microLink

UAX-90045-01

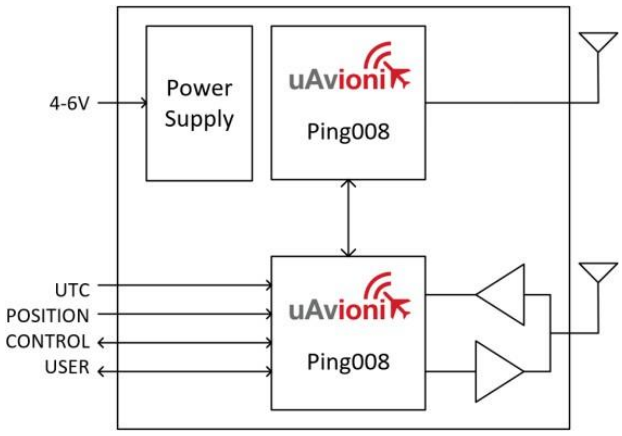
MicroLink BVLOS Data Link

MicroLink is an aviation-grade, Beyond Visual Line Of Sight (BVLOS), miniature data link radio specifically designed for long range Unmanned Aircraft System (UAS) Command & Control (C2) data links. It's the ideal choice for applications sensitive to size, weight, and power demands, MicroLink operates in the 902-928 MHz ISM band rather than a dedicated aviation band, making FAA permission-to-transmit unnecessary. Annoying radio frequency interference is mitigated, thanks to a robust dual radio architecture enhanced with spread spectrum (frequency hopping) technology.

MicroLink Radio Technology

- Dual radio architecture for true diversity
  - Path (spatial) diversity
  - Frequency diversity
  - Polarization gain
- Dynamic Medium and Multiple access, time and position synchronized, to support 100s of simultaneous links
  - Adaptive time and frequency spreading
- Global Positioning System (GPS) Coordinated Universal Time (UTC) link synchronization
- Status, integrity and health monitoring
- Environmental RTCA/DO-160G
- Software RTCA/DO-178C Level C
- Complex Hardware RTCA/DO-254 Level C
- FCC 47 CFR Part 15.247
  ID 2AFFTC2XISM

Radio Specification	
Band	902-928 MHz ISM Band
Architecture	Dual Radios
Transmit Power	1W (4W EIRP)
Spreading	Code and Frequency
Bandwidth	200 kHz
Receiver Sensitivity	
User Receiver	-118 dBm



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Ground Radio System (GRS) – skyStation 2

- All-Weather, Network-Ready microLink GRS
- TCP and UDP Power-over-Ethernet (PoE) connectivity
- IP67-Grade Enclosure
- Dual Linear Coaxial Antennas
- Pole Mounting Kit

Specification	Value
Input Power	POE – 13W Peak
Size	122 x 82 x 55 mm
Weight	500 grams
Operating Temp	-45 to 70°C
Interfaces	
User	
Protocol	TCP or UDP
Control	
Protocol	TCP or UDP
Timing/Position	
UTC and GPS Position	Internal
Environmental	
DO-160G	Temperature Cat B2

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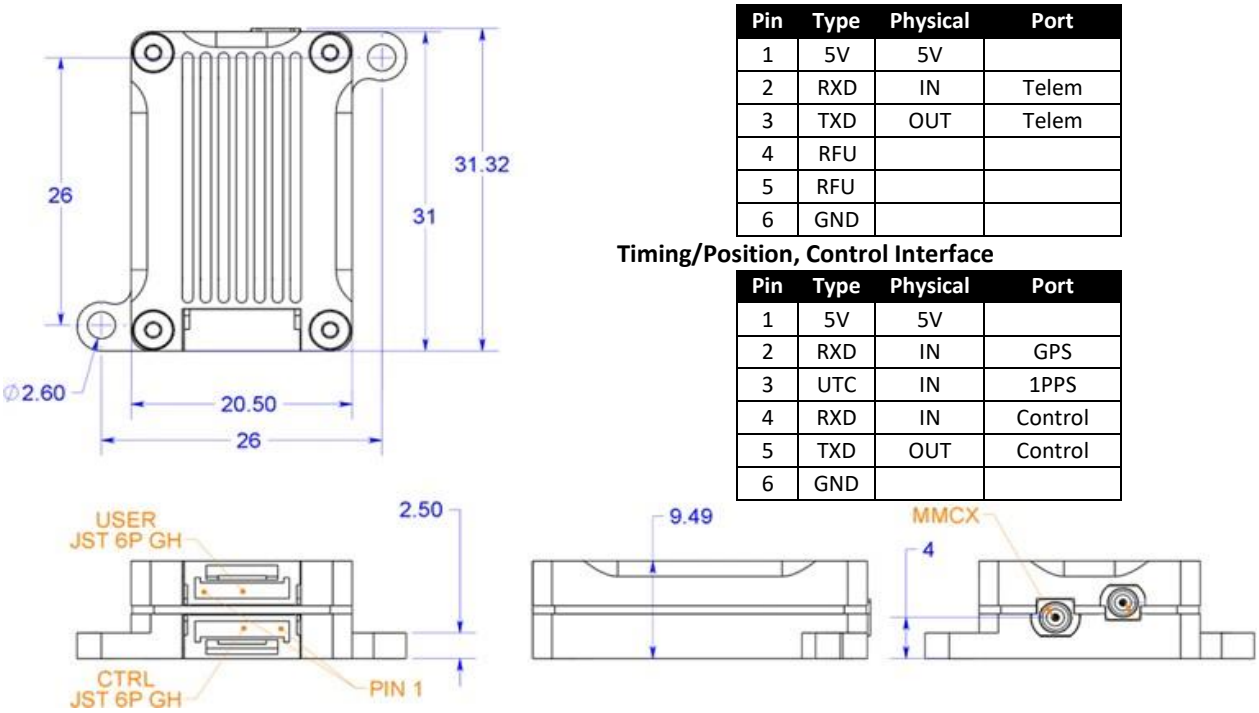
Airborne Radio System (ARS)

