AIRVINE

DATASHEET

WaveTunnel™ WT 2041DC



The WaveTunnel 2041-DC is an indoor wireless backhaul system supporting multiple in-building topologies. Operating in the 60 GHz band, this point-to-point-to-point (PTPTP) system has a 2Gbps max throughput rate and a 150-meter link range.

WaveTunnel employs an advanced RF front end with enough gain to beam through indoor wall materials thus enabling NLOS backbones, and with +/- 45-degree steering can also avoid obstacles and beam around corners. The unique PTPTP operating mode is made possible by employing dual opposite-facing radios that allow the system to be deployed quickly and efficiently in either a daisy-chain or ring network topologies. The unit can be configured quickly by using a Smartphone App, AirvineMobile™ or a browser version, VineManager™. Powered by a collection of software, VineSuite, the WaveTunnel is the world's first mmWave indoor wireless backbone.



The WaveTunnel system can be employed in a variety of applications or markets. The product has been designed from the ground up to be simple to install, simple to configure and simple to use. All of this means no rf or special skills are needed enabling installation of a single unit in minutes.

WaveTunnel is ideal for a multitude or applications, a sampling are listed here:

- Multiple Dwelling Units
- Industrial and Manufacturing
- Hospitality
- Large Private Venue

Featured benefits for these and other applications includes the ability to deploy without construction and hence there is little to no disruption to tenants, guests, or employees. In addition Wave Tunnel provides:

- Our proprietary VineOS enables resilient ring support
- Deployment of a high-speed Ethernet backbone in hours
- Nodes that automatically connect once configured
- The ability to be installed flush with the ceiling
- Three layers of security for your traffic

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MECHANICAL

Dimensions	275mm x 237mm x 114mm (10.2” x 9.3” x 4.5”) (not including bracket)
Weight	5 lbs 8 oz (2.5 kg) (not including bracket)
Enclosure Materials	ABS/PC with aluminum heatsinks
Mounting	Adjustable ceiling mounting bracket included made of Zinc-plated steel, other brackets available to mount to a pole or wall

HARDWARE

Networking Interface	4 x Gigabit Ethernet ports, POE Support
RF Connections	2 x 60 GHz WaveTunnel radios – one on either side of the WaveTunnel unit, 802.11b/g/n Wi-Fi radio for management
Power Consumption	Without External AC/DC Adapter: 27W (no POE output) 147W (with max 120 Watt POE output) Including External AC/DC Adapter (@115VAC): 28W (no POE output) 152W (with max 120 Watt POE output) Including External AC/DC Adapter (@230VAC): 30W (no POE output) 163W (with max 120 Watt POE output)
Power Input Voltage & Current	Input Voltage Range: 53 to 58 VDC, Max Input Current: 4.7A
Power Input Connector	Kycon KPJX-4S
External AC/DC Adapter (included with PN: 2041DC-1	180-Watt, 90 VAC to 264 VAC Input, 54VDC Output, Class II
Operating Temperature Range	0 – 40 °C
Certifications (RF/EMC)	FCC Part 15 Class A, FCC 15.255, 15.247, RSS-102, RSS-247, ISED-003

REGULATORY

RF	60 GHz: FCC 15.255, ISED RSS-2120, EN 303 722 2.4 GHz: FCC 15.247, ISED RSS-247, EN 300 328, EN 300 440 Mexico: NOM-208
EMC, Exposure	EMC: FCC Part 15, ICES-003, EN 301-489-3, EN 62311 Exposure/Immunity 2.4 GHz: FCC 2.1091, RSS-102, EN 62311
Safety	EN/IEC/UL 62368-1 Rev 3, CE Mark, RED, NOM-019
Environmental	RoHS, REACH, WEEE

SOFTWARE

OS	VineOS™
Operating Mode	Point-to-Point-to-Point
Airvine Specific Features	Integrated dual 60 GHz radios; VineOS
Network	Bridge mode, VLAN, QoS
Services	NTP client, Vine Discovery, Vine Routing
Tools	Antenna Alignment, speed test
Software Management	AirvineMobile App VineManager, HTTPS Web GUI, CLI, SNMPv3, REST API, FTP Client (for software download), local console, RADIUS User Authentication, In-band / Out-of-band management.
Minimum Software Requirements	Web browser, iOS and Android based smartphone
VLAN Support	Support 4k VLAN IDs

SYSTEM

Maximum Throughput	Up to 2Gbps
Maximum Range	150 meters
Encryption	WPA2-PSK (AES), 128-Bit AES Over-the-Air
PoE Out	4 Ethernet ports with configurable power settings of 0, 15,30 or 60W. Total maximum POE Power Budget is 120W
USB Management Port	Micro USB Type B connector, non-powered for local console management

RF

Operating Frequency, Duplex Mode, Modulation	57-71 GHz, TDD, up to 16 QAM
Antenna Azimuth & Elevation	±45 degrees Azimuth, ±9 degrees Elevation
Antenna Gain & Maximum EIRP	21dBi beamforming array antenna, 40 dBm Max EIRP
Channel Support	1 - 6

* Specifications subject to change without notice

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