firetide®

HotPort® 6000 Wireless Mesh Nodes

HotPort® 6000 Wireless Mesh Nodes

HotPort 6000 mesh nodes provide reliable Ethernet connectivity over a high-perfor-mance, self-forming wireless mesh backbone — indoors, outdoors, or onboard moving vehicles. All HotPort nodes have multiple Ethernet ports for connecting network de-vices or other networks to the wireless mesh.

HotPort 6000 mesh nodes provide up to 70 Mbps throughput and operate at 2.4 GHz, 4.9 GHz (U.S. public safety licensed band), or 5 GHz. Depending on the model, HotPort 6000 nodes are equipped with either single or dual radios, operating at 400 mW.

Reliable Connectivity Anywhere

Designed for seamless indoor and outdoor operation, the HotPort mesh network securely handles concurrent video, voice, and data applications, making it ideal for municipal, public safety, and industrial net-works. The mesh's self-forming and self-heal-ing properties enable rapid deployment and dependable operation. Firetide's AutoMesh™ routing protocol manages network load and traffic congestion to optimize mesh-wide performance and capacity.

HotPort 6000 Indoor Mesh Node

Firetide's end-to-end solution includes HotPort nodes for mesh infrastructure, HotPoint® access points for wireless access, HotView™ software for a complete manage-ment system, and Firetide Mobility Controller for mesh and client mobility.

Dual-radio Performance

To maximize performance, dual-radio HotPort 6000 nodes support two radio modes. In the "bonded" mode, both radios are combined to operate as a single unit that provides double the bandwidth of a single radio equivalent. This is ideal for bandwidth-intensive applica-tion such as video surveillance, resulting in crystal clear video images. This mode also provides a "fat pipe" for point to point wire-less backhaul — for example, to connect two mesh networks.

In the "linear" mode, both radios operate independently enabling sustained bandwidth levels over an unlimited number of hops. This enables long linear topologies, such as when networking a railway line, and provides a sus-tained level of service to every node, which is also critical for large municipal networks

Single Infrastructure for Multi-user, Multi-service Wireless Network

The HotPort 6000 mesh solves the problem of having to build out dedicated wireless networks for multiple applications and users. With HotPort 6000 nodes, you can build a single infrastructure for public safety video, public Wi-Fi access, enterprise VPN, and voice traffic, dramatically reducing capital invest-ment in the wireless backbone.

Convenient Network Expansion

You can extend your existing network, whether wired or wireless, with HotPort 6000 nodes and achieve seamless integration with all network components and applications.

Advanced Mesh Mobility

All HotPort nodes can operate with the Firetide Mobility Controller software for high speed infrastructure mobility, enabling reli-able connectivity for Wi-Fi access on public transportation or video surveillance from moving police vehicles.
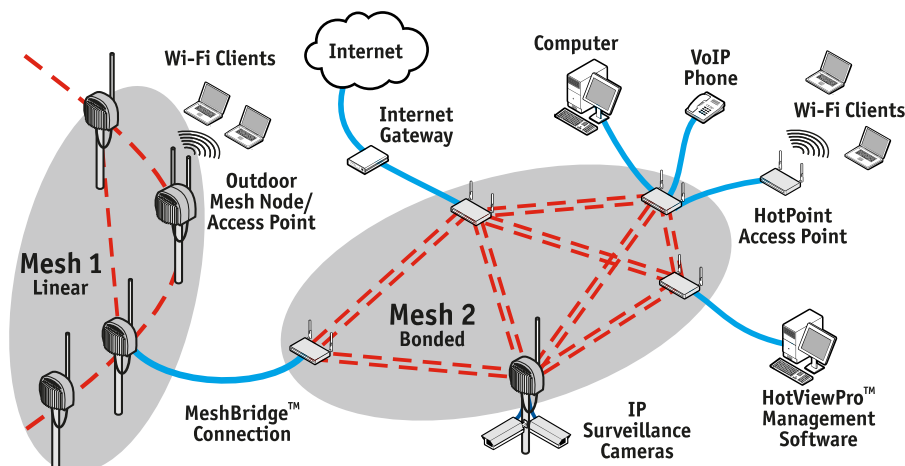
End-to-End Security

HotPort 6000 mesh nodes ensure maximum security and privacy of your data. They feature WEP and WPA2 encryption between nodes and AES encryption from ingress to egress. All Layer 3 IP data is encapsulated and accessible only to Firetide mesh nodes. HotPort nodes support VLANs, segmenting traffic with secure access control on same physical infrastructure.

Key Applications

Municipalities: True multi-service net-works providing a single infrastructure for video, public Wi-Fi access, enterprise VPN, and voice traffic.

Security and public safety: High-perfor-mance surveillance video with optimal frame rates and image resolution, giving you the ability to make any IP camera a "wireless" device.

Transportation: Reliable Wi-Fi access with high speed mobility and sustained bandwidth over a linear topology.

