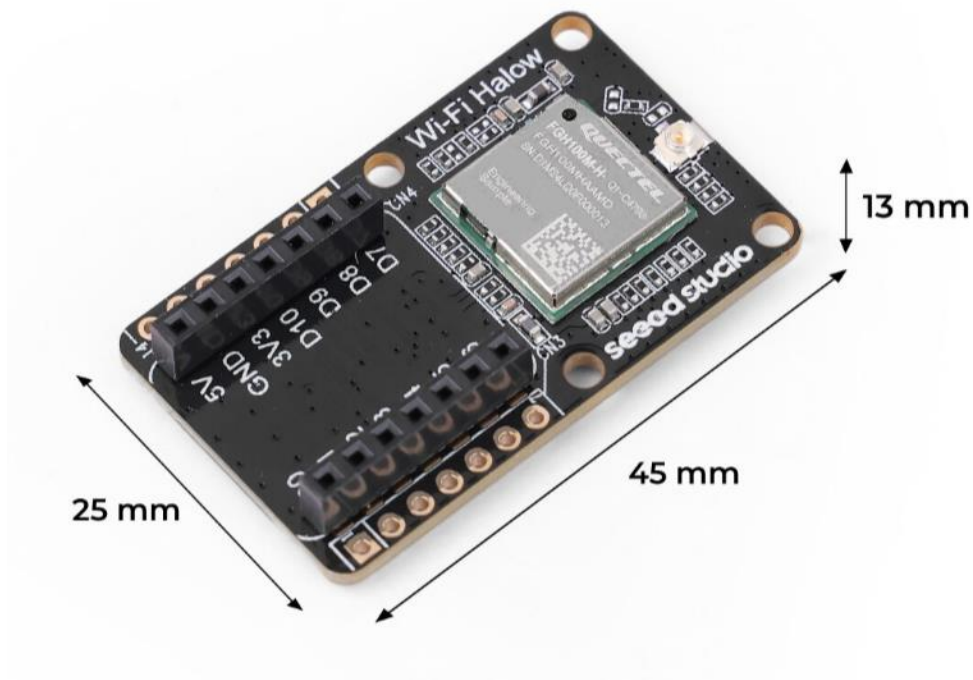


Wi-Fi HaLow Transceiver for Sseed Studio XIAO

SKU 109100041



The Wi-Fi HaLow Board based on the FGH100M-H module is a high-performance, long-range Wi-Fi HaLow solution. Operating in the 902-928 MHz frequency band, it offers excellent penetration and coverage, making it ideal for smart home and IoT applications. With its compact design and compatibility with the Sseed Studio XIAO ecosystem, this card ensures reliable and efficient connectivity for various projects.

Long-Range Connectivity: Complies with IEEE 802.11ah standard, operating in 902-928 MHz frequency band, providing coverage up to 1 km with superior penetration performance.

Low Power Consumption: Optimized power efficiency design, making it ideal for power-sensitive IoT applications.

Robust Security: Implements comprehensive security features including AES, SHA-256, SHA-384, SHA-512, and WPA3 encryption.

Seamless Integration with Sseed Studio XIAO Boards: Sized at 42 x 25mm, it's compatible with the Sseed Studio XIAO Boards (Pre-Soldered) via easy snap-on. (We recommended to use XIAO ESP32 series.)

Note:

This expansion board is currently not directly compatible with the XIAO nRF54L15 series because Arduino is not supported.

However, the hardware interface is fully compatible, and developers can manually adapt the software if needed.

Official software support from Sseed Studio is under development — stay tuned for updates!

Specification

Parameters	Details
WLAN Protocol	IEEE 802.11ah
Wi-Fi Frequency Band	902–928 MHz
Wi-Fi Antenna	1 x 1
Wi-Fi Modulation Mode	OFDM,BPSK, QPSK, 16QAM, 64QAM
Encryption Mode	AES, SHA-256, SHA-384, SHA-512, WPA3
Wi-Fi Operating Mode	STA
Operating Temperature Range	-30 °C to +85 °C
Extended Temperature Range	-40 °C to +85 °C
Physical Rate (Max.)	802.11ah: 32.5 Mbps
Power Supply Voltage	VBAT: 3.0–3.6 V, typ. 3.3 V
I/O Power Supply Voltage	VDD_IO: 1.62–3.6 V, typ. 1.8/3.3 V
FEM Power Supply Voltage	VDD_FEM: 3.0–5.25 V, typ. 5 V

Application

- Smart Home Devices
- Industrial Automation Control
- Smart City Infrastructure
- Agricultural IoT Monitoring
- Environmental Monitoring Systems

Part List

Wi-Fi HaLow Module	×1
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