Corning SCRN-530 Radio Node for Enterprise Radio Access Network (E-RAN)

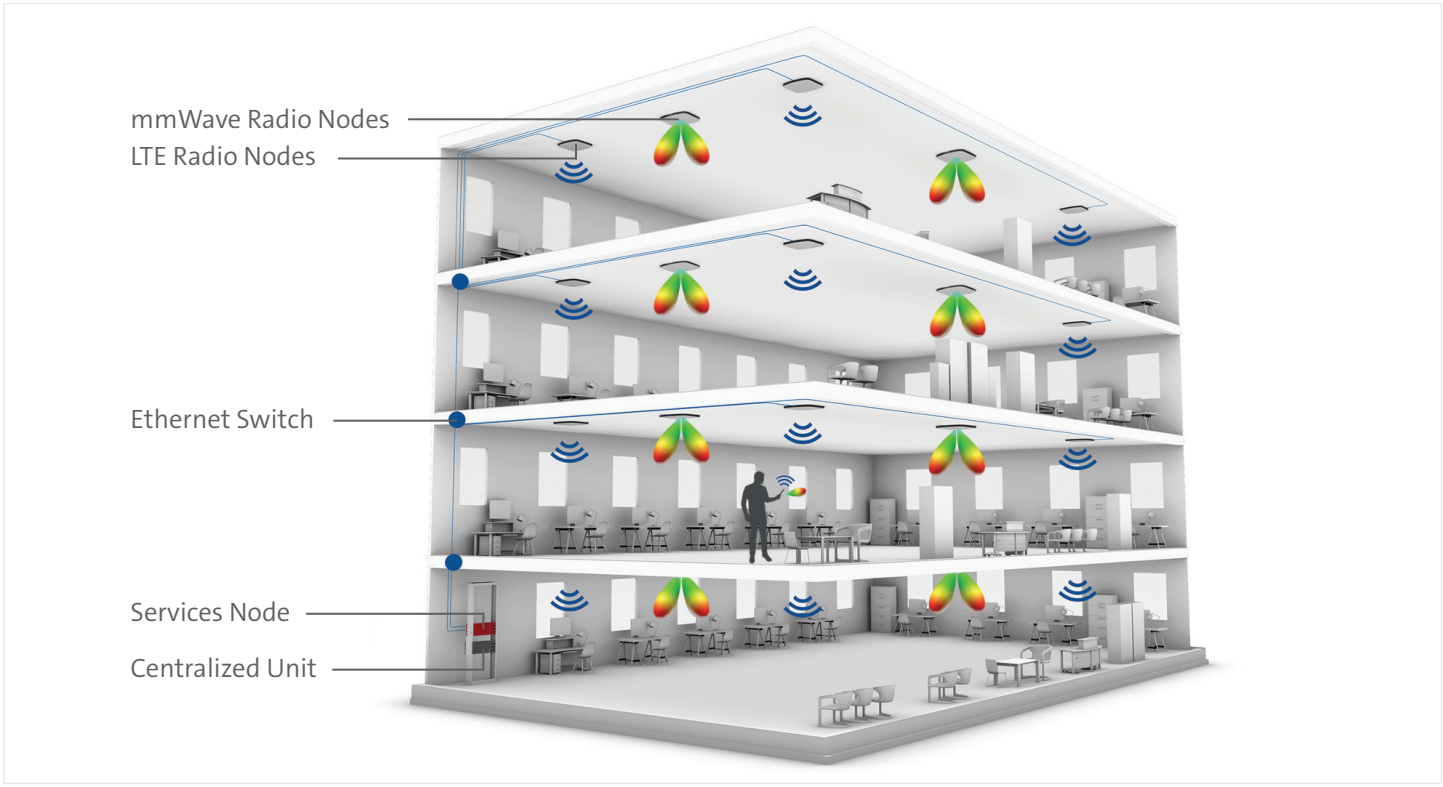
SCRN-530 | Figure 1

High-performance 5G mmWave small cell for scalable indoor and venue deployments

The SCRN-530 is an integrated 5G mmWave small cell. The Corning scalable small-cell system, called an enterprise radio access network (E-RAN), simplifies the complexity of radio management and mobility and provides operators with a single touchpoint to aggregate and manage a large network of 5G small cells.