HotPort 6000 Outdoor Mesh Node

Wi-Fi Clients · Internet · Computer · VoIP Phone · Wi-Fi Clients · Internet Gateway · Outdoor Mesh Node/ Access Point · HotPoint Access Point · Mesh 1 Linear · Mesh 2 Bonded · MeshBridge™ Connection · IP Surveillance Cameras · HotViewPro™ Management Software

HotPort® 6000 Wireless Mesh Nodes

Specifications

Models
• HotPort 6101–Single-radio Indoor Mesh Node
• HotPort 6102–Dual-radio Indoor Mesh Node
• HotPort 6201–Single-radio Outdoor Mesh Node
• HotPort 6202–Dual-radio Outdoor Mesh Node

Mesh Protocol
• Firetide AutoMesh Protocol

Security and Encryption
• 40 bit, 104 bit WEP keys
• 128 bit, 256 bit AES keys (WPA2, end-to-end data)
• MAC address filtering
• Digitally signed firmware files
• Digital certificates on nodes

Traffic Prioritization
• Quality of Service (QoS 802.1p)

Wireless Interface
• IEEE 802.11a/b/g/h ad hoc
• Transmit power up to 400 mW
• Frequency ranges
    2.412 – 2.483 GHz
    4.94 – 4.99 GHz (US public safety band)
    5.15 – 5.25 GHz
    5.25 – 5.35 GHz
    5.470 – 5.725 GHz
    5.725 – 5.825 GHz
• Receive sensitivity (typical)
    2.4 GHz, DSSS
        1 Mbps: -95 dBm
        11 Mbps: -88 dBm
    2.4 GHz, OFDM
        6 Mbps: -90 dBm
        54 Mbps: -73 dBm
    5 GHz
        6 Mbps: -90 dBm
        54 Mbps: -73 dBm
• Dynamic Frequency Selection (DFS)
• Transmit Power Control (TPC)

Mesh Management Software
• HotView mesh management software (bundled)
• HotView Pro mesh management software (optional)

Mobility Controller Software
• Firetide Mobility Controller client and infrastructure mobility software (bundled with HotView Pro)

Regulatory Agency Certifications
• Contact your Firetide dealer for product availability and certifications for your country.
• RoHS and WEEE compliant

Warranty
• Hardware: one year limited warranty
• Software: 90 days limited warranty

Outdoor HotPort 6000 connectors

Outdoor Model

Network Ports
• Three 10/100 Mbps Ethernet ports with weatherproof connectors, LED activity indicator
• IEEE 802.3, 802.3u compliant
• CSMA/CD 10/100 autosense
• Ports 2, 3 PSE Power over Ethernet per 802.3af

Enclosure
• Cast aluminum NEMA-4X/IP66 enclosure
• Two N-type antenna connectors
• One weatherproof power connector
• Three weatherproof Ethernet connectors
• System LEDs (power, status, mesh)
• Weight: 12 lbs (5.4 Kg) with bracket and sunshield
• Dimensions: 12" X 10.5" X 5.75" (30.5 cm X 27 cm X 15 cm) including sunshield; 12" X 8.5" X 4.875" (30.5 cm X 22 cm X 12 cm) excluding sunshield

Power
• AC Input: 90-240 VAC, 50-60 Hz, 0.9 A
• DC Input: 15 VDC ±15%, 3 A
• Ports 2 and 3: IEEE 802.3af compliant PoE (PSE), 13.5 W max

Environmental Specifications
• Operating temperature: -40ºC to +60ºC
• Storage temperature: -40ºC to +85ºC
• Humidity (non-condensing): 10% to 90%
• Storage humidity (non-condensing): 5% to 95%
• Maximum altitude 15,000 feet (4600 meters)

Included Accessories
• Antennas: two pairs, 2.4 GHz and 5 GHz, 5 dBi, omni directional (included for network staging only)
• Bracket for pole and wall mounting
• External AC power cord (non-North America power cord is separate orderable item)
• Removable sun shield
• One weatherized Ethernet transition cable with watertight RJ-45 coupling

Optional Accessories
• Outdoor weatherized Ethernet cables, for use with HotPoint access points
• Luminaire photocell socket power
• Single detachable, high gain, spectrum-specific, omni directional and directional antennas (see Antenna Guide)

Indoor HotPort 6000 connectors

Indoor Model

Network Ports
• Four 10/100 Mbps Ethernet ports with LEDs
• IEEE 802.3, 802.3u compliant
• CSMA/CD 10/100 autosense

Enclosure
• System LEDs (power, status, mesh)
• Ethernet port LEDs (link, status, activity)
• Connectors: two antenna, one power, four Ethernet (RJ-45)
• Reset button (recessed)
• Security slot for physical locking device
• Weight: 2 lb 14 oz (1.3 kg)
• Dimensions: 9.375" X 6" X 2" (24 cm X 15 cm X 5 cm)
• Plenum-rated UL2043

Power
• DC Input: 15 VDC ±15%, 1.8 A
• External power supply: 100-240 VAC, 50/60 Hz

Environmental Specifications
• Operating temperature: 0ºC to +60ºC
• Storage temperature: -20ºC to +70ºC
• Humidity (non-condensing): 10% to 90%
• Storage humidity (non-condensing): 5% to 95%
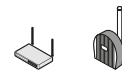• Maximum altitude 15,000 feet (4600 meters)

Included Accessories
• AC power adapter with cord (non-North America power cord is separate orderable item)
• Antennas: two pairs, 2.4 GHz and 5 GHz, 5 dBi, omni directional

Optional Accessories
• Wall or cubicle-mount bracket
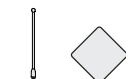
Other Firetide Products

Access Points
HotPoint Indoor & Outdoor Access Points

CPE
HotClient Indoor & Outdoor Customer Premises Equipment

Software
HotView & HotView Pro, Firetide Mobility Controller, Firetide WLAN Controller

Accessories
Antennas, Mounting Kits, Cables, etc.