AIRVINE

DATASHEET

WaveCore™ Flex 5000



WaveCore Flex 5000-I Indoor



WaveCore Flex 5000-O Outdoor

The WaveCore Flex 5000 is the world's first wireless bridge designed to back-haul Ethernet traffic into and out of buildings through concrete and brick exterior walls and roofs. Designed as a complement to the WaveTunnel and the WaveCore, together the products enable seamless wireless backbones to be deployed within, or extend out from, or between any building, any floor plan, anywhere.



The system combines a high-performance front end enabling 2 Gbps data rates through 8" of concrete. The bridge can be configured quickly using VineManager™ an intuitive browser-based device management utility, or our smartphone app Airvine Mobile.

The WaveCore Flex is engineered to penetrate exterior walls, ceilings, floors, and roofs — virtually any barrier made of brick or concrete. It eliminates the need for costly and time-consuming core drilling, as well as the associated x-rays, inspections, and permits. Setting up a point-to-point wireless link is simple and fast by combining and deploying two WaveCore Flex devices, a process made even easier with the Airvine Mobile App.

WaveCore Flex is ideal for a multitude of applications, a sampling is listed here:

- Extending the internal building network to connect to equipment located outside of enterprise buildings such as video cameras, satellite data terminals, and Wi-Fi access points.
- Connect two buildings without any external equipment – both Flex devices are deployed indoors.
- Bringing rooftop communications connections such as microwave, satellite or BWA inside without penetrating the roof.

When WaveCore Flex is combined with WaveTunnel and the original WaveCore system, Airvine offers a completely wireless Ethernet backbone alternative across the entire enterprise. No more cables, conduits and the attendant construction disruption – mount, power and walk away. It's that simple.

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MECHANICAL

	WaveCore Flex 5000-I Indoor Version	WaveCore Flex 5000-O Outdoor Version
Dimensions	257mm x 68mm x 261mm (10.1" x 2.7" x 10.3"), not including bracket	251mm x 79mm x 264mm (9.9" x 3.1" x 10.4"), not including brackett
Weight	4 lbs. (1.8kg) without mounting brackets 5 lbs. (2.26kg) with small brackets 5.7 lbs. (2.58 kg) with large brackets	4.5 lbs. (2.04kg) without mounting brackets
Enclosure Materials	ABS/PC with aluminum heat sink	Outdoor Rated IP67 Enclosure made of ABS/PC plastic and aluminum
Mounting	Short wall/ceiling/acoustic ceiling mounting brackets are included	Wall/pole (1.25" to 4.5" diameter) mounting brackets included

HARDWARE

Networking Interface	1 x 10/5/2.5/1G Ethernet port, RJ45 – PoE 802.1at PD Power Input 1 x 10Gbps Ethernet Port, SFP+ (SFP transceiver not included)	1 x 10/5/2.5/1G Ethernet port (RJ45) – PoE 802.bt PD Power Input, up to 90 Watts 1 x 2.5/1G Ethernet port (RJ45) – up to 60 Watts PoE PSE Output 2 x M25 weatherproof cable glands included
RF Connections	One 5 GHz high-capacity radio with directional antenna One 2.4 GHz Wi-Fi radio with omni antenna for local management	One 5 GHz high-capacity radio with directional antenna One 2.4 GHz Wi-Fi radio with omni antenna for local management
Power Consumption	25.5 Watts Maximum, 20 Watts Typical	25.5 Watts Max, 20 Watts Typical – (no PoE PSE Output) 87.5 Watts Max, 82 Watts Typical – (with 60-Watt PoE PSE Output)
Power Input Voltage & Max Current	12 VDC Input Voltage Range: 11 to 13 VDC Max Current: 2.32 A 48 VDC PoE Input Voltage: 42 to 57 VDC Max Current: 0.61 A	48 VDC PoE Input Voltage (no PSE Output): 42 to 57 VDC Max Current: 0.61 A 48 VDC PoE Input Voltage (60W PSE Output): 42 to 57 VDC Max Current: 2.04 A
Power Input Connector 12V	Accepts circular 2.1mm ID / 5.5mm OD power connectors. Outside -, Inside +	N/A
Operating Temperature	-20°C to +55°C	-40°C to +60°C
Humidity	5% to 95%, non-condensing	5% to 95%, non-condensing
Enclosure IP Rating	Indoor Enclosure, For Indoor Use Only	IP67 Outdoor Enclosure

REGULATORY

RF	5 GHz: 2.4 GHz:	FCC 15E, ISED RSS-248, EN 303 687 FCC 15.247, ISED RSS-247, EN 300 328	FCC: 5.150-5.850 GHz 2.401-2.484 GHz	ETSI: 5.470-5.725 GHz
EMC, Exposure	EMC: Exposure/Immunity	FCC Part 15, ICES-003, EN 301-489-1, EN 301-489-17 FCC 2.1091, RSS-102, EN 62311, EN 55032, EN 55035		
Environmental	RoHS, REACH, WEEE			

SOFTWARE

OS	VineOS™	
Operating Mode	Point-to-Point Ethernet Bridge	
Services	NTP client, FTP client (for software download)	
Tools	Antenna Alignment Tool	
Software Management	VineManager: AirvineMobile:	HTTPS Web GUI Available on Apple IOS and Android OS devices
Minimum Software Requirements	Web Browser	
Networking Support	VLAN Transparent Pass Through, Management VLAN	

SYSTEM

Concrete Penetration	Up to 12 Inches / 30 cm of concrete penetration	
Encryption	WPA3-SAE (AES)	

RF 5 GHz Radio

Frequency Bands **	UNII-1 (5.150-5.250), UNII-2c (5.470-5.725), UNII-3 (5.725-5.850)	
Bandwidths	Up to 160 MHz	
Antenna Type and Beam Width (3dB)	Type: Beamwidth:	Directional Antenna 35o Azimuth, 35o degrees Elevation

* Specifications subject to change without notice
** Frequency Band support will vary based on the country of operation

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