airFiber® 60 HD

Datasheet
AF60-HD

UISP®

airFiber 60 HD

High-Performance, 60Ghz radio delivering superior throughput in mid-range bridge deployments.

The AF60-HD is a 60Ghz radio providing superior performance in mid-range bridge applications. Designed to be used in links ranging up to 1.5km, the AF60-HD delivers incredible throughput with very low interference and latency on the 60Ghz spectrum. Housed in a compact and rugged form-factor design, it comes equipped with integrated GPS and a Bluetooth management radio for easy setup, configuration, and monitoring. The AF60-HD delivers unbeatable price-to-performance for ISP operators.

Mechanical

Dimensions	Ø189 x 89 mm (Ø7.4 x 3.5")
Weight	Without Mount: 1.8 kg (3.9 lb) With Mount: 2.95 kg (6.5 lb)
Enclosure Materials	Aluminum Alloy, UV Stabilized Plastic
Mount Material	Metal
Mount	60G Precision Alignment Pole Mount (Included)
Wind Loading	64 N at 200 km/h (14.39 lbf at 125 mph)
Weatherproofing	IPX6

Hardware

Processor	Quad-Core ARM® Cortex® A72 at 1.6 GHz
Memory	2 GB DDR4
Networking Interfaces	(1) 10/100/1000 Mbps RJ45 Ethernet (1) 1/10 Gbps SFP+
Button	Factory Reset
RF Connections	Internal
Max. Power Consumption	29.31W
Power Method	Passive PoE (Pairs 4, 5+; 7, 8-)
Power Supply	48VDC, 0.65A Gigabit PoE Adapter (Included)
Supported Voltage Range	48VDC ± 10%
ESD/EMP Protection	Air/Contact: ± 24kV
Operating Temperature	-40 to 55° C (-40 to 131° F)
Operating Humidity	5 to 95% Noncondensing
Certifications	FCC, IC, CE

LEDs

Power	Flashing White: Bootup in Progress White: Not Connected to UISP™ Controller Blue: Connected to UISP Controller
Ethernet	Flashing Blue: Ethernet Activity
GPS	Blue: Receiving at Least (4) GPS Satellite Signals
60G	Blue: Active Connection

System

Maximum Throughput	3.8 Gbps
Maximum Range	1.5 km
Encryption	WPA2-PSK (AES)
Uplink/Downlink Ratio	50/50

Software

OS	airOS®
Modes	PtP Only
Services	UISP, Ping Watchdog, Web Server, SSH Server, NTP Client, System Log, Device Discovery
Utilities	Beamform Info, Discovery Utility, Ping, Trace Route, Speed Test
Network	Bridge Mode
Wireless Settings	GPS Sync
Management interface	Bluetooth management for easy setup over UISP App WEB UI
Minimum Software Requirements	Modern Web Browser or Android/iOS Smartphone
Technology	Wave

RF

Operating Frequency*	57 to 66 GHz *Depends on regulatory region.
GPS	Yes
Channel Bandwidth	2160 MHz
Operating Channels	58320, 60480, 62640, 64800 MHz
Beamwidth	HPOL: NaN (The Antenna is Only Vertically Polarized) VPOL: 3° Elevation: 3°
Electrical Downtilt	0°

Federal Communication Commission Interference 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.

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 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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure 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 60cm between the radiator & your body.

Note: The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all WiFi product marketed in US must fixed to US operation channels only.

Professional installation instruction

1. Installation personal

   This product is designed for specific application and needs to be installed by a qualified personal who has RF and related rule knowledge. The general user shall not attempt to install or change the setting.

2. Installation location

   The product shall be installed at a location where the radiating antenna can be kept 60cm from nearby person in normal operation condition to meet regulatory RF exposure requirement.

3. External antenna

   Use only the antennas which have been approved by the applicant. The non-approved antenna(s) may produce unwanted spurious or excessive RF transmitting power which may lead to the violation of FCC/IC limit and is prohibited.

4. Installation procedure

   Please refer to user's manual for the detail.

5. Warning

   Please carefully select the installation position and make sure that the final output power does not exceed the limit set force in relevant rules. The violation of the rule could lead to serious federal penalty.

ISED Canada

CAN ICES-3(A)/NMB-3(A)

This device complies with ISED Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems. CAN ICES-3(A)/NMB-3(A)

Le présent appareil est conforme aux CNR d'ISDE Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. l'appareil ne doit pas produire de brouillage;
2. l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux. RF Exposure Warning

The antennas used for this transmitter must be installed to provide a separation distance of at least 60(FCC/IC) cm from all persons and must not be located or operating in con junction with any other antenna or transmitter.

Les antennes utilisées pour ce transmetteur doivent être installé en considérant une dis tance de séparation de toute personnes d'aumoins 60(FCC/IC) cm et ne doivent pas être localisé ou utilisé en conflit avec tout autre antenne ou transmetteur.