- Transparent serial user data interface
- Plug and play with Ardupilot PixHawk autopilots
- Dual MMCX antenna connectors
- Supports NMEA/UBX GPS Sensors such as HERE2 and microFYX

Specification	Value
Input Voltage & Power	4-6 VDC 1.7 Watts Peak
Size	31 x 26 x 9.5 mm
Weight	16 grams
Operating Temp	-45 to 70°C
Interfaces	
User	
Data rate	57600 bps
Protocol	Binary, Transparent
Control	
Data rate	115200 bps
Protocol	UCP
Timing/Position	
UTC	1 PPS Time Pulse
Position	UBX / NMEA 0183 115200 bps
Environmental	
DO-160G	Temperature Cat B2

Mechanical Specification



Electrical Specification

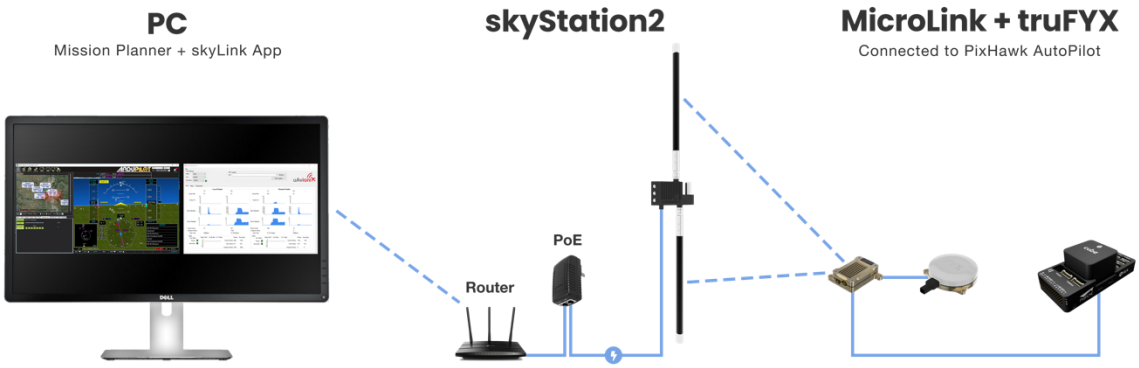
USER Interface

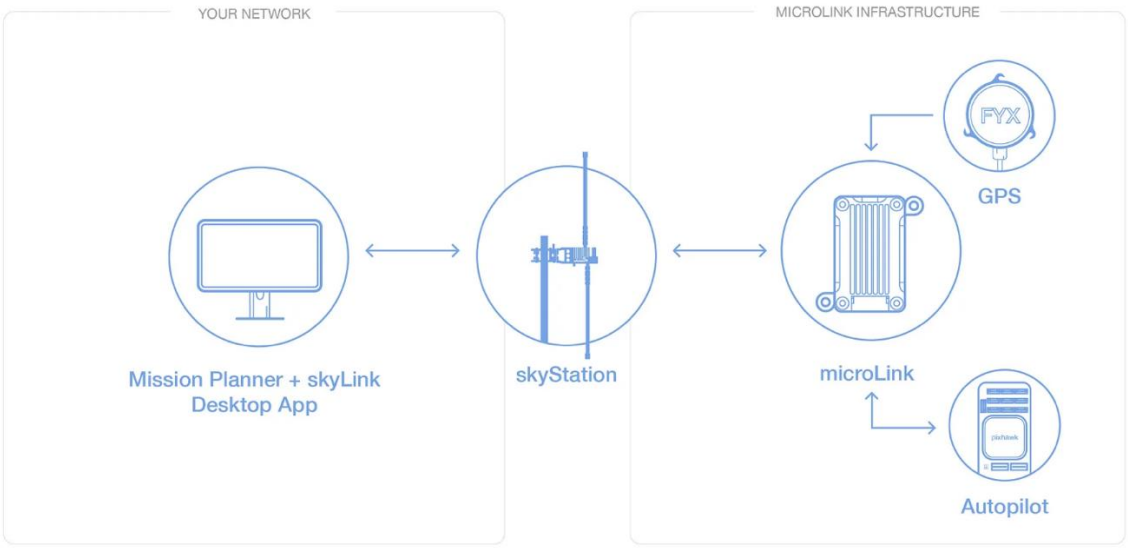
Pin	Type	Physical	Port
1	5V	5V	
2	RXD	IN	Telem
3	TXD	OUT	Telem
4	RFU		
5	RFU		
6	GND		

Timing/Position, Control Interface

Pin	Type	Physical	Port
1	5V	5V	
2	RXD	IN	GPS
3	UTC	IN	1PPS
4	RXD	IN	Control
5	TXD	OUT	Control
6	GND		

Typical System Configuration





Ordering Part Numbers	
SkyStation 2	UAX-1005539-001
microLink	UAX-90045-01
GPS Options	
microFYX kit	UAX-90042-01
HERE2 kit	UAV-1002956-001
Replacement Parts	
SkyLink Dipole Antenna	UAV-1003060-001
MMCX 100mm	UAV-1003063-001
MMCX 200mm	UAV-1003063-002
GH 6p Cable	UAV-1003061-001
GH 8p Cable	UAV-1003062-001