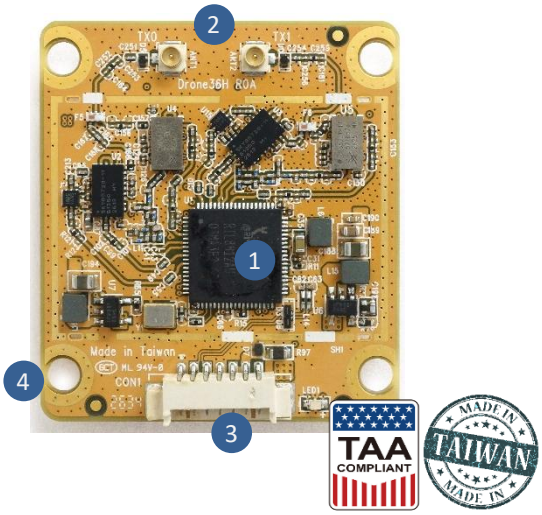
RTL8812AU USB 2.0
Module for Drone

Drone36H



Key point

1. Chipset: RTL8812AU
2. RF Connector: IPEX
3. USB Connector:
   7 Pins wafer pitch 1.25 mm
4. Screw Hole: 3 mm

Drone36H is an ultra-compact, lightweight, high-power 2.4/5 GHz 802.11a/b/g/n/ac wireless module powered by the Realtek RTL8812AU chipset. Featuring a built-in high-power Front-End Module (FEM) and 10 MHz narrow channel support, it significantly extends transmission range and enhances link robustness. Designed with a miniature 35 x 38.6 mm footprint and weighing only 5.1 g, it is the ideal solution for long-range HD video transmission and telemetry in size- and weight-constrained UAVs, FPV racing drones, robotics, and remote surveillance systems.

Technical Features:

Ultra-Compact & Lightweight Design:
Engineered with a miniature 35 x 38.6 mm form factor and a featherlight 5.1 g weight, perfectly suited for space- and payload-sensitive drone builds.

Narrow Bandwidth Support:
Supports 10 MHz narrowband channels to substantially extend wireless communication range and improve anti-interference performance.

Reliable HD Video Streaming:
Dual-band wireless support with robust PHY data throughput ensures smooth, low-latency HD video transmission for UAV, FPV, and IP camera applications.

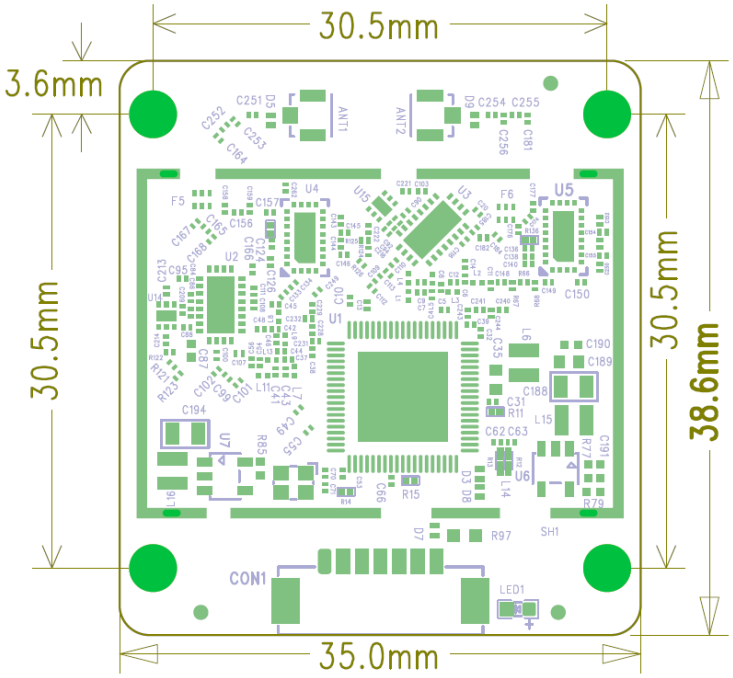
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- Specifications

