



Overview

This Holybro SiK 1W Telemetry Radio is a small, light, and inexpensive open-source radio platform with a maximum 50 kilometres range (outdoors, line-of-sight range).

This radio is plug-and-play, ready for all Pixhawk Standard and other similar flight controllers, providing the easiest way to set up a telemetry connection between your controller and a ground station. It uses open-source firmware that has been specially designed to work well with MAVLink packets and to be integrated with the Mission Planner, Ardupilot, QGroundControl, and PX4.

The radios are available in 915 MHz or 433 MHz versions. Please purchase the model that is [appropriate for your country/region](#).

Features

- [Open-source SiK firmware](#)
- Plug-n-play for Pixhawk Standard Flight Controllers
- 1W maximum RF output
- The Easiest way to connect your controller and Ground Station
- Interchangeable air and ground radio
- 6-position JST-GH connector

SiK Telemetry Radio V3

- » Open-source SiK firmware
- » Interchangeable as air or base unit
- » Frequency band: 902~928MHz or 414MHz - 460MHz

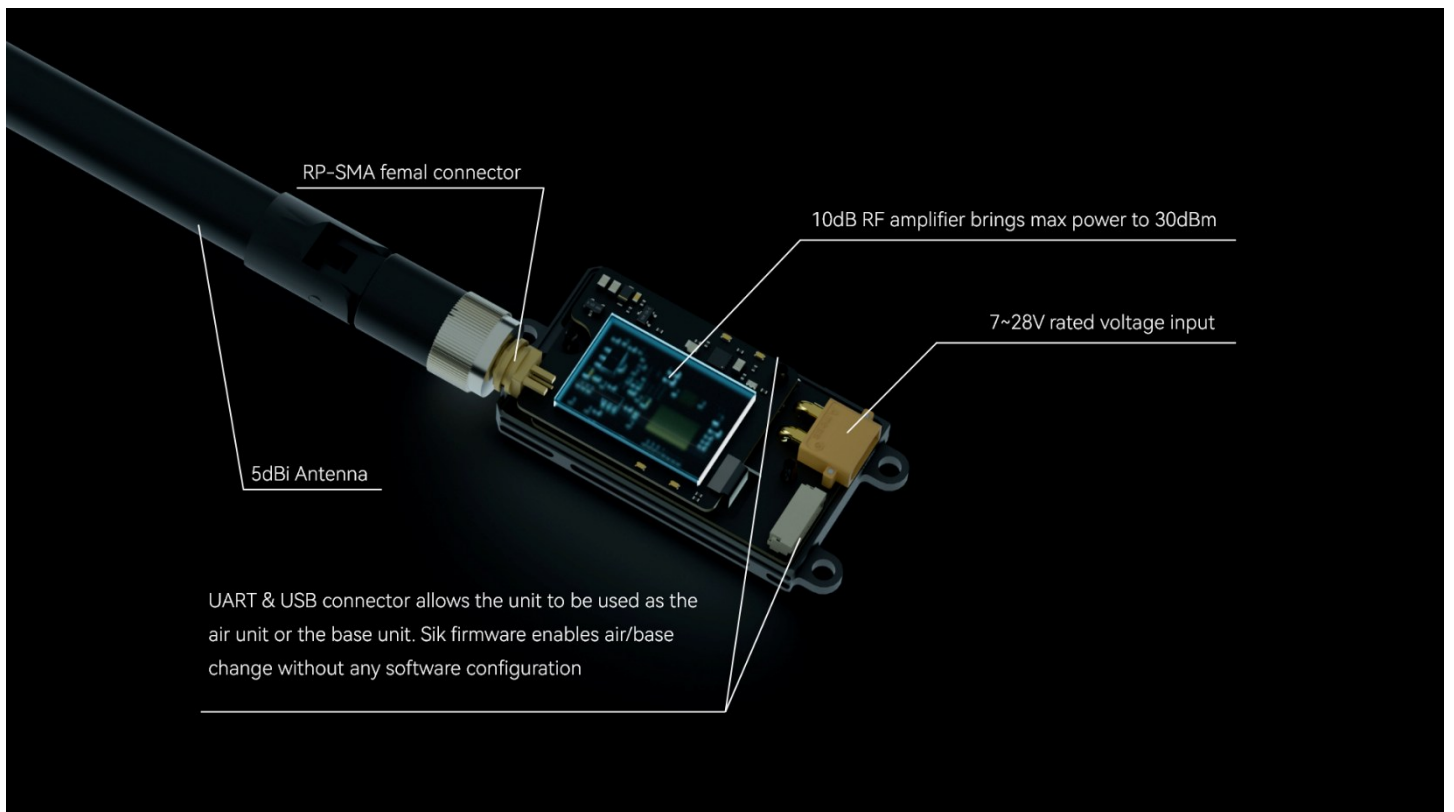
1 W Variants

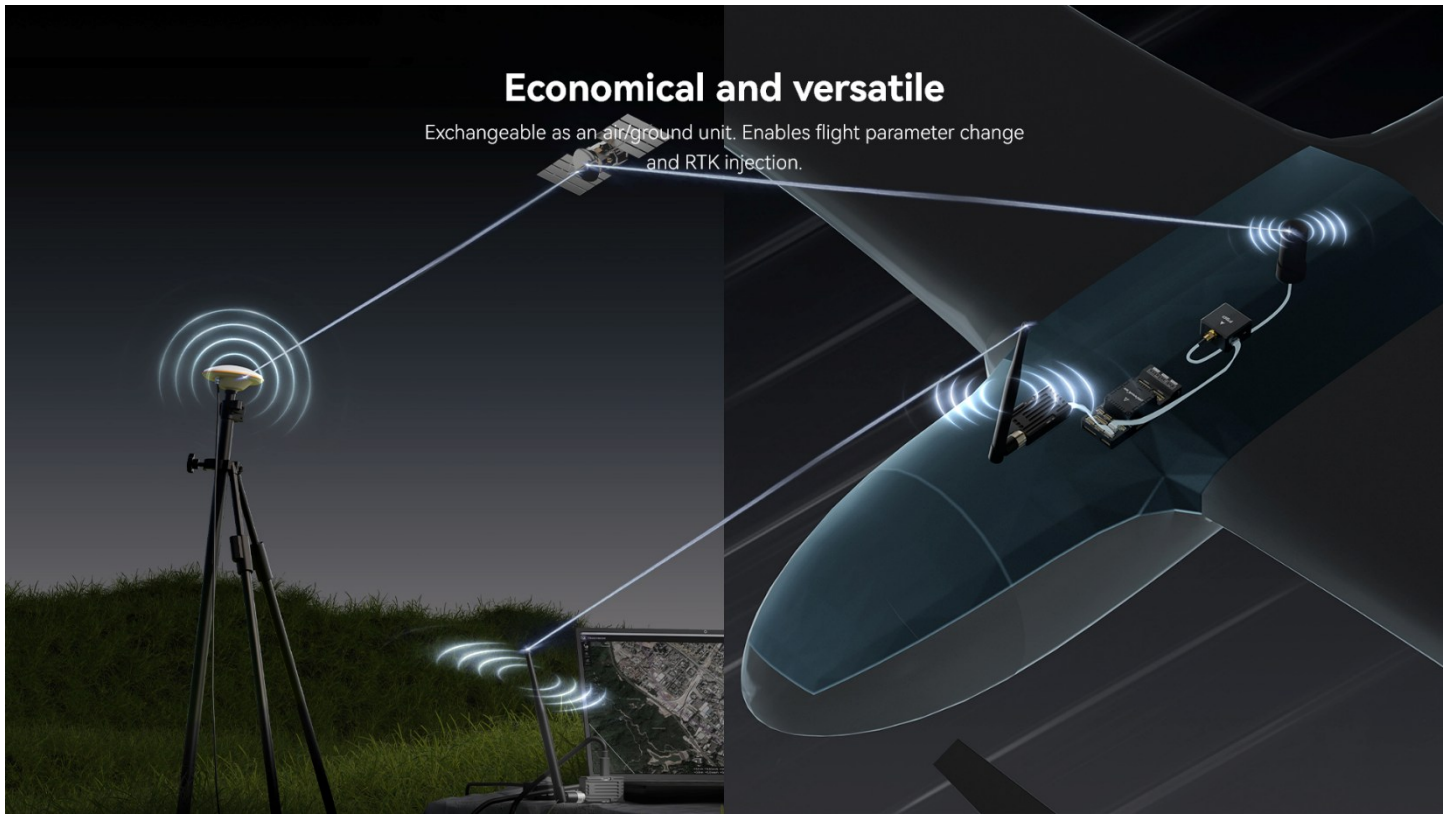
- » 30dBm max output power, outdoor RF line-of-sight range up to 50km
- » XT30 power input port, support range: 7~28V