Features	Benefits
Supported service	Small Cell supporting NR on mmWave band n260
Supported bands/channels	39 GHz n260 (37.0 - 40.0 GHz)
Capacity	64 active users
Performance	1.8 Gbps DL, 60 Mbps UL (DL:UL slot ratio of 4:1) @ 64QAM with 4CC DL, 1CC UL
Fronthaul network	Deployable over Corning® ActiFi® 2-fiber/2-copper conductor composite cable
Power source	36V-60V DC delivered via ActiFi 2-fiber/ 2-copper conductor composite cable
Installation	Ceiling and wall mountable with 4 tilting options for wall mount only: 0°, 15°, 30°and 45° tilt
Authentication	Certificate-based authentication with Corning CU (Centralized Unit)

Functional Overview	
Radio Capabilities	Each SCRN-530 supports 2 x 2 MIMO operation on NR band n260, enabling high user capacity and high data rates per radio node coverage footprint. Each radio node carrier supports 64 active NR users. When used with 4 x 100 MHz channel bandwidth on downlink, a radio node supports a peak downlink rate of 1.8 Gbps and a peak uplink rate of 60 Mbps @ 64QAM. The coverage area for each small cell is approximately 2,500 sq. ft.
Easy to Install	Corning radio nodes can be installed on walls or ceilings. Both network connectivity and power are provided via Corning® ActiFi® fiber/copper composite cable. Antennas are built in for Band n260.
Secure	530 utilizes on-chip trusted platform module (TPM) functions to implement secure boot, and establish certificate-based connection to CU (Centralized Unit). There is no management or console port on the radio node, and the radio node can be physically locked to prevent theft.



Building Diagram | Figure 2

Specifications

System Specifications	
Security	Secure boot and secure key storage using trusted platform module (TPM) functions IPsec tunneling to NR CU (Centralized Unit) X.509 certificate-based authentication
Timing and Synchronization	IEEE 1588v2-based (PTP) synchronization with an external PTP grandmaster clock.

Radio Specifications	
Performance	1.8 Gbps DL, 60 Mbps UL (DL:UL slot ratio of 4:1) @ 64QAM with 4CC DL, 1CC UL 64 active users
Licensed Radio	39 GHz n260 (37.0-40.0 GHz) Component Carrier (CC) bandwidth: 100 MHz 2 x 2 MIMO with 8 x 8 dual polarized antenna array EiRP: 40 dBm
RF Management	Beam Management Auto assignment of physical cell identities (PCI)
QoS Features	Non-GBR bearer support per UE

Physical Specifications	
Enterprise Installation	Ceiling and wall mountable with 4 tilting options for wall mount only: 0°, 15°, 30° and 45° tilt Mounting hardware included Power: 36V-60V DC, 2A Power consumption: 70 W
LED Indication	1 x tri-color LED (RGB) Status indications: boot, normal, disabled, fault, and radio node tracking
Antenna Options	8 x 8 dual polarized antenna array for beamforming Beamforming: Scan range: +/- 60 degrees Beamforming: Peak gain = 22.5 dBi
Physical and Environmental	Dimensions: 279.4 x 279.4 x 80.3 mm (11.0 x 11.0 x 3.16 in) Weight: 4.5 kg / 9.9 lbs Data: 10GbE SFP+ Operating temperature: 0°C to +45°C Storage temperature: -40°C to +70°C Operating humidity: 5% to 90% noncondensing Storage humidity: 0% to 90% noncondensing Ingress protection rating: IP30 Cooling Method: Convection cooling

Regulatory Compliance and Certification

System Specifications	
Certifications	Safety UL-62368-1 2nd Edition FCC Compliant - Part 15 (Class A), Part 30 UR: FCC 47 CFR 1.1307(b) MPE: FCC 47 CFR 1.1310

Ordering Information

Description	Part Number
39 GHz band n260 mmWave RN with 8 x 8 dual-pol antenna array 40 dBm EIRP @ 64QAM	SCRN-530-39

CORNING

Corning Optical Communications LLC • 4200 Corning Place • Charlotte, NC 28216 USA
800-743-2675 • FAX: 828-325-5060 • International: +1-828-901-5000 • www.corning.com/opcomm