SpiderCloud® SCRN-340 Radio Node for Enterprise Radio Access Network (E-RAN)

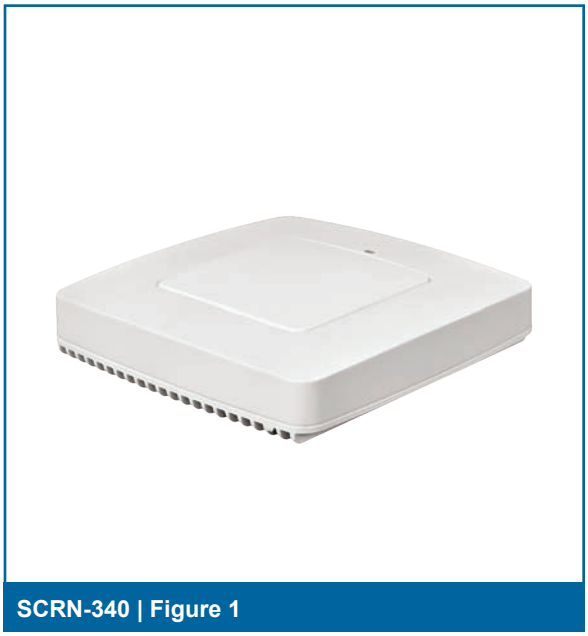
Features and Benefits

Supported service	Two 2 x 2 MIMO LTE carriers (sectors)
Supported bands/channels	Two software-selectable licensed LTE channels
LTE capacity	128 active LTE users per band
LTE performance	200 Mbps peak DL with (10+20) MHz carrier aggregation (with 20 MHz B2(25) or B4(66) channel)
Fronthaul network	Deployable over existing Ethernet switching infrastructure (VLAN)
Power source	Power-over-Ethernet (PoE+)
Installation	Wall and ceiling mountable
Authentication	Certificate-based authentication with SpiderCloud services node

Dual-carrier, multi-band LTE radio node for scalable enterprise and venue deployments

The SCRN-340 offers mobile operators and enterprises with two carriers (or sectors) of LTE capacity in a choice of four widely used LTE licensed bands. Customers can select, via software, the two bands that are appropriate for a deployment.

The SCRN-340 is deployed as part of SpiderCloud® Enterprise Radio Access Network (E-RAN). E-RAN hides the complexity of radio management and mobility and provides customers with a single touch point to aggregate and manage a large network of LTE small cells.



SCRN-340 | Figure 1

SpiderCloud® SCRN-340 Radio Node for Enterprise Radio Access Network (E-RAN)

Functional Overview

Radio Capabilities	Each SCRN-340 supports 2 x 2 MIMO, with a peak transmit power of 24 dBm per transmitter (or 27 dBm per band). When used with 20 MHz channel bandwidth, the B2(25) or B4(66) LTE carrier supports a peak downlink rate of 150 Mbps and a peak uplink rate of 50 Mbps, and supports 128 active users. When used with a 10 MHz channel bandwidth, the B13 or B14 LTE carrier supports supports a peak download rate of 75 Mbps and a peak uplink rate of 25 Mbps. With 10+20 MHz carrier aggregation the radio will support a peak downlink rate of 200 Mbps. In addition, SCRN-340 supports Cat-M1 and is software upgradeable to support additional IOT capabilities and higher peak data rates.
Self-Organizing Networks	SpiderCloud® radio nodes implement SON capability by listening to other radio nodes within the E-RAN and neighboring LTE macrocells in multiple frequency bands. This information is used to perform continuous self-optimization and provide high-quality radio coverage and mobility.
Easy to Install	SpiderCloud radio nodes can be installed on walls or ceilings. Both network connectivity and power are provided over Ethernet. The radio node has no fans and is completely convection cooled. Antennas are built-in for both LTE bands, with an orderable option for QMA connectors for use with external antennas.
Secure	SCRN-340 utilizes on-chip trusted platform module (TPM) functions to implement secure boot, and establish certificate-based IPsec tunnel to SpiderCloud services node for all LTE traffic. There is no management or console port on the radio node, and the radio node can be physically locked to prevent theft.

