Leading utilities and cities have delivered breakthroughs in operational efficiency, customer service and environmental sustainability by relying on Silver Spring’s secure, reliable two-way connectivity to critical infrastructure. The Silver Spring Bridge 5 offers secure, flexible integration for serial- and Ethernet-capable devices with Silver Spring’s network.

High-Performance Communications for the Most Demanding Applications

The Silver Spring Bridge 5 combines the performance, distributed intelligence, and rapid integration necessary to address the most demanding critical-infrastructure applications. The low latency, high data rate and quality of service address mission-critical control processes while delivering the low cost-of-ownership advantages of a unified network. Extending range while dynamically adapting data rates enables cost-effective automation of telemetry and control processes in the most challenging environments. Powerful onboard processing and storage deliver distributed intelligence to transform data into action with remote decision-making.

INTEGRATION AND DEPLOYMENT SCENARIOS

Smart grid – The low latency and high-speed throughput address the challenges of reliable integration of distributed generation, renewables and two-way power flow. Distributed intelligence in the Bridge 5 offers breakthrough performance for distribution automation applications such as CVR, WO and control of large groups of teeming reclosers.

Smart city – The flexibility and ease of integration of the Bridge 5 enables rapid deployment of new city services such as traffic monitoring and building energy management. The proven multi-layer security of the Bridge 5 empowers cities to rapidly deploy new applications and services while leveraging consistent policies and controls proven at scale.
**Key Benefits**

The Bridge 5 couples secure, reliable performance with open standards-based IPv6 communications to enable cities and utilities to cost-effectively integrate mission-critical control and monitoring processes.

**Increased grid reliability and efficiency**

The low latency and high data rates of the Bridge 5 boost grid reliability by enabling demanding processes for monitoring and control, such as secure communication among large teams of collaborating reclosers and feeder switches. The distributed intelligence within the product opens new application areas including energy balancing across distributed generation and storage resources.

**Easily manage distribution automation programs across demanding range and data throughput requirements**

The Bridge 5 leverages the technological advances of Gen™5 by dynamically adapting data rates to optimize for range, while ensuring the highest overall system performance. Gen5 also includes a dual-band mesh capability that nearly doubles network capacity as devices can transmit and receive on the 900 MHz and 2.4 GHz bands simultaneously.

**Risk mitigation through proven, multi-layer security**

Two-way communications remain protected from the increasingly hostile threat environment by building on Silver Spring’s proven, multi-layer security leveraging built-in controls from the application to device layer.

**Rapid time to value with flexible integration**

The Bridge 5 offers standard Ethernet and serial DNP3 interfaces as well as robust APIs for maximum flexibility. The Silver Spring Partner Program accelerates the visibility and adoption of joint solutions across cities and utilities worldwide.

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About Silver Spring Networks

Silver Spring Networks is a leading networking platform and solutions provider for smart energy networks. Silver Spring’s pioneering IPv6 networking platform, with over 22 million Silver Spring enabled devices delivered, is connecting utilities to homes and businesses throughout the world with the goal of achieving greater energy efficiency for the planet. Silver Spring’s innovative solutions enable utilities to gain operational efficiencies, improve grid reliability, and empower consumers to monitor and manage energy consumption. Silver Spring Networks’ customers include major utilities around the globe such as Baltimore Gas & Electric, CitiPower & Powercor, Commonwealth Edison, CPS Energy, Florida Power & Light, Jemena Electricity Networks Limited, Pacific Gas & Electric, Pepco Holdings, Progress Energy, and Singapore Power, among others. For more information please visit [www.silverspringnet.com](http://www.silverspringnet.com). Rev. 2/25/2016

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**FEATURES**

Secure, reliable performance to enable the most demanding smart infrastructure applications

- Up to 2.4 Mbps data speeds
- 10 ms latency
- Open standards-based two-way communications and interfaces
- IPv6; IEEE 802.15.4g, Wi-SUN compliant; DLMS/COSEM
- Extended range for cost-effective coverage
- Dynamically-adaptive data rates from 6.25 kbps to 2.4 Mbps optimize overall performance and range
- Integrated, open standards-based security
- Public key-based authentication and AES-256 encryption
- Dual-band mesh capability increases network capacity by leveraging the 900 MHz and 2.4 GHz bands simultaneously

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The Bridge 5 delivers the low latency, high data rate, and distributed intelligence to enable the most demanding grid modernization and distribution automation initiatives.
### Specifications:

| **Communications** | Data rate: 6.25 kbps to 2.4 Mbps  
|                     | Frequencies: 902-928 MHz, 2.4000-2.4835 GHz (USA)  
|                     | Spread spectrum technology: FHSS  
|                     | Adaptive gear shifting: FSK, DSSS, OFDM  
|                     | Transmitter output: 900 MHz – 30 dBm (1 W)  
|                     | 2.4 GHz-27 dBm (500 mW)  
|                     | Output impedance: 50 ohms  
|                     | Two antenna connectors: SMA, Female Antenna: Various  
|                     | Serial: 2x RS-232, DB9, Female, DCE  
|                     | Serial date rates: 2400 bps to 115 kbps  
|                     | Ethernet: 1 x RJ45, 10/100 Mbps  
|                     | Isolated GPIO: 4-pin in / 4-pin out  
| **Protocols/Security** | Addressing: Internet Protocol version 4 (IPv4) and version 6 (IPv6)  
|                     | Security: X.509-based PKI, link-layer security, L3/L4 firewall, IPsec tunnels (Bridge to Bridge, Bridge to VPN concentrator), secure SoC and secure bootloader  
|                     | Serial: Encapsulation within IP (tunneling) for asynchronous serial (DNP3)  
| **Power** | Input range: DC 10 – 60V or with optional AC adaptor 110 – 240V  
| | Power consumption: 2.9 W (idle), 5 W (TX), 9 W (max)  
| **Environmental** | Operating temperature: -40°C to +85°C (-40°F to +185°F)  
| | Humidity: 0% to 95%, non-condensing  
| **Mechanical** | Dimensions: 15 cm (6") L x 14 cm (5.5") x W x 4.2 cm (1.75") H  
| | Weight: 425 g (15 oz.)  
| | Enclosure: IP50, blue, aluminum  
| **Approvals** | FCC: Part 15.247  
| | RSS-247  
| **Memory** | 32 MB/32 MB Flash/RAM  

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**Corporate Headquarters**

SSS Broadway Street  
Redwood City, CA 94063  
O: +1 650 839 4000  
Toll Free: +1 666 204 0200

www.silverspringnet.com