

FV-800 / HAT-110

Long-Range UAV / USV Link Solution — COFDM Full-HD Video & C2 Data Links

300+ KM LONG-RANGE LINK FOR UAV / USV



FV-800 COFDM Video & C2 Link



HAT-110 Auto-Tracking Antenna

The FV-800 is a highly cost-effective solution for long-range HD video transmission in First-Person View (FPV) applications. Leveraging advanced COFDM (Coded Orthogonal Frequency Division Multiplexing) technology, it delivers reliable, stable video links even in complex and dynamic environments.

Engineered for long-distance and high-speed mobility scenarios, the FV-800 provides consistent, high-quality video performance — an ideal choice for both professional and hobbyist users who demand dependable operation under challenging conditions.

Beyond video transmission, the FV-800 integrates a dedicated telemetry radio channel for full-duplex command and control (C2). It also supports configuration and control via AT commands and UDP over UART or Ethernet, offering flexible and seamless system integration.

Working in conjunction with the FV-800, the HAT-110 auto-tracking antenna further extends communication range and enhances link reliability. By parsing MAVLink packets from the remote UAV or USV, the antenna automatically adjusts its azimuth and elevation to maintain optimal alignment. Its built-in RTK-based north-finding capability simplifies deployment and enables accurate tracking, even from a mobile ground station.

Communication Range with 8 W Power Amplifier

Range with 8W Power Amplifier



FV-800 Specifications

Interface	Ethernet RJ-45, UART / RS-232 / RS-485 / S.Bus
Power Supply	9 – 30 V DC
Power Consumption (Peak @ 24 VDC)	PA 250 mW (23 dBm): Aloft 450 mA · Ground 325 mA PA 1 W (30 dBm): Aloft 600 mA · Ground 325 mA PA 2 W (33 dBm): Aloft 1000 mA · Ground 325 mA PA 4 W (36 dBm): — PA 8 W (39 dBm): —
Dimension (W×D×H)	PCBA: 85 × 60 × 12 mm (× 2) Enclosure: 145 × 90 × 35 mm (without heatsink & fan)
Weight (without antenna & cable)	Aloft 280 g · Ground 240 g
Operating Temperature	–10 °C ~ 60 °C

HAT-110 Specifications

Interface	Ethernet: RJ-45 (4 pins) Power: 4 pins (up to 3 A) Spare: 4 pins (additional power, UART, or S.Bus, etc.)
Power Supply	Supply Voltage: 24 VDC Peak Operating Current: 2.21 A · Holding Current: 0.69 A Azimuth Motion: 1.23 A (30 W) · Elevation Motion: 1.70 A (41.4 W) Simultaneous Azimuth & Elevation Motion: 2.31 A (56 W)
Controller Protocol	MAVLink, UDP, HTTP
Coverage	0° ~ 360° Pan (continuous) · 0° ~ 90° Tilt
Pan Speed	> 25°/s
Maximum Tilt Speed	> 15°/s
Maximum Payload	10 kg
Maximum Tracking Range	> 300 km
RTK Auto North Finder	Supported
Weight	< 7 kg (without antenna & tripod)
Operating Temperature	–10 °C ~ 60 °C
Driver System	Stepping Motor with driver (Oriental Motor, Japan)
Torque	> 3 kgf·m
Control Board	Hides Technology (Taiwan)
Dimension	w/ 60 cm dish: H 195–265 cm · W 80 cm · D 65 cm w/ 60 cm dish & Yagi: H 195–265 cm · W 80 cm · D 75 cm w/ 90×60 cm grid: H 200–270 cm · W 100 cm · D 65 cm w/ 90×60 cm grid & Yagi: H 200–270 cm · W 100 cm · D 75 cm