AVENUE LINK LITE

SMALL CELL BACKHAUL

SOLVE YOUR SMALL CELL BACKHAUL CHALLENGE WITH THE AVENUE LINK LITE – AN INTEGRATED ZONING-FRIENDLY PACKET MICROWAVE SOLUTION OPTIMIZED FOR URBAN ENVIRONMENTS.

Avenue® Link Lite is a complete sub-6 GHz microwave system housed within a single all-outdoor unit with standard Ethernet interfaces and integrated antenna. This packet microwave radio offers a host of benefits, including:

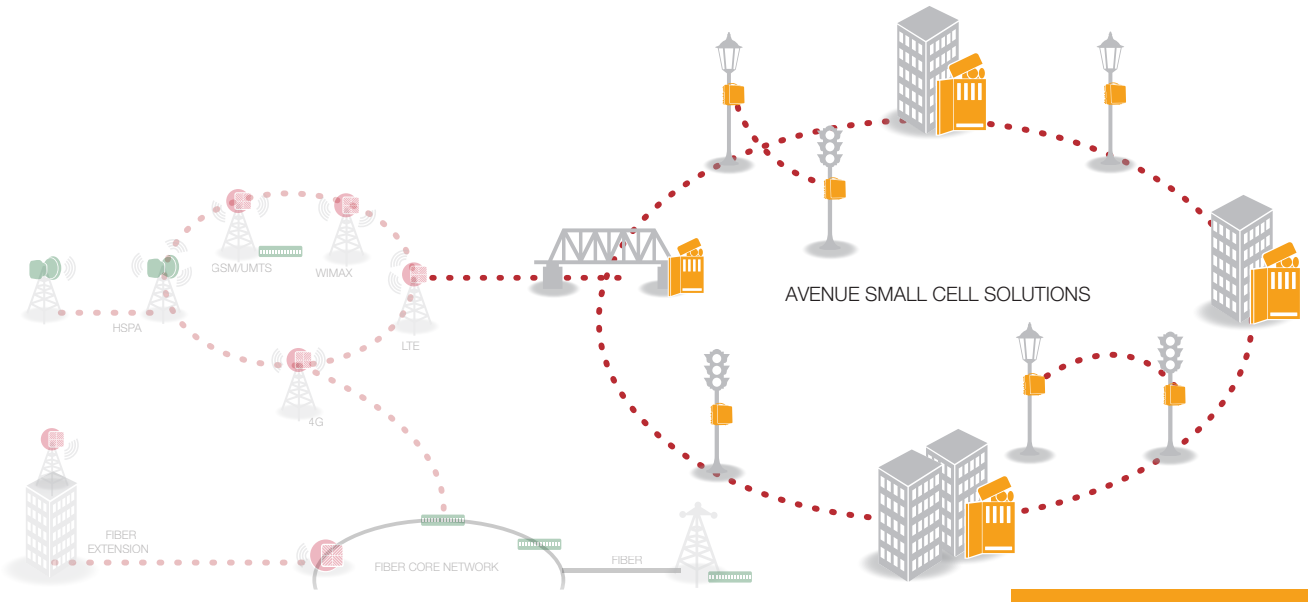
- Non-line-of-sight (NLOS) support across both licensed and unlicensed TDD spectrum
- Complete scalability, supporting 20/40 MHz channel bandwidth
- Advanced Interference avoidance features including site synchronization, Dynamic Frequency Selection, Transmit Power Control
- Flexible network architecture options

Engineered to provide the greatest flexibility for mobile operators, the Avenue Link Lite can be deployed to any number of structures including street lamps, traffic light poles, or building sides. Installation is fast, simple and easily managed by a single installer without the use of heavy equipment, ensuring virtually no disruption to city operations.