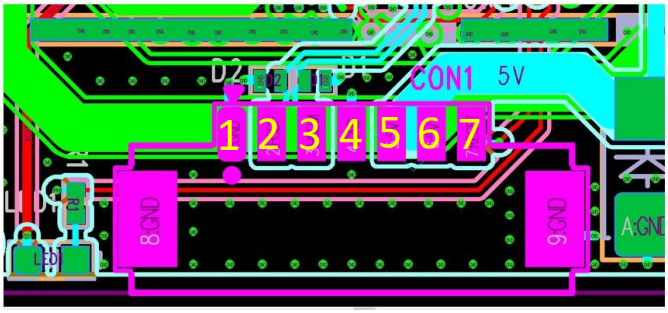
Chipset	Realtek RTL8812AU
Wireless Standard	IEEE 802.11a/n/ac
Frequency	Dual Band (Non-concurrent) 2.402 ~ 2.482 GHz 5.15 ~ 5.85 GHz
RF Transmitting Power	2.4 GHz: up to 26 dBm 5 GHz: up to 22 dBm
RF Receiving Sensitivity	2.4 GHz: 11b 1M -96 dBm 5 GHz: 11a 6M -93 dBm
Bandwidth	10/20/40/80 MHz
Data Rate	11b: 1, 2, 5.5, 11 Mbps 11g: 6, 9, 12, 24, 36, 48 and 54 Mbps 11a: 6, 9, 12, 18, 24, 36, 48 and 54 Mbps 11n: 2.4 G up to 300 Mbps 11ac: up to 300 Mbps (limited by USB2.0)
Host Interface	USB 2.0
Power supply	DC 5V , 1100 mA (Max)
Antenna connector	2 x IPEX
Dimensions	38.6 x 35 x 4.6 mm
Operating temperature	-25 °C – 60 °C (-13 °F – 140 °F)
Weight	5.1 g
Operating System	Windows & Linux
Package Contents	1 x Drone36H Module 1 x USB Interface Cable

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- Outline Drawing



- USB Pin Definition



Pin No.	Name
1	GND
2	D+
3	D-
4	GND
5	5V
6	5V
7	NC

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- ## RF Specifications (Single Antenna)

RX Sensitivity

2.4 GHz							
Mode	Data Rate	CH1		CH6		CH11	
		ANT0	ANT1	ANT0	ANT1	ANT0	ANT1
11b	1M	-95	-96	-96	-96	-96	-96
	11M	-89	-89	-89	-89	-89	-89
OFDM	54M(g)	-76	-76	-76	-76	-76	-76
HT20	MCS7	-73	-73	-73	-73	-73	-73
HT40	MCS7	-70	-70	-70	-70	-70	-70

5 GHz									
Mode	Data Rate	CH36		CH100		CH149		CH165	
		ANT0	ANT1	ANT0	ANT1	ANT0	ANT1	ANT0	ANT1
OFDM	6M(a)	-93	-93	-93	-93	-93	-93	-93	-93
	54(a)	-76	-76	-76	-76	-76	-76	-76	-76
HT20	MCS7	CH36		CH100		CH149		CH165	
		-73	-73	-73	-73	-73	-73	-73	-73
HT40	MCS7	CH38		CH102		CH151		CH167	
		-70	-70	-70	-70	-70	-70	-70	-70
AC80	MCS9	CH42		CH122		CH138		CH155	
		-58	-58	-58	-58	-58	-58	-58	-58

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TX Power

2.4 GHz							
Mode	Data Rate	CH1		CH6		CH11	
		ANT0	ANT1	ANT0	ANT1	ANT0	ANT1
11b	1M	27	27	27	27	27	27
	11M	27	27	27	27	27	27
OFDM	54M(g)	23	23	23	23	23	23
HT20	MCS7	22.5	22.5	22.5	22.5	22.5	22.5
HT40	MCS7	22	22	22	22	22	22

* There is +/- 2 dBm tolerance for production test

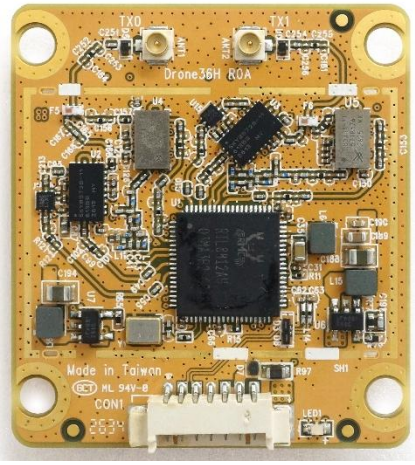
5 GHz											
Mode	Data Rate	CH36		CH64		CH100		CH157		CH165	
		ANT0	ANT1	ANT0	ANT1	ANT0	ANT1	ANT0	ANT1	ANT0	ANT1
OFDM	6M(a)	21	21	20	20	21	21	21	21	21	21
	54(a)	20	20	19	19	20	20	20	20	20	20
HT20	MCS0	CH36		CH64		CH100		CH157		CH165	
		21	21	20	20	21	21	21	21	21	21
	MCS7	20	20	19	19	20	20	20	20	20	20
HT40	MCS0	CH38		CH62		CH102		CH151		CH167	
		20	20	19.5	19.5	20	20	20	20	20	20
	MCS7	19	19	19	19	19	19	19	19	19	19
AC80	MCS9	CH42		CH106		CH122		CH138		CH155	
		18	18	18	18	18	18	18	18	18	18

* There is +/- 2 dBm tolerance for production test

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Package Contents

- 1 x Drone36H module
- 1 x USB-A to 7-pin wafer cable (1.25 mm Pitch, 20 cm)



Drone36H module



USB-A to 7-pin wafer cable (20 cm)

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