# FWB-100 Firetide Wireless Bridge

## High-capacity Point-to-point

Firetide FWB-100 outdoor wireless Ethernet bridges provide low-cost, high-capacity connectivity between two locations. FWB-100 is software configurable for 2.4, 5 and 4.9 GHz and achieves up to 35 Mbps of throughput. Tri-band operation augments the tri-band functionality of Firetide HotPort® mesh nodes and HotPoint® access points.

## Complete Infrastructure Solution

FWB-100 product line is a natural expansion of Firetide's core wireless infrastructure technology. Firetide's expertise in large-scale wireless mesh networks for video, data and voice applications in harsh environments ensures that its bridges are optimized to provide the highest performance, security and reliability in the industry.

## Concurrent Voice, Video, Data

FWB-100 bridge is optimized to provide high-capacity and low-latency connectivity for demanding data, voice and video applications. Point-to-point connectivity is critical for municipalities, public safety, industrial installations and campus environments. In addition to these markets, this product serves the needs of wireless Internet service providers and telecom operators. FWB-100 brings in the RF management features of Firetide's mesh products which enable intelligent response to interference and effective management of multiple clients accessing the network simultaneously.

## Wireless Bridging

FWB-100 provides true bridging functionality and is agnostic to the types of client or protocols on the network. FWB-100 supports transparent overlay of multiple subnet (VLANs) over the point-to-point link. It also provides seamless transport of multicast and broadcast traffic over the point to point link, including IPTV distribution, video on demand, video surveillance and video conferencing. In addition, to prevent bandwidth abuse, FWB-100 provides advanced tools such as multicast rate limits.
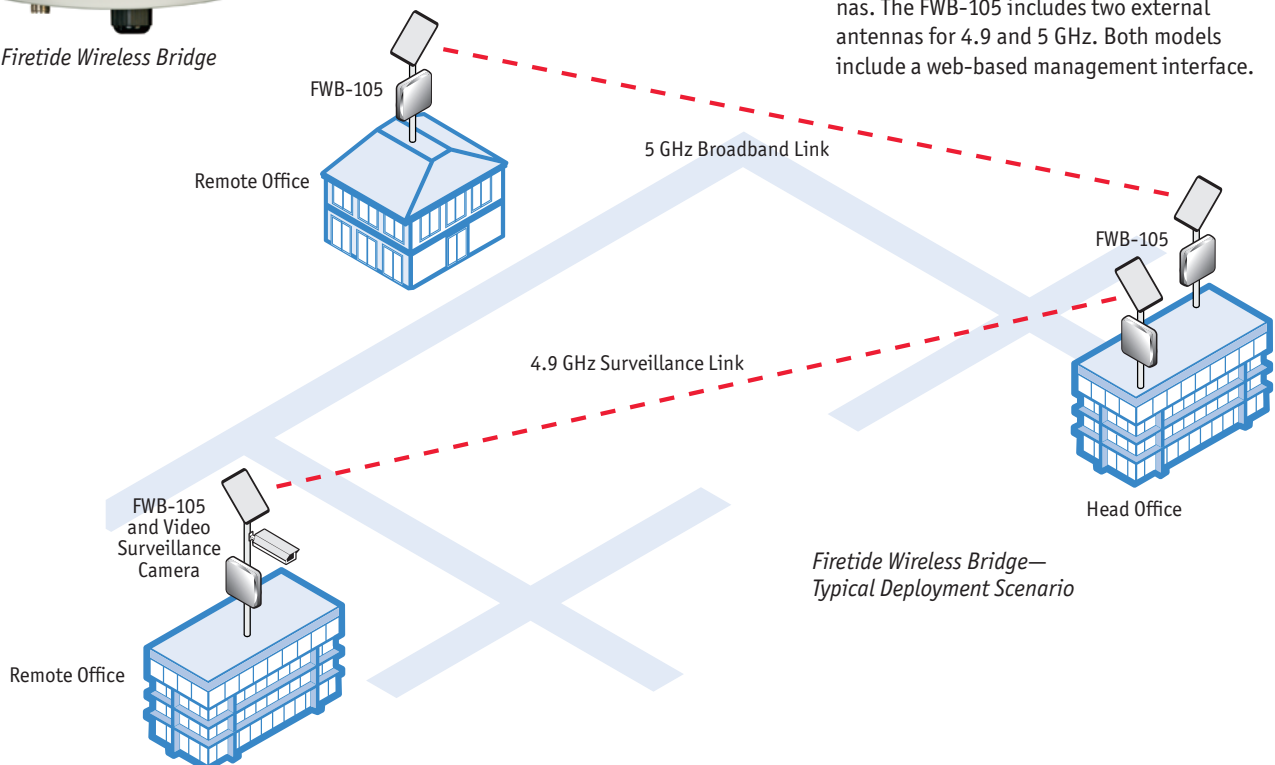
## Privacy and Security

FWB-100 supports the industry's highest level of security to ensure privacy for communications and reduce liability for service providers. Like all components of the Firetide wireless mesh and access infrastructure, FWB-100 offers WPA2-PSK (Wi-Fi Protected Access) encryption for an unmatched, solid, and trusted network.

