**Fluidmesh™ 2200 series** is the only *wireless mesh networking* product designed and manufactured specifically for **video-surveillance applications**. Every Fluidmesh 2200 series not only transmits the video streams coming from the cameras directly attached to it, but also dynamically routes packets coming from other Fluidmesh units through the optimal path.

### Reliability and flexibility

The wireless mesh architecture enables the creation of reliable and redundant networks, where every Fluidmesh unit can route packets around physical obstacles, sources of interference or low-quality links.

### Simultaneous transmission with two radios at 2.4 and 5 GHz

Fluidmesh 2200 series takes advantage of **two radios** simultaneously, operating one radio in the 2.4 GHz range, and the other one in the 5 GHz range. The double radio allows to **double the available bandwidth** and to create 100% **full-duplex** wireless links.

### MPEG4 and M-JPEG optimization and multicast support

Every Fluidmesh 2200 series automatically detects the type of video packets (eg. **MPEG4** vs. **M-JPEG**, **I-frame** vs. **P-frame**) and the transport protocol (eg. UDP vs. TCP) and optimizes the wireless transmission based on the packet type. Moreover, video packets are prioritized over data packets in order to minimize delays. Contrary to many other wireless transmission products, Fluidmesh technology supports **multicast** transmission, greatly reducing the required bandwidth for every camera.

### Video-streams confidentiality and authenticity

The Fluidmesh 2200 series is compatible with the most advanced **cryptographic** schemes (**VPN, SSL, HTTPS,** etc.). The confidentiality and authenticity of the video and data streams can be guaranteed by the use of robust algorithms, such as **AES**, **3DES** and **RSA**.

### IP68/NEMA6P submersible outdoor enclosure

The Fluidmesh 2200 series is designed and manufactured for applications requiring **top environmental and physical reliability**. The outdoor enclosure is completely submersible and complies with the IP68 and NEMA6P standards. The Fluidmesh 2200 series can be installed in locations subject to **extreme environmental conditions** such as seaports, refineries or industrial plants.

### Compatible with every IP camera and video-server

Fluidmesh technology is 100% **compatible with the IP protocol** and with every IP video-surveillance product, such as **IP cameras** and **video-servers**.
Every Fluidmesh 2200 series is equipped with an internal support to install up to **two video-servers** directly within the transmitter enclosure.
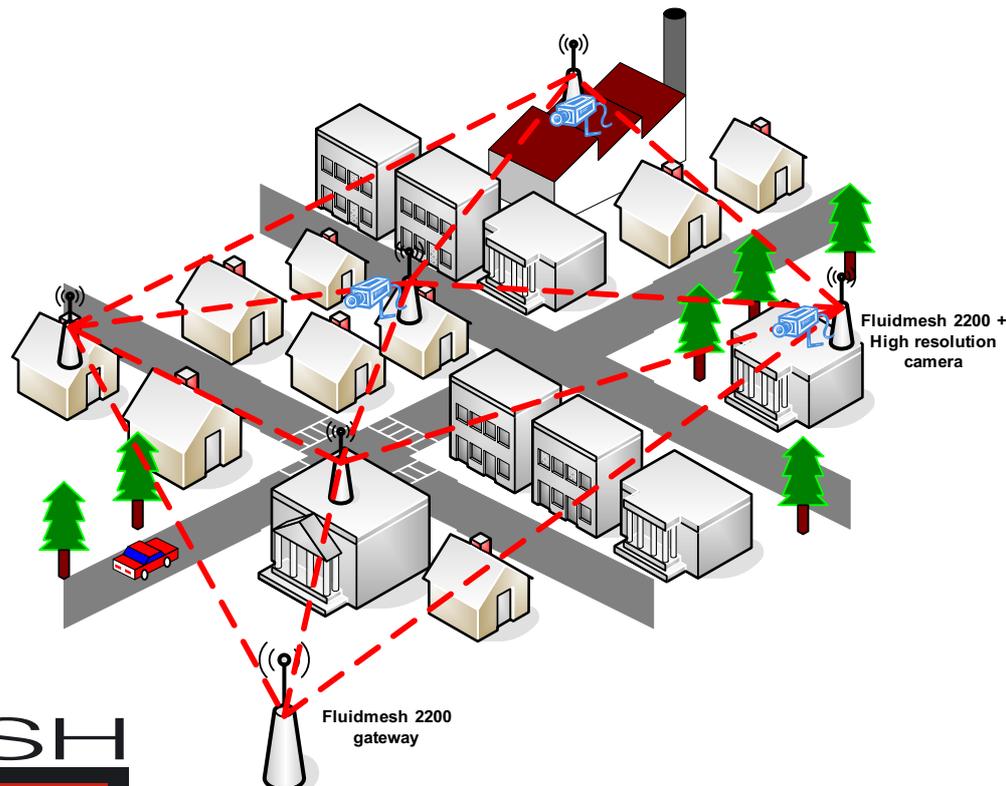
## FEATURES