When using unlicensed spectrum, the Avenue Link Lite facilitates fast and easy deployment and savings on spectrum licensing, resulting in reduced operating expenses and a rapid return on investment for the operator. A complete set of interference counter measures guarantees proper behavior even in an unlicensed environment. When deployed using licensed spectrum, the Avenue Link Lite allows a 1:1 frequency reuse scheme.

SOLUTION HIGHLIGHTS

- Small cell-optimized backhaul for NLOS applications
- Integrated antenna
- Zoning-friendly, environmentally hardened enclosure
- Up to 230 Mbit/s aggregate capacity
- Bulk compression
- 128AES payload encryption
- Green design – minimized footprint and maximum power consumption of 15W
- Simple single cable repeater site configuration
- Unlicensed or licensed spectrum
- OFDM with adaptive modulation and 2x2 MIMO
- Advanced Quality of Service with 8 queues and low packet latency
- Support for 50/50 and 70/30 Tx/Rx allocation scheme.
- Quick Return on Investment
- Minimized Total Cost of Ownership, pay-as-you- grow
- Comprehensive network management system for simple remote configuration and monitoring
- Interoperability with Harmony Radio Lite



AVENUE LINK LITE

FREQUENCY BANDS

4.9 – 5.8 GHz
3.4 – 3.8 GHz

MECHANICAL

Interfaces	2 x 100/1000Base-T Electrical Ethernet (RJ45)
Radio/Modem with 19cm integrated antenna	21.8 cm x 22.3 cm x 9.7 cm; 1.8 kg
Radio/Modem with external antenna cover	21.8 cm x 22.3 cm x 9.45 cm; 2.03 kg
Wind Loading	160 kph Operational 220 kph Survival
Mount Adjustment	190mm antenna +50°/-65° Elevation, +/- 360° Azimuth 305mm antenna +/- 48° Elevation, +/- 360° Azimuth

ENVIRONMENTAL

Operating Temperature	-40°C to +55°C (-40°F to +140° F)
Humidity	100 % Condensing
Altitude	4500 m (14,760 ft)
Water Tightness	IP66
Operational Shock	ETSI 300-019-1-4; 5g 11ms
Operational Vibration	ETSI 300-019-1-4 Class 4m5, NEBS GR-63
Earthquake	NEBS GR-63

NETWORK MANAGEMENT (NMS)

Alarm Management	SNMP Traps, Enterprise MIB
NMS Compatibility	Netviewer NMS; any SNMP based NMS; SNMPv2c
Security	3 User-level Authentication
EMS	SNMP
Local Management	Web Based MGMT System, HTTP

POWER

Ethernet P+E/PoE+; optional power injector with AC or DC input

Input (DC)	-48 VDC nominal (-36 to -60V P+E, -42.5 to -57V PoE+)
Input (AC)	100 VAC ~ 240 VAC, 50 Hz ~ 60 Hz (PoE+)
Consumption (per link end)	17W (max)

FEATURES

Base Capacity	Up to 230 Mbit/s aggregated with 2x2 MIMO
Bulk Compression	Bandwidth Accelerator delivers up to 2x the base capacity
Modulation	OFDM with adaptive modulation and 2x2 MIMO BPSK, to 64QAM
Bandwidth	20/40 MHz
Maximum Tx Power	5GHz – 17dBm 3GHz – 22dBm 2GHz – 26dBm
Antenna	Integrated 190mm & 305mm External 305mm to 1800mm
DFS	Dynamic Frequency Selection
DCS	Dynamic Channel Selection
ATPC	Automatic Transmit Power Control supported
Synchronization	SyncE & 1588v2 transparent clock support (future release) Co-site synchronization support
Retransmission	Dynamic packet retransmission
Tx/Rx ratio	Support for 50/50 and 70/30 Tx/Rx allocation scheme.
Packet Size	Up to 9600B
QoS Prioritization	8 levels served by 8 queues, based on 802.1p/q, DSCP ToS Bits

82-000076-08-00

DragonWave
www.dragonwaveinc.com