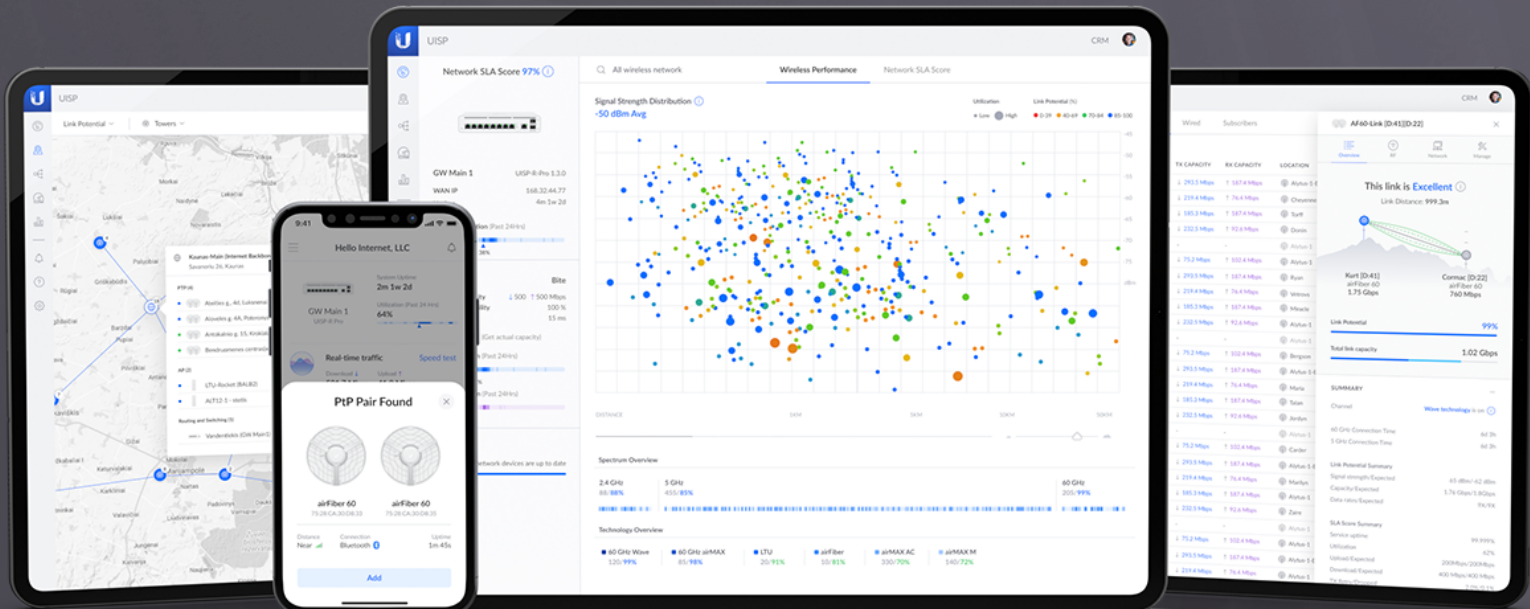




airFiber 60 XR

15+ km, multi-gigabit, 60 GHz bridge with SFP+ support

The airFiber® 60 XR (AF60 XR) is a 60 GHz radio designed to facilitate 2.5+ Gbps connectivity over very long distances. The AF60 XR features an integrated, high-gain dish antenna that delivers high speed, long-range, point-to-point (PtP) links. Its new Wave Technology also offers incredible, long-range performance within the 60 GHz spectrum. Additionally, the AF60 XR has a built-in, 5 GHz failover radio for operational redundancy as well as a Bluetooth management radio to simplify setup and configuration.



Mechanical

Dimensions	779 x 664 x 383 mm (30.68 x 26.14 x 15.06")
Weight	Without mount: 8.6 kg (19 lb) With mount: 13 kg (28.7 lb)
Enclosure material	UV stabilized polycarbonate, steel
Mount Material	Galvanized steel
Mounting	Precision Alignment Kit (included) Pole compatibility: Ø40-80 mm (Ø1.5-3.15")
Wind loading	422 N at 200 km/h (94.86 lbf at 125 mph)
Weatherproofing	IPX6

Hardware

Processor	Quad-Core ARM® Cortex® A53 at 1.4 GHz
Memory	1 GB DDR3L
Networking interface	(1) GbE RJ45 port (1) 1/10G SFP+port
Button	Factory reset
RF connections	Internal
Max. power consumption	24W
Power method	Passive PoE 4-pairs (1, 2+; 3, 6-) (4, 5+; 7, 8-) or 2-pairs (4, 5+; 7, 8-)
Power supply	48VDC, 0.65A gigabit PoE adapter (included)
Supported voltage range	48V ±10%
Operating temperature	-40 to 55° C (-40 to 131° F)
Operating humidity	5 - 95% noncondensing
Certifications	FCC, IC, CE