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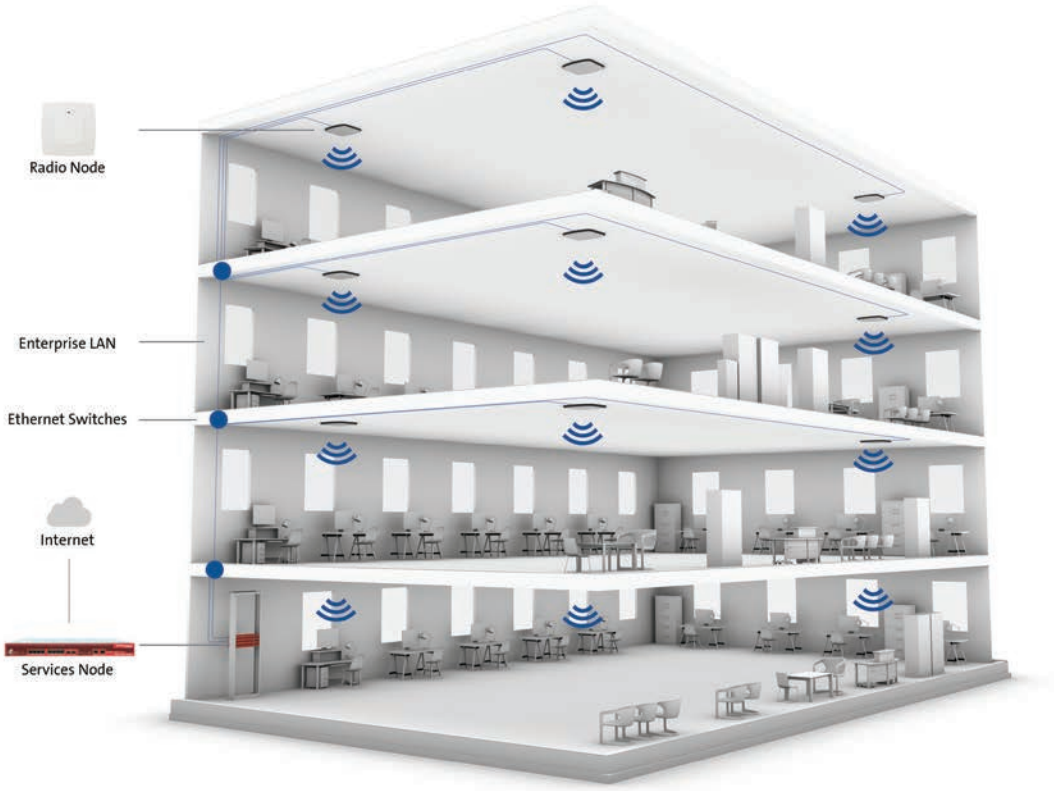

Building Diagram | Figure 2

SpiderCloud® SCRN-340 Radio Node for Enterprise Radio Access Network (E-RAN)

System Specifications

Security	Secure boot and secure key storage using trusted platform module (TPM) functions IPsec tunneling to services node X.509 certificate-based authentication
Timing and Synchronization	IEEE 1588v2-based (PTP) synchronization to services node
Ciphering	SNOW 3G and AES air interface encryption

Radio Specifications

Performance	200 Mbps peak DL with (10+20) MHz carrier aggregation 128 active users per band
Licensed Radio	Multiple-band class options (see product SKUs) Bands 2(25) and 4(66) channel sizes: 5, 10, 15, 20 MHz Bands 13 and 14 channel size: 10 MHz 2 x 2 MIMO Maximum transmit power: 2 x 250 mW (27 dBm)
Mobility	Inter radio node handover anchored at the services node Inter-frequency S1 handover to/from macro Intra-frequency S1 handover to/from macro Dual-band idle-mode UE load balancing

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Radio Specifications (cont.)

RF Management	LTE network listen
	Inter- and intra-frequency neighbor cell detection
	Auto assignment of physical cell identities (PCI)
	Automatic neighbor relation (ANR) management
QoS Features	Support for all LTE QCIs
	Guaranteed bit rate (GBR)
	Maximum bit rate (MBR)
	Aggregate maximum bit rate (AMBR)
Voice Services	VoLTE
	Eight data radio bearers (DRB) per UE

Physical Specifications

Enterprise Installation	Wall and ceiling mountable
	Mounting hardware included
	Padlock option
	Power-over-Ethernet: 802.3at
	Power consumption: 30 W
LED Indication	1 x tri-color LED (RGB)
	Status indications: boot, normal, disabled, fault, emergency call, radio node tracking
Antenna Options	Two internal Tx/Rx antennas (peak gain, 5 dBi)
	Option for QMA antenna connectors for use with external antennas. Orderable as separate SKU.
Physical and Environmental	Dimensions: 183 x 183 x 36 mm (7.2 x 7.2 x 1.4 in)
	Weight: 1.23 kg (2.7 lbs)
	1 x 1000 Mbps Ethernet (RJ45)
	Operating temperature: 0°C to 40°C
	Storage temperature: 0°C to 85°C
	Operating humidity: 0 to 90% noncondensing
	Storage humidity: 0 to 90% noncondensing
	Ingress protection rating: IP30

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Regulatory Compliance and Certification

Certifications	Safety EN 60950, CB certification (IEC 60950, UL 60950-1)
	FCC Part 15, Class A
	FCC Part 24 and 27
	MPE: FCC 47 CFR 1.1307(b)
	General CE and NRTL marking

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Ordering Information

Part Number	Description
SCRN-340-13142566	Configurable dual-carrier LTE small cell First carrier can be configured to use Band 13 or Band 14 Second carrier can be configured to use Band 2(25) or Band 4(66) Monitors LTE 700/1900/2100 MHz
SCRN-340-13142566-EQ	Same as SCRN-340-13142566 with QMA antenna connectors for external antennas

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Notes:

Corning Optical Communications LLC • PO Box 489 • Hickory, NC 28603-0489 USA
800-743-2675 • FAX: 828-325-5060 • International: +1-828-901-5000 • www.corning.com/opcomm