Features and Benefits

**Capacity**
- Up to 100 dual-band 4G LTE radio nodes

**Privacy**
- Carrier-grade security

**Installation**
- Enterprise-optimized easy installation
- Synchronization with macro network
- Self-optimizing networks (SON)
- Automatic RF planning

**Performance**
- VoLTE and carrier aggregation
- Ongoing RF optimization

**Backhaul**
- Sharing between applications
- User and traffic prioritization
- Core network integration

Scalable small-cell services node for enterprises and venue deployments | 4G LTE air-interface technology | Multiple small-cell applications | One powerful enterprise services platform

The SpiderCloud® enterprise radio access network (E-RAN) is an innovative solution for delivering cellular coverage, capacity and services inside buildings. E-RAN consists of a services node, which controls, configures, and manages up to 100 UMTS and LTE SpiderCloud radio nodes, providing UMTS and LTE coverage in buildings and campuses as large as 1,000,000 ft². Using a services node, operators and enterprises can deploy an indoor cellular solution within days.

The enterprise-optimized design provides the same ease of installation as that of traditional Wi-Fi equipment, and greatly reduces the time to bring up new small-cell sites. Using a common backhaul connection via any Ethernet LAN and an integrated network management system, operators can manage multiple access networks.

The SpiderCloud E-RAN architecture allows up to 100 small cells to appear as a multisector eNodeB, with the services node anchoring a single S1 interface with the core network. The services node provides a single touchpoint in terms of control, data, and management traffic. This architecture enables a number of unique performance-enhancing features, such as fast intra-E-RAN handovers and centrally coordinated interference mitigation schemes. This architecture enables the flexibility of direct connection to the EPC over an S1, or through a HeNB gateway.

With rapid adoption of mobile and cloud computing, the evolving enterprise is shifting rapidly from traditional CapEx-oriented IT infrastructure to more OpEx-oriented business models that deliver new applications across smartphone and tablet platforms, using virtualized infrastructure. Operators and enterprises are in a position to enable the E-RAN platform to address demand for reliable coverage and capacity.
### System Specifications

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### SON Self-Configuration

- Software download
- Node authentication
- IP address allocation
- PCI assignment

### Security

- Trusted platform module (TPM)
- Secure boot and secure key storage
- Encrypted file system
- IPSec encryption
- SNOW 3G and AES encryption
- X.509 certificate-based authentication (core network and small cells)
- Perfect forward secrecy (PFS)
## System Specifications (cont.)

**HW Features**
- 300K+ hours overall system MTBF
- Component redundancy
- VLAN traffic separation

**Synchronization**
- IEEE 1588v2 PTP-based synchronization
- Synchronization with macro network
- Multiple synchronization clock options
  - Onboard high precision OCXO
  - Core network master PTP server
  - Cellular network listen (Over the air)

**Networking Protocols**
- DHCP server, DHCP proxy
- IPv4, IPv6, UDP, TCP, RTP, GTP, IPSec

**System Management**
- Configuration: remote management and auto configuration using TR-069
- Faults and events: TR-069, SNMPv2c, SNMPv3, Syslog
- Performance: 3GPP counters, KPIs, standard MIBs, and SpiderCloud MIBs
- Command line interface (CLI) via console port and remotely using SSH

## Physical Specifications

### Interfaces
- 8 x Gbps Ethernet ports
- 2 x Gbps SFP Ethernet ports
- 1 x RJ45 console port (RS-232)
- 1 x 10/100 management port
- 1 x TNC connector for GNSS antenna

### Mounting
- 1RU (standard 19-in rack)

### Physical and Environmental
- Dimensions: 603 x 448 x 44 mm (23.7 x 17.6 x 1.7 in)
- Weight: 10.7 kgs (23.5 lbs)
- Power: 450 W rated
- Voltage: 100-240 V
- Max current: 4.5 A
- Altitude: 0 to 3000 meters (0 to 9843 ft.)
- Operating temp: 0 to 40°C
- Storage temp: -40 to 70°C
- Humidity: 7 to 93% noncondensing
- Cooling: 5 x speed controlled, hot-swappable fans

### LEDs
- 1 x power
- 3 x status
- 1 x synchronization
Regulatory Compliance and Certification

Regulatory Compliance

- CISPR 22:2008 Class A
- EN 55022:2010/AC:2011
- EN 55024:2010
- EN 61000-3-2:2006/A2:2009
- EN 61000-3-3:2008
- EN 60950-1:2006/A12:2011
- VCCI V-3/2012.04
- CAN/CSA-C22.2 NO. 60950-1A-07 (R2012)