100 mW & 500 mW Variants

- » 20dBm or 27dBm max output power
- » 300 meters or 1 km max range in urban environment
- » Can be powered via Pixhawk Telem port (5V DC)





Specifications

SiK Telemetry Radio 1W	
Max RF Power	30 dBm
Receive sensitivity	-121 dbm @2kbps RF Data Rate, -105 dbm @64kbps RF Data Rate
Antenna Gain	1.66dBi
RF Data Rates	2, 4, 8, 16, 32, 64(default), 96, 128, 192, 250 kbps
Serial Interface Data Rate	1.2, 2.4, 4.8, 9.6, 19.2, 38.4, 57.6(default), 115.2 kbps
Frequency Band	902MHz - 928MHz or 414MHz - 460MHz
Interference Immunity	Frequency Hopping Spread Spectrum (FHSS) Configurable duty cycle
Address Options	Network ID: 0 –255
Channels	Up to 50 Frequency Hopping Channels
Supported Network Topologies	Point-to-point
Configuration Method	MissionPlanner or AT Commands
Data Framing	Standard or MAVLink protocol framing
Error correction	Corrects up to 25% of bit errors with open-source SIK firmware

SiK Telemetry Radio-1W 915MHz	
Serial Data Connector & Interface	6-pin JST-GH connector, 3.3V-TTL
USB	Type-C
SMA Connector	RP-SMA female
Power Connector	XT30
Operating Temperature	-40~85°C
Dimension	66.5 x 32 x 16.5mm (without antenna)
Weight	67g w/ antenna
Input Voltage (DC)	7~28V

- 2-way full-duplex communication through adaptive TDM UART interface
- Transparent serial link
- MAVLink protocol framing
- Built in FT230X/FT231 USB to BASIC UART conversion IC

Electrical Data

- Supply voltage: 7~28V DC via XT30
- Transmit current: 12V/400mA at 30 dBm
- Receive current: 12V/30mA
- Serial interface: 3.3 V UART

Package Included

- Single 1W
 - 1W Radio modules with antennas *1
 - High-gain omnidirectional antenna *1
 - Male Type-C to male Type-C USB cable *1
 - Male XT30 to female XT30 adapter cable *1
 - Male XT30 to female XT60 adapter cable *1
 - JST-GH-6P to JST-GH-6P cable *1 (for Pixhawk Standard FC)
 - Rubber damping grommet *3
- Pair 1W
 - 1W Radio modules with antennas *2
 - High-gain omnidirectional antenna *2
 - Male Type-C to male Type-C USB cable *1
 - Male XT30 to female XT30 adapter cable *1
 - Male XT30 to female XT60 adapter cable *1
 - JST-GH-6P to JST-GH-6P cable *1 (for Pixhawk Standard FC)
 - Rubber damping grommet *3

FCC STATEMENT :

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

RF warning statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

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