

# Infrastructure Mesh Point

## Secure Net-Centric Wireless Communications

Today's **forward deployed and emergency response organizations** are constantly challenged to **securely connect with and extend the reach of their networks**. Providing the necessary bandwidth and connectivity to critical enterprise systems for their users **across long distances and to remote outdoor locations** is the number one limiting factor in field units' ability to effectively achieve their objectives. Often, a traditional wired approach may not be practical, and in many cases, such as disaster response or working in conflict areas, completely impossible and unnecessarily risky to life. Further, knowing that these devices are critical infrastructure elements and employed in harsh outdoor environments for months or years at a time, they must be **rugged, weatherized and easy to setup and operate**.

Providing simultaneous network access and backhaul, the **Fortress ES440 Infrastructure Mesh Point** brings **secure, net-centric, wireless communications to forward deployed and network-edge environments**. With **Fortress FastPath Mesh™** technology, the Fortress ES440 provides a **path optimized** self-forming, self-healing, wireless mesh network to help maintain uninterrupted connectivity as nodes move within the wireless mesh network.

With four powerful radios, the **Fortress ES440** is the perfect choice for use with sector antennas to provide maximum coverage in outdoor environments. The ES440 offers **FIPS 140-2 validated security** and is upgradeable to **NSA Suite B**. Delivered in a small and rugged form factor, the ES440 Infrastructure Mesh Point delivers dependable performance in a wide range of conditions including arctic, desert, tropical and maritime environments.

**Fortress Infrastructure Mesh Points** enable deployed and network-edge organizations to securely extend their communications reach in the most challenging outdoor environments.



## Product Datasheet



## Features and Benefits:

### Simple and Secure Connectivity

The ES440 securely extends the network in outdoor locations, bringing secure voice, video, and data communications to those who need it, when and where they need it.

### Maximum Range and Network Resilience

With 4 powerful radios for long range access, and Fortress FastPath Mesh™ technology, the ES440 ensures that network access can be made available almost anywhere.

# Product Datasheet

## Features and Benefits:

### Small and Rugged Design

The rugged design and small form factor of the ES440 delivers dependable performance in a wide range of conditions including arctic, desert, tropical and maritime environments.

### Easy to Use, Easy to Wear

The ES440 management interfaces are intuitive and easy to use. The small, rugged and weatherized enclosure allows the ES440 to be mounted in a wide variety of locations.

### Flexible Power and Mounting Options

The ES440 is specially designed to be polemounted to help minimize signal loss through cable and can be powered by POE. The ES440 can be also be mounted horizontally or vertically to any flat, fixed surface such as a floor, wall, ceiling, shelf or rack.

### Certified Security

With FIPS 140-2 compliant, Layer 2, AES-256 encryption, the ES440 provides security that is compliant with federal policy. Upgradeable to NSA Suite B algorithms, Fortress offers proven security that has been thoroughly tested and deployed in the most demanding environments.