LEDs

Power	Flashing white: bootup in progress White: not connected to UISP™ console Blue: connected to UISP console
Ethernet	Flashing blue: ethernet activity
GPS	Blue: receiving at least (4) GPS satellite signals
60G	Blue: active connection
5G	Blue: active connection



Software

OS	airOS®
Operating mode	PtP only
Ubiquiti specific features	Integrated 60 GHz radio, discovery protocol, Wave technology
Network	Bridge mode
Services	UISP™, ping watchdog, NTP client, device discovery
Tools	Antenna alignment, discovery utility, ping, trace route, speed test
Software management	Bluetooth management for easy setup over UISP app WEB UI
Minimum software requirements	Any modern WEB browser/iOS or Android based smartphone

System

Maximum throughput	2.5+ Gbps
Maximum range	15 km
Encryption	WPA2-PSK (AES)

RF

Operating frequency*	57~71 GHz* *Depends on regulatory region.
Channel bandwidth	2160, 1080 MHz
Operating channels*	58320, 59400, 60480, 61560, 62640, 63720, 64800, 65880, 66960, 68040, 69120 MHz *Depends on regulatory region.
Modulation	BPSK, QPSK
Beamwidth	HPOL: NaN (the antenna is only vertically polarized) VPOL: ± 1° Elevation: ± 1°
Management radio	2400 - 2483.5 MHz
Electrical downtilt	0°

Back-Up RF

Operating frequency*	US/CA	U-NII-1	5150 - 5250 MHz
		U-NII-3	5725 - 5850 MHz
	Worldwide	5150 - 5875 MHz	
	*Depends on regulatory region.		
Channel bandwidth	20, 40, 80 MHz		
Modulation	BPSK (½), QPSK (½), QPSK (¾), 16QAM (½), 16QAM (¾), 64QAM (2/3), 64QAM (¾), 64QAM (5/6), 256QAM (¾), 256QAM (5/6)		
Beamwidth	HPOL: 7° VPOL: 7° Elevation: 7°		
Cross-pol isolation	14 dB		
Electrical downtilt	0°		



Specifications are subject to change. Ubiquiti products are sold with a limited warranty described at www.ui.com/support/warranty

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Compliance

FCC

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. 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 A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operations of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This radio transmitter FCC ID: SWX-AF60XR has been approved by FCC.

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.

This radio transmitter IC: 6545A-AF60XR has been approved by ISED Canada.

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.

Le présent émetteur radio IC: 6545A-AF60XR a été approuvé par ISDE Canada.

Avertissement:

(ii) pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis (pour les dispositifs utilisant la bande de 5 725 à 5 850 MHz) doit être conforme à la limite de la p.i.r.e. spécifiée, selon le cas; (detachable antenna only)

(iii) lorsqu'il y a lieu, les types d'antennes (s'il y en a plusieurs), les numéros de modèle de l'antenne et les pires angles d'inclinaison nécessaires pour rester conforme à l'exigence de la p.i.r.e. applicable au masque d'élévation, énoncée à la section 6.2.2.3, doivent être clairement indiqués.

FOR MOBILE DEVICE USAGE (>20cm/low power)

Radiation Exposure Statement:

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

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à plus de 1000 cm entre le radiateur et votre corps.

The tilt angle is limited to 15 degrees due to the bracket used for installation

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 1000cm 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/ISED 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.

Instructions d'installation professionnelle

1. Installation

Ce produit est destiné à un usage spécifique et doit être installé par un personnel qualifié maîtrisant les radiofréquences et les règles s'y rapportant. L'installation et les réglages ne doivent pas être modifiés par l'utilisateur final.

2. Emplacement d'installation

En usage normal, afin de respecter les exigences réglementaires concernant l'exposition aux radiofréquences, ce produit doit être installé de façon à respecter une distance de 1000 cm entre l'antenne émettrice et les personnes.

3. Antenne externe.

Utiliser uniquement les antennes approuvées par le fabricant. L'utilisation d'autres antennes peut conduire à un niveau de rayonnement essentiel ou non essentiel dépassant les niveaux limites définis par FCC/ISED, ce qui est interdit.

4. Procédure d'installation

Consulter le manuel d'utilisation.

5. Avertissement

Choisir avec soin la position d'installation et s'assurer que la puissance de sortie ne dépasse pas les limites en vigueur. La violation de cette règle peut conduire à de sérieuses pénalités fédérales.