HotPort® 7000 (7010/7020) Wireless Mesh Nodes

HotPort 7010 Indoor Mesh Node

HotPort 7020 Outdoor Mesh Node

HotPort 7000 – A cost-effective, viable alternative to fiber and the key to creating the fastest, most reliable and secure private wireless broadband network.

Expand Your Existing Networks

With HotPort 7000, you can expand the reach of your existing networks while adding a variety of fixed and mobile applications:

- City-wide video surveillance
- Traffic management and intelligent transportation systems
- Mobile Network Infrastructure for mobile city workers
- Wireless broadband for underserved areas

Easier Deployments & Network Management

Unlike wired networks, where deployment is cumbersome, the self-forming nature of the Firetide mesh network ensures rapid deployment of large-scale networks. The HotPort 7000 mesh features integrated spectrum analysis, network capacity planning and antenna alignment tools for easier deployments and network management.

Higher Reliability

The HotPort 7000 nodes form a multi-point to multi-point ad hoc wireless mesh network with no single point of failure. Unlike a wired network, where a cut in the cable could take several days to resolve, the Firetide mesh routes the traffic immediately to an alternate link ensuring continuous service and network availability.

Dual-radio Performance

To maximize performance, dual-radio HotPort 7000 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. 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 sustained level of service to every node, which is also critical for large municipal networks.

Quality of Service

Firetide's patented AutoMesh™ technology supports advanced load balancing and congestion control mechanisms for optimal routing within the mesh network. The HotPort 7000 mesh infrastructure also provides extensive VLAN capabilities critical for deploying a multi-service network on a large scale.

Metro-scale Deployments

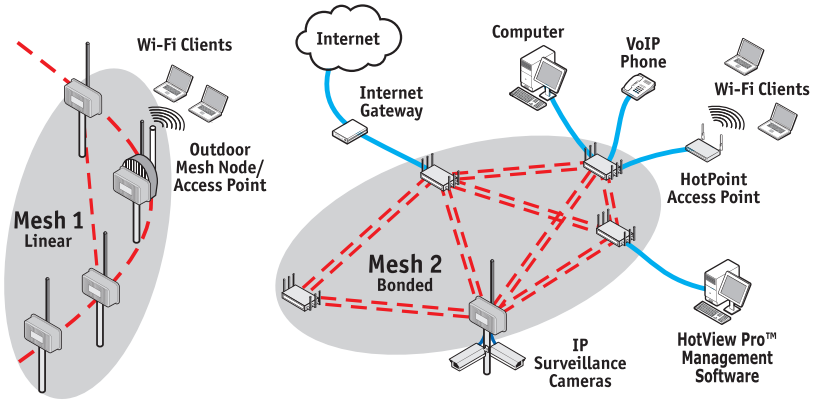
Firetide's network easily scales up to several hundreds of mesh nodes for city-wide deployment. Advanced features like Gigabit EthernetDirect™ support mesh connectivity across multiple locations. Indoor and outdoor HotPort 7000 nodes feature dual or single configurable radios in the 2.4, 4.9 (U.S. public safety licensed band) and 5 GHz frequency ranges.

Multicast & Security

Firetide mesh provides reliable multicast capabilities, advanced security, including 802.11i support, dual-layer of FIPS140-2 certifiable 256-bit AES encryption, digital certificates on network elements, digitally signed firmware files, MAC based access control lists and VLAN based access control lists.

Convenient Upgrade Paths

HotPort 7000 mesh nodes ship as 802.11a/b/g/n dual-radio capable hardware, with enhanced functionality enabled through software licenses. Projects that do not require 802.11n MIMO (multiple input, multiple output) capacity or dual-radio capability can start with 802.11a/b/g-enabled single-radio configuration. Dual-radio functionality can easily be enabled through a software license at an additional cost. Similarly, a separate software license can enable MIMO functionality for operation in 40 MHz channels to take advantage of 802.11n technology and throughput of up to 300 Mbps outdoors and 400 Mbps indoors.



