Wireless video surveillance with Fluidmesh Networks

Fluidmesh technology is the answer to the ever growing need for highly reliable wireless video surveillance systems that do not present the disadvantages of Wi-Fi technology when it is employed for video streaming applications.

Reliability and flexibility of wireless mesh networks

Fluidmesh Networks develops wireless networking solutions based on the innovative mesh networking architecture, that presents unmatched advantages in terms of reliability and flexibility compared to any traditional point-to-point or point-to-multipoint wireless solutions.

In a wireless mesh network, every Fluidmesh unit not only transmits the data packets coming from the cameras directly attached to it, but it also acts as an "intelligent router," able to forward packets coming from other Fluidmesh units through the optimal path.

In a redundant and reliable mesh network, every video stream has multiple available paths to reach the base stations and the network forwards the packets through the optimal path at any point in time.

The absence of any single point of failure incredibly increases the reliability of the system compared to any other transmission technology, either wireless or wired.

Solution to the weaknesses of Wi-Fi based products

Differently from Wi-Fi products that are designed for low-cost indoor data transmission, Fluidmesh technology is designed specifically as a solution for video-surveillance applications that need reliability and available bandwidth for high-resolution video streaming.

Fluidmesh Networks designed and implemented advanced routing and transmission protocols optimized for high-resolution MPEG4 and M-JPEG video streaming. Differently from any Wi-Fi solution, such as video-stream prioritization and multicast traffic support.

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Unmatched reliability and flexibility with no cable

The wireless mesh architecture enables the design 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

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

Every Fluidmesh implements an advanced radio selection algorithm that selects the optimal radio based on the channel conditions. In such a way, every Fluidmesh unit can take advantage of fluctuations in the traffic and channel quality, increasing the available bandwidth and reliability of the network.

Fluidmesh™ 2200 series
Wireless Mesh Networks
for Video-surveillance

FLUIDMESH
NETWORKS

Fully IP Compatible

Fluidmesh technology is fully compatible with the IP protocol and with any IP-based video-surveillance product, such as IP cameras and video-servers. No specific camera model or brand of recording software or NVR is required. The selection of the video-surveillance products can be fully based on the peculiarities of the location and on the requirements of the end-user.

The Fluidmesh 2200 series enclosure can accommodate up to two video-servers and therefore does not require the installation of another outdoor enclosure for the video-servers.

MPEG4 and M-JPEG optimization and multicast support

Every Fluidmesh unit automatically detects the type of video packets (e.g. MPEG4 vs. M-JPEG, I-frame vs. P-frame) and the transport protocol (E.G. 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 support multicast transmission greatly reducing the bandwidth needed for every camera.

Video-Streams confidentiality and authenticity

Fluidmesh technology 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. Fluidmesh units can be installed in the locations subject to extreme environmental conditions such as seaports, refineries or industrial plants.

For more information visit www.fluidmesh.com

	Fluidmesh™	Wi-Fi
Dynamic *wireless mesh* routing	YES	NO
Two radios on 2.4 and 5 GHz range	YES	NO
License-free frequencies	YES	YES
Video-stream prioritization	YES	NO
MPEG4 and M-JPEG optimization (unicast and multicast)	YES	NO
Security protocols compatibility (VPN, SSL, HTTPS, etc.)	YES	YES
Submersible enclosure IP68/NAME6P	YES	NO
Internal support for video-server	YES	NO