**W**IRELESS
+ **Mesh-based architecture**
+ **Low latency and high bandwidth**
+ **Double radio on 2.4 and 5 GHz**
+ **Full-duplex links**
+ **Video packets prioritization**
+ **MPEG4 and M-JPEG optimization**

**S**YSTEM
+ **Self-healing network**
+ **Web-based management**
+ **IP68/NEMA6P submersible enclosure**
+ **Full compatibility with any IP camera and video-server**

**S**ECURITY
+ **VPN support**
+ **Cryptographic support (SSL, HTTPS)**
+ **Authenticated routing**

Fluidmesh 2200 +
High resolution
camera

Fluidmesh 2200
gateway

# Technical Specifications

## RADIO

| | |
|---|---|
| - Frequency Bands: | 5.18 - 5.25 GHz (US, FCC)<br>5.470 - 5.850 GHz (US, FCC)<br>5.470 - 5.725 (Europe, ETSI)<br>2.4 - 2.462 GHz (US, FCC)<br>2.4 - 2.472 GHz (Europe, ETSI) |
| - Non-overlapping channels: | 15 (US, FCC)<br>22 (Europe, ETSI) |
| - Modulation: | OFDM (BPSK, QPSK, 16-QAM, 64-QAM) |
| - Modulation speed: | Up to 54 Mbps per radio (total 108 Mbps) |
| - TX Power: | Up to 18 dBm, depending on configuration and regulatory constraints |
| - RX Sensitivity 2.4Ghz: | -90dB@6Mbps, -74dB@54Mbps |
| - RX Sensitivity 5Ghz: | -88dB@6Mbps, -71dB@54Mbps |
| - Antenna connectors: | N-Female |

## ELECTRICAL

| | |
|---|---|
| - Power input AC: | 100/240 V 50/60 Hz single and split phase ANSI/IEEE C62.41 category C3 integrated branch circuit protection |
| - Power input DC: | 7-18 V DC |
| - Power consumption: | Max 10W (only transceiver)<br>Max 35W (with video-server) |

## ENVIRONMENTAL

| | |
|---|---|
| - Operating Temperature: | -25°C to +55 °C |
| - Storage Temperature: | -30°C to +65 °C |
| - Humidity: | 95% non-condensing |
| - Weather Rating: | IP68, NEMA 6P |
| - Wind Survivability: | >165 mph |
| - Wind Loading: | <1024 N |
| - Salt/Fog/Rust Resistance: | MIL-STD-810F 509.4 |
| - Shock & Vibration: | ETSI 300-19-2-4 spec. T41.E |

## PHYSICAL

| | |
|---|---|
| - Dimensions (inches/mm): | 8"/203 (h) x 8"/203(w) x 4"/102(d) |
| - Weight (lb/Kg): | 5.7/2.6 |
| - Mounting: | Wall-mount brackets included |
| - Interfaces: | Two (2) Internal Ethernet 10/100BaseT autosensing, RJ45 |

## PROTOCOLS AND REMOTE MANAGEMENT
- Protocols:
   UDP, TCP, IP, RTP, RTCP, RTSP, HTTP, HTTPS, ICMP, ARP
- Web-based interface for remote management
- Multicast support

## SECURITY
- Authenticated routing
- Full VPN compatibility
- Full compatibility with all encryption and authentication standards (AES 3DES, RSA, HTTPS, SSL, etc.)

## APPROVALS
- FCC CFR 47 Part 15, class B
- Industry Canada RSS 210
- CE
- IP68 rated for outdoor use
- NEMA 6P rated for outdoor use

## OPTIONAL ACCESSORIES
- Video-server Internal Mounting Kit
- Fluidmesh SunShield
- Pole Mounting Kit

## WARRANTY
- Two (2) years on parts and labor

**FLUIDMESH**
NETWORKS