



The Fluidmesh® 1100 is a quadri-band wireless Ethernet product designed and manufactured specifically for security, video-surveillance, and mission-critical condition monitoring applications.

Quadri-band Radio operating at 2.4 GHz, 4.9 GHz, and 5.1-5.8 GHz

The Fluidmesh 1100 Duo features one quadri-band radio and can operate at 2.4 GHz, 4.9 GHz, and 5.1-5.8 GHz and modulate up to 108 Mbps. The preferred frequency can be easily selected through a web based interface.

Compact Design for Easy Installation

The Fluidmesh 1100 is a compact unit designed for low visual impact deployments - perfect for urban areas. The integrated panel antenna makes for easy installation and supports a range of 1.5 miles in line of sight. The provided low-power POE injector guarantees a straight-forward set-up.

FluidThrottle™

The Fluidmesh 1100 is based on the innovative FluidThrottle™ technology which allows the user to limit the total cost of ownership of the wireless network by paying only for the amount of bandwidth required. Additional throughput can be easily achieved by upgrading the system with software plug-ins in case the bandwidth requirements increase over time. This solution makes Fluidmesh the most cost-effective and flexible wireless solution provider in the market.

FluidMAX™

The Fluidmesh 1100 supports the patent-pending FluidMAX™ technology and can be used to create Point-to-Point, Point-to-Multipoint, and Mesh architectures. In developing FluidMAX, Fluidmesh has embraced the WiMax Point-to-Multipoint architecture and enabled its wireless units to operate with a centralized or a distributed Medium Access Control protocol depending on the network layout.

Fully IP/Ethernet Compatible

The Fluidmesh 1100 is a fully IP and Ethernet compatible device. Despite being designed and optimized for video solutions, it can also create fully IP compatible networks that can be employed for multiple services. Possible applications are VOIP communication, data network interconnection, remote DVR control, etc.

EasyMesh™ Platform

The Fluidmesh 1100 includes the EasyMesh™ platform. The EasyMesh technology allows the user to set the same range of private IP addresses across the entire network.

The Fluidmesh 1100 also includes the FMQuadro™ web interface which allows the user to configure, monitor, and troubleshoot the wireless network in real time without the need of additional software.

MPEG4, M-JPEG, and H.264 optimization and multicast support

Every Fluidmesh 1100 automatically detects the type of video packets (eg. MPEG4 vs. M-JPEG vs. H.264, I-frame vs. P-frame) and the transport protocol (e.g., UDP vs. TCP) in use and optimizes the wireless transmission based on the packet type. Moreover, video packets are prioritized over other packets in order to minimize delays. Fluidmesh technology supports multicast transmission, greatly reducing the required bandwidth for every camera.

AES-128 Encryption Support (FIPS-197 Compliant)

The Fluidmesh 1100 includes support for 128 bit AES Encryption at the link-level which can be used for FIPS-197 compliance. Because AES is implemented in hardware, there is no loss in terms of performance when AES is enabled.

FEATURES

WIRELESS

- + Quadri-band: 2.4, 4.9, 5.1-5.8 GHz
- + Low latency and high bandwidth
- + Video packets prioritization
- + MPEG, M-JPEG, and H.264 optimization

SYSTEM

- + Power over Ethernet (not IEEE802.3af)
- + Integrated planar antenna
- + Self-healing network
- + Web-based management
- + IP66 outdoor-rated enclosure
- + Full compatibility with any IP camera or video-server

SECURITY

- + Proprietary communication protocol
- + VPN support
- + Cryptographic support (SSL, HTTPS)

Supported Architectures



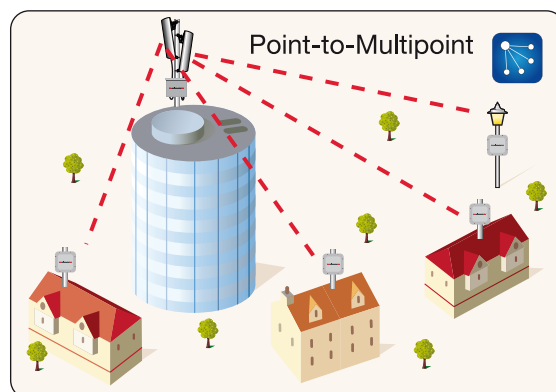
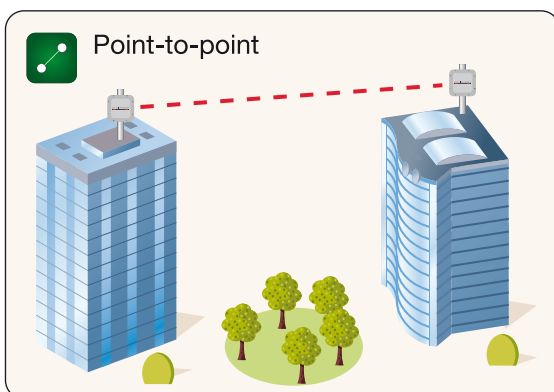
Point-to-Point

