

802.11AH Mini-PCle WiFi Radio

The GW16146 is a low power, long range, 900MHz 802.11ah full size Mini-PCle WiFi radio designed to provide Wi-Fi HaLow wireless communication utilizing Gateworks Single Board Computers. The 802.11ah radio is targeted towards Internet of Things (IoT) applications. The GW16146 features a Silex SX-NEWAH 802.11ah module that is powered by the NRC7292 System-on-Chip from Newracom. The radio operates in the 900MHz license-exempt band which allows it to penetrate buildings, walls and foliage much better than standard 2.4G/5G WiFi radios. Additionally, 802.11ah provides much greater range (1km+) and higher bandwidth (up to 4Mbps) over other Sub 1GHz protocols like LoRa and Sigfox. Other advantages include a higher client count (100+) and lower power. Standard WiFi IP connectivity software, including Linux tools, commands and interfaces are also supported allowing for quick application integration. An onboard FTDI SPI to USB bridge allows a Gateworks Single Board Computer to communicate to the module using USB 2.0 signaling which is supported on many Mini-PCle connector interfaces. A MHF-1 antenna connector allows for a variety of external antenna choices. Antenna and cables sold separately.

FEATURES

- Silex SX-NEWAH 802.11ah Module
 - Based on Newracom NRC7292 System-on-Chip
 - IEEE 802.11ah WiFi HaLow
 - Simultaneous GATT Server & Client
 - FOTA Support
 - Up to 4Mbps data rate
 - Supports 1/2/4 MHz bandwidth
 - Access point and station mode
 - Security: OPEN, WPA2-PSK(AES), WPA3-OWE, WPA3-SAE
 - 902.0 ~ 928.0 MHz Frequency
 - +23dBm Transmit Power
 - MHF-1 Antenna port
 - Uses standard Linux IP framework
 - FCC Certified
- FTDI FT232H USB to SPI
- Mini-PCle Form Factor with USB 2.0 High Speed Signaling
- -40°C to +85°C Operating Temperature
- Made in USA
- 1 Year Warranty



SPECIFICATIONS

Electrical

Input Voltage

- 3.3V From Mini-PCle Edge Connector

Typical Operating Current

- 75mA @ 3.3V

Mechanical

Dimensions

- 30.0x50.95x3.5mm (1.18x2.0x0.14in)

Weight

- 0.22 oz (6.2g)

Environmental

Operating Parameters

- Temperature: -40°C to +85°C
- Humidity (non-condensing): 20% to 90%

Storage Parameters

- Temperature: -40°C to +85°C
- Humidity (non-condensing): 5% to 95%