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| KEY FEATURES AND PERFORMANCE      |   |
|-----------------------------------|---|
| Portable Rugged Form Factor       | <ul style="list-style-type: none"><li>• 8.5" x 8.5" x 1.75"</li><li>• Approximately 4 lbs</li></ul>   |
| Mobile                            | <ul style="list-style-type: none"><li>• Self-forming, self-healing 802.11 Fortress FastPath Mesh™</li></ul>   |
| Secure                            | <ul style="list-style-type: none"><li>• FIPS, AES-256, NSA Suite B</li></ul>  |
| Versatile                         | <ul style="list-style-type: none"><li>• Variable DC power (9-32V), multiple mounting options</li></ul>  |
| SECURITY                          |   |
| Encryption                        | <ul style="list-style-type: none"><li>• AES-128, 192, 256</li><li>• WPA2 (802.11i)</li><li>• NSA Suite B upgradeable</li></ul>  |
| Encryption Key Zeroization        | <ul style="list-style-type: none"><li>• Remote key zeroization</li></ul>  |
| MANAGEMENT                        |   |
| Configuration/status              | <ul style="list-style-type: none"><li>• Secure browser-based GUI, CLI or SNMP</li></ul>   |
| Power LED                         | <ul style="list-style-type: none"><li>• On</li></ul>  |
| Status LED                        | <ul style="list-style-type: none"><li>• Booting/internal tests</li></ul>  |
| Radio LED                         | <ul style="list-style-type: none"><li>• Strength and association</li></ul>  |
| Ethernet Port LEDs                | <ul style="list-style-type: none"><li>• Link, activity, status</li></ul>  |
| HARDWARE                          |   |
| Enclosure                         | <ul style="list-style-type: none"><li>• Rugged IP67 aluminum enclosure</li></ul>  |
| Chassis Dimensions                | <ul style="list-style-type: none"><li>• 8.5" x 8.5" x 1.75"</li></ul>   |
| Weight                            | <ul style="list-style-type: none"><li>• Approximately 4 lbs</li></ul>   |
| Mounting                          | <ul style="list-style-type: none"><li>• Optional mounting bracket kit</li></ul>   |
| INTERFACES                        |   |
| Ethernet                          | <ul style="list-style-type: none"><li>• 2 RJ-45 10/100 LAN ports w/ auto-MDIX (weatherized)</li></ul>   |
| Serial                            | <ul style="list-style-type: none"><li>• 1 serial port (console port)</li></ul>  |
| Power                             | <ul style="list-style-type: none"><li>• variable 9-32V DC</li></ul>   |
| Antenna                           | <ul style="list-style-type: none"><li>• 4 N-Type external antenna connectors (female)</li></ul>   |
| RADIOS                            |   |
| Radios                            | <ul style="list-style-type: none"><li>• 2 500mW 802.11a/n radio</li><li>• 2 250mW 802.11a/b/g/n radio</li><li>• Self-forming, self-healing, and path optimizing Fortress FastPath Mesh™</li></ul> |
| ENVIRONMENTAL                     |   |
| Cooling                           | <ul style="list-style-type: none"><li>• Convection (no fans)</li></ul>  |
| Operating Temperature             | <ul style="list-style-type: none"><li>• -10°C to +70°C</li></ul>  |
| Humidity                          | <ul style="list-style-type: none"><li>• 5 to 95%</li></ul>  |
| Weather Resistance                | <ul style="list-style-type: none"><li>• IP67 submersible</li></ul>  |
| Shock, Vibration, Moisture, Temp. | <ul style="list-style-type: none"><li>• MIL-STD 810G</li></ul>  |
| Power                             | <ul style="list-style-type: none"><li>• Variable 9-32V DC</li></ul>   |
| CERTIFICATION AND TESTING         |   |
| Safety & Emissions                | <ul style="list-style-type: none"><li>• CE, FCC, UL 60950-1, IEC 60529 (CB Test)</li></ul>  |
| NIST                              | <ul style="list-style-type: none"><li>• FIPS 140-2 level 2 submitted</li></ul>  |
| HERO/HERF/HERP                    | <ul style="list-style-type: none"><li>• MIL-STD 464A</li></ul>  |
| EMI                               | <ul style="list-style-type: none"><li>• MIL-STD 461F</li></ul>  |
| Harsh Environments                | <ul style="list-style-type: none"><li>• MIL-STD 810G</li></ul>  |
| Weather Resistance                | <ul style="list-style-type: none"><li>• IP67 submersible</li></ul>  |
| MTBF                              | <ul style="list-style-type: none"><li>• 100,000 hrs</li></ul>   |
| Accessories                       | <ul style="list-style-type: none"><li>• Mounting bracket kit</li></ul>  |
| Warranty                          | <ul style="list-style-type: none"><li>• Includes 1 year of maintenance and support</li></ul>  |