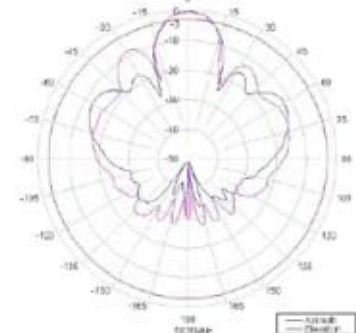
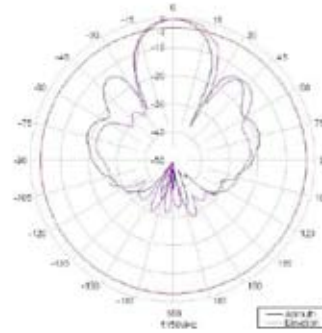
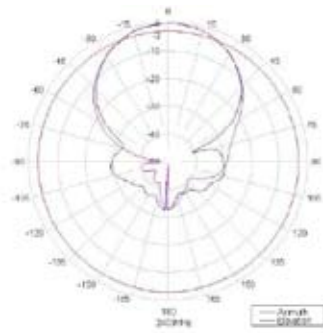
Point-to-Multipoint

Mesh

Mixed

Most Common Architectures





Technical Specifications

RADIO

- Frequency Bands: 5.17 - 5.850 GHz (US, FCC)
5.470 - 5.725 GHz (Europe, ETSI)
2.4 - 2.462 GHz (US, FCC)
2.4 - 2.472 GHz (Europe, ETSI)
4.940 - 4.990 GHz (US, FCC)
- Non-overlapping channels: 29 (US, FCC)
22 (Europe, ETSI)
- Modulation: OFDM (BPSK, QPSK, 16-QAM, 64-QAM)
- Modulation speed: Up to 108 Mbps
- TX Power: Up to 18 dBm, depending on configuration and regulatory constraints
- RX Sensitivity 2.4GHz: -90dB@6Mbps, -74dB@54Mbps
- RX Sensitivity 4.9GHz: -88dB@6Mbps, -71dB@54Mbps
- RX Sensitivity 5GHz: -88dB@6Mbps, -71dB@54Mbps
- Antenna Gain: 13dBi@2.4GHz, 15dBi@4.9/5GHz

ELECTRICAL

- Power input DC: 12-18 V DC (90/240V 50/60 Hz AC with the AC adapter included)
- Power consumption: Max 8W
- Power over Ethernet: Non-IEEE802.3af compliant

ENVIRONMENTAL

- Operating Temperature: -25°C (-13°F) to +70°C (158°F)
- UL Operating Temperature: -25°C (-13°F) to +65°C (149°F)
- Storage Temperature: -30°C (-22°F) to +70°C (158°F)
- Humidity: 95% non-condensing
- Weather Rating: IP66
- Wind Survivability: >165 mph
- Wind Loading@125mph: <43.4 lb
- Salt/Fog/Rust Resistance: MIL-STD-810F 509.4
- Shock & Vibration: ETSI 300-19-2-4 spec. T41.E

PHYSICAL

- Dimensions (inches/mm): 10.7/267 (h) x 10.7/267 (w) x 2.6/67 (d)
- Weight (lb/Kg): 2.9/1.3
- Enclosure material: Fiberglass

NETWORK

- Interfaces: One (1) Internal Ethernet
10/100BaseT autosensing, RJ45
- Protocols: UDP, TCP, IP, RTP, RTCP, RTSP,
HTTP, HTTPS, ICMP, ARP
- Medium Access Control (MAC) Protocols: Centralized Polling-based, Distributed CSMA/CA-based
- Web-based interface for remote management
- Multicast support
- UPnP support
- SNMP support

SECURITY

- Full VPN compatibility
- Full compatibility with all encryption and authentication standards (AES, 3DES, RSA, HTTPS, SSL, etc.)
- AES-128 (FIPS-197 Compliant) Link-level Encryption (optional)

APPROVALS

- FCC CFR 47 Part 15, class B
- Industry Canada RSS 210
- CE!
- C-Tick
- IP66 enclosure, rated for outdoor use

SUPPLIED ACCESSORIES

- 90/240V 50/60 Hz AC-DC UL/cUL Adapter 18V max. 15W Multi-Plug (US, EU, UK)
- PoE Injector
- Pole Mounting Kit (i.e. Pole Mounting Kit Max O.D. 2 in.)

OPTIONAL SOFTWARE PLUG-INS

- Wired Ethernet Capacity Plug-in up to 5 Mbps
- Wired Ethernet Capacity Plug-in up to 10 Mbps
- Wired Ethernet Capacity Plug-in up to 15 Mbps
- Unlimited Wired Ethernet Capacity Plug-in (up to 100 Mbps)
- 128-bit AES Encryption Plug-in
- 4.9 GHz Public Safety band Plug-in

WARRANTY

- Two (2) years on parts and labor

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