Product Overview

GUST DUAL-BAND EXTENDED RANGE RADIO

V1.1

Dual band software defined radio

Gust works at 2.4GHz ISM and 3~7GHz band. Gust is a software defined radio which can support software defined 2.4GHz physical layers, including Bluetooth 5, THREAD, ANT, Zigbee, etc., or other proprietary protocols, simply by flashing different radio stack firmwares.

By default Gust is shipping with BLE 5 radio stack.

Gust's 3~7GHz frequency can be operated concurrently together with 2.4GHz channels.

Extended range for UAV communications

Both Gust's 2.4GHz and 3~7GHz band have power amplifier embedded, providing up to 20dB gains. This allows Gust to be able to communicate with UAV's at distance up to several kilometers.

Adjustable transmit power

The power gain for both PAs of the 2 radio bands can be adjusted through software parameters, from 0 to 20dB.

Please note that in different countries laws are different on radio frequencies and output power. Please make sure that the radio band and output power is legal in your location before operating.

Connect and control from computer

Gust can be configured and controlled from computer. Connect Gust to computer through USB cable, or through BLE connection.

Use AirMind's Central GCS software to configure and control Gust from computer.

Optional external radio interface

In case the default 2 radio bands still can not meet your demand, Gust radio stack also allows user to use 3rd party radios(e.g., any 433/915MHz) other than Gust defaults radios, through the onboard external radio interface.

Gust can power the 3rd party radio through the external radio port.

Multiple connections and networking

Gust can build concurrent links with many other nodes at the same time. How many links and data rates supported over the link depend on which radio protocol user chose to use. For example, when using Bluetooth 5 protocol, one Gust radio can build maximum 20 concurrent links with other nodes.

User can use Gust to connect multiple UAVs to build their own desired UAV network topology.

Develop DroneTag radio apps

Gust follows DroneTag radio networking standard. Users can develop their own radio protocols compatible with DroneTag standard to meet their own communication requirements.

User can update Gust's firmware through debug port by using firmware uploading cables in accessory.

Brief sheet

Hardware version	Gust v1.1
Radio frequencies	3~7GHz, 2.4GHz ISM
DroneTag radio processor	64MHz Cortex-M4F
Onboard radio power amplifier	up to +20dB gain
Adjustable Radio TX power	Yes
DroneTag radio range	PA off: 500kbps@400m 125kbps@1km 2Mbps@100m PA on: 500kbps@3km 125kbps@7km 2Mbps@800m
External antenna socket	SMA x 2
Default external antenna	Whip antenna
Dimension	64 x 50 x 30 mm
Weight	~ 80g
Power supply	DC +6V ~ 13V, support USB power supply (+5V)
Power consumption	400mA@5V max