Specifications

Models

- HotPort 7010—Indoor Mesh Node*
- HotPort 7020—Outdoor Mesh Node*

* Purchase of software license(s) required for dual-radio and/or 802.11n MIMO functionality

Mesh Protocol

- Firetide AutoMesh Protocol

Security and Encryption

- WPA/WPA2 Wireless encryption
- 128 bit / 256 bit end-to-end AES
- 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/n ad hoc; 3X3 MIMO with 2 streams*

* Purchase of software license required for 802.11n MIMO functionality

- Transmit power up to 400 mW
- Frequency ranges
  - 2.412 – 2.483 GHz
  - 4.94 – 4.99 GHz
  - 5.15 – 5.25 GHz (Indoor use only)
  - 5.25 – 5.35 GHz
  - 5.470 – 5.725 GHz
  - 5.725 – 5.850 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, OFDM
    - 6 Mbps: -90 dBm
    - 54 Mbps: -73 dBm
- Ability to configure 5,10, 20 and 40 Mhz (MIMO only) channel bandwidth
- Dynamic Frequency Selection (DFS)
- Transmit Power Control (TPC)

Management Software

- HotView Pro™ mesh management software (separate purchase required)

Regulatory Agency Certifications

- Contact your Firetide dealer for product availability and certifications for your country
- RoHS, FCC Part 15, CE, WEEE compliant

Warranty

- Hardware: one year limited warranty (Extended warranty available for purchase)
- Software: 90 days limited warranty

Outdoor Model—7020

Network Ports

- Three GigE 10/100/1000 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
- Six type-N female antenna connectors
- Two weatherproof power connectors: AC and DC
- Three weatherproof Ethernet connectors
- System LEDs (power, status, mesh)
- Weight: 12 lbs (5.4 kg) with bracket and sunshield
- Dimensions: 11.6”L X 8.1”W X 4.1”H

Power

- AC Input: 100-240 VAC , 50-60 Hz, 0.9 A
- DC Input: 12 VDC ± 10 % , 2.8 A (without PSE output)
- Power Consumption: 34 W (with DC input and no PSE output)
- 802.3af PoE-PSE power output on Ethernet ports 2 and 3

Environmental Specifications

- Operating temperature: -40°C to +60°C
- Storage temperature: -40°C to +85°C
- Humidity (non-condensing): 10% to 90%
- Storage humidity (non-condensing): 5% to 95%
- Maximum altitude 15,000 feet (4600 m)

Included Accessories

- Antennas: Six dual-band 2.4 GHz & 5 GHz, 3 dBi, indoor-rated omnidirectional (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 sunshield
- Three weatherized Ethernet connectors for watertight RJ-45 coupling

Optional Accessories

- Outdoor weatherized Ethernet transition cables for use with HotPoint® access points
- Omnidirectional & panel antennas
- Customized outdoor weatherized circular DC connector with AC-DC power adaptor

Indoor Model—7010

Network Ports

- Four GigE 10/100/1000 Mbps Ethernet ports, LED activity indicator
- IEEE 802.3, 802.3u compliant
- CSMA/CD 10/100 autosense

Enclosure

- System LEDs (power, status, mesh
- Ethernet port LEDs (link, status, activity)
- Connectors: Six RPSMA female antenna, one power, four Ethernet (RJ-45)
- Reset button (recessed)
- Weight: 2 lb 14 oz (1.3 kg)
- Dimensions: 9.4”L X 5.9”W X 1.6”H
- Security slot for physical locking device

Power

- DC Input: 12 VDC ± 10 % , 2.8 A
- Power Consumption: 34 W Max
- Port 1 : IEEE 802.3at compliant PoE-PD

Environmental Specifications

- Operating temperature: 0°C to +60°C
- Storage temperature: -20°C to +70°C
- Humidity (non-condensing): 10% to 90%
- Storage humidity (non-condensing): 5% to 95%
- Maximum altitude 15,000 feet (4600 m)

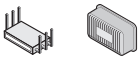
Included Accessories

- AC power adapter with cord (non-North America power cord is separate orderable item
- Antennas: Six Dualband 2.4 GHz and 5 GHz, 3 dBi, omnidirectional

Optional Accessories

- Wall-mount bracket

Firetide Products



Mesh Nodes
HotPort Indoor, Outdoor and Edge Mesh Nodes

Access Points
HotPoint Indoor & Outdoor Access Points

Mobility
Firetide Mobility Controller

Software
HotView Pro Mesh Management Software

Accessories
Antennas, Mounting Kits, Cables, etc.

Data Sheet

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