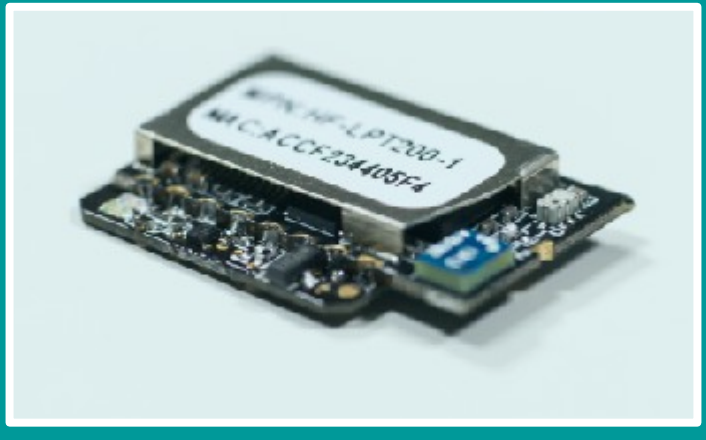
Aistin Owl Feather
WLAN Add-on Board (WLN212)

Aistin Owl Wings WLN212 is an Aistin Add-on Board, which makes wireless connectivity via WLAN possible for your Aistin Host Board CPU231. Get your Aistin Host to work in WLAN at no time – just plug this on and you're a go!

Low power WLN212 can be programmed to turn on/off when needed. It's excellent for periodic transmissions. WLN212 automatically reconnects when device is powered on. It can even be used as a data transfer gateway between different radio protocols, when connected with Bluetooth LE or IQRF Aistin Add-on Boards.

Aistin Host boards CPU252 and CPU242 have this WLAN module already integrated.

Technical Overview



Certification	FCC/CE
Dimensions	22,7 x 16,9 mm,PCB thickness 0,6mm
Standard	802.11 b/g/n
Frequency Range	2.412GHz – 2.484 GHz
Transmit Power	802.11 b: +16 +/-2dBm (@11Mbps) 802.11 g: +14 +/-2dBm (@54Mbps) 802.11 n: +13 +/-2dBm (@HT20, MCS7)
Receiver Sensitivity	802.11 b: -93dBm (@11Mbps, CCK) 802.11 g: -85dBm (@54Mbps, OFDM) 802.11 n: -25dBm (@HT20, MCS7)
Data Interface	UART, SPI, GPIO
Network Type	STA/AP/STA+AP
Security Mechanisms	WEP/WPA-PSK/WPA2-PSK
Encryption	WEP64/WEP128/TKIP/AES
Network Protocol	IPv4, TCP/UDP/FTP/HTTP

WLN212

Functional Overview

WLN212 is based on HF-LPT200 Low Power Wifi module. Wireless networking with WLN212 is very flexible. It can be configured as both wireless stationary (STA) and wireless access point (AP) based on network type. When WLN212 is set to work in AP mode, other stationary equipments are able to connect to WLN212 directly.

It's possible to set WLN212 to work in AP+STA mode, meaning that module supports one AP interface and one STA interface at the same time. When AP+STA mode is enabled, module's STA interface can connect with router and connect to TCP server in the network. At the same time module's AP interface is also active and permits the device to connect through TCPB. Advantages of AP+STA mode are ease of setting and tracking user device through phone/tablet without changing the original network setting, and the ease of setting module parameters through Wifi when module works in STA mode.

WLN212 supports module serial interface transparent transmission mode. Benefits of this mode is in achieving a plug-and-play serial data port and reducing user complexity. In this mode only the necessary parameters should be configured. Module can then automatically connect to default wireless network and server after powering on the device.

UART free-frame function is supported in WLN212. When selected, module will check the intervals between any two bytes when receiving UART data. If interval time exceeds a predefined value (default 50ms) it is considered as the end of one frame and the frame is transfered to Wifi port. Alternatively WLN212 will receive UART data until 1000 bytes and then transfers 1000 bytes frame to Wifi port.

Aistin Bus24 Signal Chart