ZYRO

ZYRO Link

Wireless Video & Data Link Module / Product Brief



Product image

Beyond Distance, In Real Time

01 Product Overview

ZYRO Link is a wireless link module for real-time video and data backhaul. It focuses on low latency, long-range coverage, interference resistance, and flexible deployment. The module supports point-to-point, point-to-multipoint, relay, and optional Mesh networking topologies for drones, robots, unmanned vessels, wearable systems, and industrial video transmission scenarios.

02 Key Features

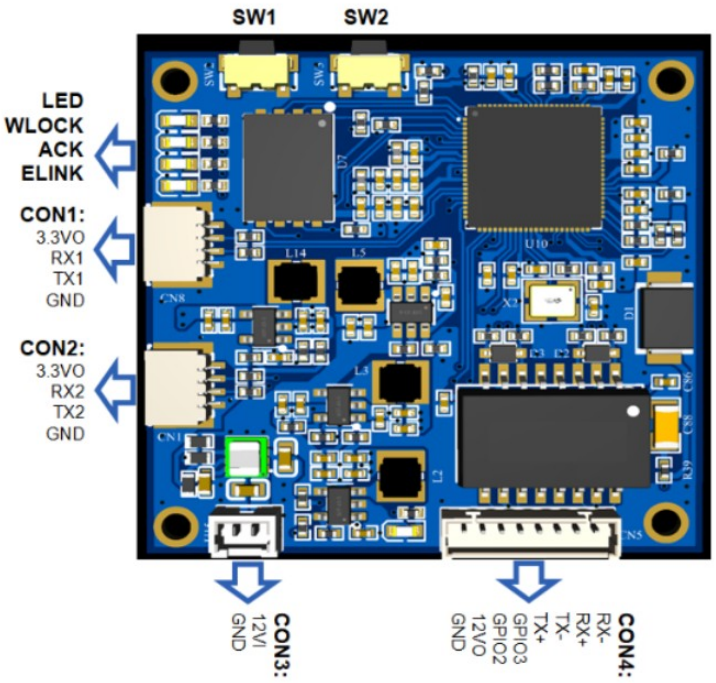
Long-range coverage Typical air-to-ground omnidirectional transmission can reach up to 16 km, with longer range possible in directional, low-interference environments.	**Low-latency real-time link** Typical round-trip latency is as low as 2 ms for real-time video, control, and data coordination.
High throughput Adaptive throughput with measured data rates up to 100 Mbps for multi-stream video and high-speed data return.	**Interference resistance** Supports 5.15-5.85 GHz operation, real-time frequency switching, and best-channel scanning at startup.

Flexible topologies Supports point-to-point, point-to-multipoint, relay transmission, and optional Mesh networking with up to 16 nodes.	**Rich interfaces** Integrates UART, SBUS, GPIO, and 10/100M Ethernet for rapid platform integration.

03 Technical Specifications

Parameter	Value
Operating frequency	5.15-5.85 GHz
Throughput	Adaptive, up to 100 Mbps (measured)
Max transmit power	27 dBm single channel; 30 dBm dual channel
Max transmission distance	Up to 32 km in directional, interference-free air-to-ground scenarios at 2 Mbps; 1.3 km typical city line-of-sight ground-to-ground with omnidirectional antennas; 16 km omnidirectional air-to-ground
Operating temperature	-40°C to 80°C
Operating voltage	7 V to 20 V
Power consumption	3.5 W typical / 13.5 W max
Receiver sensitivity	-92 dBm (min)
Latency	Typical 2 ms
Package size	38 × 38 × 7 mm
Encryption	WPA2 AES
Network topology	Point-to-point, point-to-multipoint, relay
Frequency behavior	Real-time frequency switching and best-channel scan at startup
Functions	Serial transparent transmission, networking, SBUS
Antenna connectors	2 × IPEX
Interfaces	2 × UART, SBUS, GPIO, 10/100M Ethernet, WPS pairing button
Indicators	Power, network status, wireless lock status

04 Interface Summary



Interface layout

Parameter	Value
Antenna interface	Dual IPEX antenna ports for high-bandwidth wireless transceiving
UART × 2	For serial transparent transmission, debugging, and device interconnection
SBUS	For remote-control and flight-control integration
GPIO	For status, trigger, or peripheral control extension
10/100M Ethernet	For camera, host PC, upper computer, or network-side access
WPS pairing button	For fast pairing and link establishment
Status indicators	Show power, network status, and wireless lock status

05 Application Scenarios

- Drone video, telemetry, and mission data links
- Robots and unmanned ground vehicles in complex environments
- Unmanned surface vessels and long-range inspection tasks
- Wearable systems and covert deployment applications