



StreetNode™

Overview

StreetNode™ is specially engineered to provide top-notch performance in small-cell backhaul applications. It offers higher practical usability over any other solution in the market, accelerating and facilitating small-cell deployment, as well as minimizing the operator's investment and operational complexity. StreetNode™ is lightweight and has an elegant design. Its unique feature to operate as Point-to-MultiPoint (PtMP) terminal / hub or Point-to-Point (PtP) unit, and the innovative antenna auto-alignment mechanism, make StreetNode™ a comprehensive yet outstanding small-cell backhaul solution. StreetNode™ operates in a variety of licensed frequencies (26 / 28 / 32 / 42 GHz) and can be deployed at street level, on wall surfaces or lamp posts, thus reducing significantly the associated site costs. The uniMS™ Unified Management Suite offers a “zero-touch” service provisioning with advanced SON features, enabling “plug and play” connection to the network within a few minutes.

System Specifications

Radio Capacity (net), Mbit/s	540
Modulation	4-QAM 1/2 up to 1024-QAM
Power Supply	<ul style="list-style-type: none"> • DC: -40.5 V to -57 V • AC: 230 V (±10%), 50 Hz • Power over Ethernet (PoE)
Max. Power Consumption, W	39
Mechanical Design / Structure	<ul style="list-style-type: none"> • IP67 class • Water-tight cable glands at the bottom
Dimensions (H x W x D), mm	299 x 151 x 176
Weight, kg	2.3
Operating Temperature:	
Operating (Normal / Extended)	-33 °C to +55 °C / -50 °C to +55 °C
Transportation / Storage	-40 °C to +70 °C / -33 °C to +55 °C
Relative Humidity	0% to 95%, non-condensing 10% to 100%, condensing
Interfaces / Ports	
1 x GbE (RJ-45)	PoE, Traffic, inband NMS
1 x GbE (RJ-45)	PoE, Traffic, inband NMS
1 x GbE (SFP)	Traffic, inband NMS

Radio Specifications

	StreetNode™-26	StreetNode™-28	StreetNode™-32	StreetNode™-42
Operation:				
<i>Band, GHz</i>	26	28	32	42
<i>Frequencies, MHz</i>	24,556 to 25,438 (DL / UL) 25,564 to 26,446 (DL / UL)	27,555.50 to 28,437.50 (DL / UL) 28,563.50 to 29,445.50 (DL / UL)	31,822 to 32,564 (DL / UL) 32,634 to 33,376 (DL / UL)	40,529 to 41,957 (DL / UL) 42,029 to 43,457 (DL / UL)
RF Channel Arrangement	CEPT ERC Rec.T/R 13-02E	CEPT ERC Rec.T/R 13-02E	CEPT ERC/REC/(01)02E	ITU-R F.2005
Sub-bands	2	2	2	3
Channel Size, MHz	14 / 28 / 56	14 / 28 / 56	14 / 28 / 56	14 / 28 / 56
Duplex Spacing, MHz	1008	1008	812	1500
Tx Power, max., dBm	20.0	20.0	17.0	17.0
Sensitivity (4-QAM 1/2), dBm	-88.5 (56 MHz) -91.5 (28 MHz)	-88.5 (56 MHz) -91.5 (28 MHz)	-88.0 (56 MHz) -91.0 (28 MHz)	-88.0 (56 MHz) -91.0 (28 MHz)
Antenna Options:				
<i>Type</i>	Horn Antenna	Horn Antenna	Horn Antenna	Horn Antenna
<i>Gain / Beamwidth</i>	22.0 dB / 15.0° or 25.0 dB / 9.0°	22.5 dB / 14.0° or 25.5 dB / 8.5°	23.0 dB / 12.0° or 26.5 dB / 7.5°	23.0 dB / 11.0° or 27.5 dB / 7.0°

Features / Networking

• Radio

- ETSI EN 302 326-1 V1.2.2 Annex E
- ETSI EN 302 326-2 /-3
- Based on ETSI TS 102 123

• Ethernet

- IEEE 802.3-2008 (10 / 100 / 1000Base-T)
- IEEE 802.3-2008 (Optical Gigabit Ethernet through 1000Base-SX / LX)
- RMON Statistics

• Scalability

- Up to 30 StreetNode™ terminals per StreetNode™ hub or OSDR

• Ethernet Standards & Functionality

- IEEE 802.1Q (VLAN)
- IEEE 802.1p
- IEEE 802.1ad (Provider bridging (Q-in-Q))
- RSTP
- MEF 9 & MEF 14 compliant

• Ethernet QoS

- Bandwidth allocation based on VLAN or physical port separation or Ethernet QoS.
- Packet scheduling: 8 queues
- Packet Classification per:
 - › Interface: All the Ethernet packets coming from the port
 - › Interface and VLAN ID: Incoming port and the outer VLAN ID
 - › Interface and P-Bits: Incoming port and IEEE 802.1p VLAN Header P-Bits
 - › Interface, VLAN ID and P-Bits: Incoming port and combination of VLAN ID and P-Bits values
 - › Interface and DSCP: Incoming port and the Differentiated services Code Point (DSCP) value
 - › Interface and IPv6 TC: Incoming port and the IPv6 packet Traffic Class 8-bit field
 - › Interface and MPLS EXP: Incoming port and the MPLS packet header EXP bits
- Data Policing: 2 Rate 3 Colour per interface / VLAN / Ethernet CoS
- Queuing Schemes:
 - › Strict Priority (SP)
 - › Hybrid (4 x Strict Priority (SP) plus 4 x Weighted Round Robin (WRR))
- MAC anti-spoofing

• Air MAC CoS

- Unsolicited Grant Service (UGS)
- Real Time Variable Rate (rtVR)
- Non-Real Time Variable Rate (nrtVR)
- Best-Effort Service

• OAM

- IEEE 802.1ag (Service OAM (CFM))
- ITU-T Y.1731 (Performance Monitoring)

• Synchronization

- ITU-T G.8261 / G.8262 / G.8264 (Synchronous Ethernet)
- IEEE 1588v2 TC

• Security

- Proprietary “closed” system architecture

• EMC / EMI

- ETSI EN 301 489-4 V1.4.1:2009
- EN 55022:2006+A1:2007
- EN 61000-3-2:2006+A1:2009+A2:2009
- EN 61000-3-3:2008

• Electrical Safety

- EN 60950-1:2006 + A11:2009 + A1:2010
- EN 50385:2002

• Environmental

- ETSI EN 300 019-2-4 V2.2.2:2003, Class 4.1 (Operation)
- ETSI EN 300 019-2-2 V2.1.2:1999, Class 2.3 (Transportation)
- ETSI EN 300 019-2-1 V2.1.2:2000, Class 1.2 (Storage)

• Reliability

- MTBF > 40 years