## Flexibility of Deployment

Deployed as a standalone solution, the FWB-100 link is managed via a browser-based management interface. Customers can also integrate the FWB-100 links into a larger Firetide mesh network managed by HotView Pro™ network management software. Designed for an easy "out-of-the-box" installation experience, the unit pair is shipped preconfigured and with all accessories included. An integrated antenna alignment tool provides step-by-step guidance in achieving maximum signal quality, translating to better network performance and throughput.

## Outdoor Configurations

FWB-100s are available in two outdoor configurations. The FWB-102 provides two FWB-100 nodes with built-in 2.4 GHz antennas. The FWB-105 includes two external antennas for 4.9 and 5 GHz. Both models include a web-based management interface.



*Firetide Wireless Bridge*

FWB-105

Remote Office

5 GHz Broadband Link

FWB-105

4.9 GHz Surveillance Link

FWB-105 and Video Surveillance Camera

Remote Office

Head Office

*Firetide Wireless Bridge— Typical Deployment Scenario*

## FWB-100 Firetide Wireless Bridge

### Specifications

**Models**
- FWB-102  Firetide Wireless Bridge Integrated Antenna
- FWB-105 Firetide Wireless Bridge with external high gain antenna

**Wireless interface**
- IEEE 802.11a/b/g
- 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
  - 5.725 – 5.825 GHz
- Transmit power up to 400 mW
- Manual Transmit Power Control
- Typical RX sensitivity:
  - 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
- Media Access Protocol: CSMA/CA with ACK
- Range up to 1000 meters depending on client configuration and environment

**Networking**
- 1 10/100 Weatherized RJ45 Ethernet port

**Security, Authentication and Encryption**
- 802.11i, WPA2
- 40 bit, 104 bit WEP keys
- 128 bit, 256 bit AES keys
- Support SSID suppression
- MAC access control
- NAT
  - Supports VLANs
- Digital certificates on nodes

*Firetide Wireless Bridge connectors*

### Management and Configuration
- Multiple user interface options:
- Centralized management via HotView or HotView Pro
- Built-in web-based management
- Remote firmware upgrade

### Outdoor Model

**Enclosure**
- Cast aluminum NEMA-4/IP66 enclosure
- One built-in antenna, one N-type antenna connector for optional antenna
- One Ethernet port with weatherized watertight RJ-45 coupling
- System indicator LEDs (power, status, align)
- Weight: 2 lbs (0.9 Kg) without bracket
- Dimensions: 7.8" X 8.3" X 2.4" (198 X 210 X 60 mm)

**Power**
- Unit power is via 802.3af Power-over-Ethernet
- PoE PSE module: AC Input 90–240 VAC, 50–60 Hz, 0.15 A
- Unit power dissipation <9W

**Environmental Specifications**
- Operating temperature: -40°C to +60°C
- Storage temperature: -40°C to +70°C
- Humidity (non-condensing): 10% to 90%
- Storage humidity (non-condensing): 5% to 95%
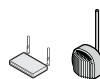- Maximum altitude 15,000 feet (4,572 meters)

**FWB-102 Included Accessories**
- Power-feed unit (AC power to PoE)
- Bracket for pole mounting

**FWB-105 Included Accessories**
- A pair of 4.9 to 5.8 GHz subscriber panel antenna with 23 dBi gain (21 dB gain for 4.9–5.1), 1.5 meter LMR400 cable, lightning suppressor with N-type connector & Az/E1adjustable mount
- Power-feed unit (AC power to PoE)
- Bracket for pole mounting

### Other Firetide Products

**Mesh Nodes**
HotPort Indoor & Outdoor Mesh Nodes

**Access Points**
HotPoint Indoor & Outdoor Access Points

**CPE**
HotClient Indoor & Outdoor Customer Premises Equipment

**Software**
HotView & HotView Pro Network Management Software

**Accessories**
Antennas, Mounting Kits, Cables, etc.