SensorTec Canada

ST-CM

360 MBPS LICENSED MICROWAVE ALL OUTDOOR, HIGH POWER.

FEATURE SUMMARY

- Zero Foot Print Installation — No equipment shelter necessary.
- High Data Throughput — up to 360 Mbps, Full Duplex.
- Class leading Tx/Rx figures — reduce the antenna size needed.
- State of the art, LDPC coding — best efficiency in noisy RF conditions.
- Outdoor-rated POE support — Only outdoor CAT5 cable runs needed.
- Wideband Support — up to 56 MHz (ETSI), 50 MHz (FCC).
- 802.1pq QoS and Jumbo Frame Support.
- Hitless Adaptive Coding/Modulation (ACM)
- Automatic Transmit Power Control (ATPC)
- Built-in In and Out-of-Band NMS Support.
- Software key-based Bandwidth Upgrades from 20 to 360 Mbps.

ST-CM All Outdoor Radio with separate payload Ethernet and NMS management ports

PRODUCT DESCRIPTION

In response to the growing dominance of IP as the carrier protocol over TDM, the ST-CM Series focuses on serving the backhaul needs of next-generation all IP networks for network operators and enterprises.

The ST-CM Series is an all outdoor licensed microwave link that greatly simplifies the installation requirements. Unlike the traditional split architec-ture (ODU-IDU) systems, The CM Series has zero footprint at the ground level without the need for climate-controlled equipment shelters and the associated site rental costs.

Cabling is also simplified with standard outdoor CAT5 runs only, rather than expensive and cumbersome RF cables. The POE module is outdoor rated and pole mountable. All that the customer needs to connect the POE module to a 48V DC power source. It is that simple.

The CM Series radio features high output power up to 30dBm for long distance with a variety of frequency band and channel BW options. The addition of 256QAM modulation adds capacity for short-hop applications. The ACM feature will ensure that the radio will automatically switch to a more robust modulation in the event that the local RF condition worsens, thus preserving the link connection in most cases. The modulation switching is hitless - customers will not lose any data in the process.

Network Management can easily be performed with the built-in NMS support package. Both in and out-of-band options are available, which gives added flexibility for different network management preferences. The ST-CM series can be purchased with the basic bandwidth configuration of 20 Mbps and can be software upgraded either upfront or in the field to 360 Mbps.

TECHNICAL SUMMARY

- Frequency Bands: 6 — 38 GHz
- Channel BW
  - 7, 14, 28, 56 MHz (ETSI)
  - 10, 20, 30, 40, 50 MHz (FCC)
- Tx Power: 16 to 30 dBm
- Bandwidth Options:
  - 20, 50, 100, 200, 350 Mbps
- Two Gigabit Ethernet Interfaces
- Modulation: QPSK to 256 QAM
- In and Out-of-Band NMS Support
- Temp Range: -40 to 55 C
- Interfaces:
  - Gigabit Ethernet For data
  - Fast Ethernet for NMS
- POE support, Injector included.
- Power Consumption: 45W, typical.

1Yonge Street, Suite 1801, Toronto, ON, M5E 1W7, Canada
sales@sensortec-canada.com
www.sensortec-canada.com

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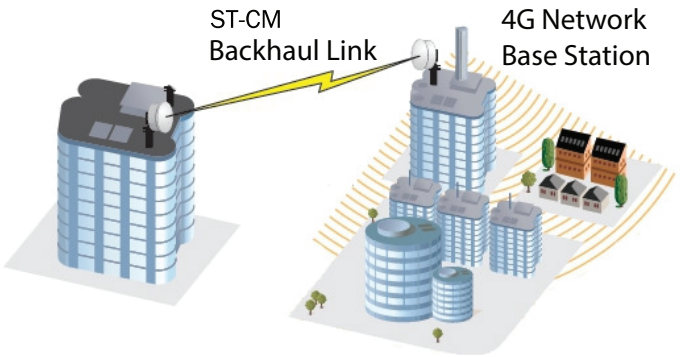
ST-CM

	6 GHz	7 GHz	8 GHz	11 GHz	13 GHz	15 GHz	18 GHz	23 GHz	32 GHz	38 GHz
Freq	5.9 - 7.12	7.1 - 7.9	7.7 - 8.5	10.7-11.7	12.7-13.3	14.4–15.4	17.7-19.7	21.2-23.6	31.8-33.4	37.0-40.0
TR Spacing (MHz)	150, 160, 170, 240, 252, 340	154, 160, 161, 168, 190, 254	119, 126, 151, 208, 266, 311	490, 500, 530	266	315, 322, 420, 475, 490, 640	1008, 1010, 1560	1008, 1200, 1232	812	700, 1260

System	
Frequency Bands	FDD / Full-Duplex
Modulation Mode	QPSK, 16QAM, 32QAM, 64QAM, 128QAM, 256QAM Hitless Adaptive Modulation (ACM)
Modes of Operation	Fixed Modulation (Default) RTPC (remote trans power control) ACM (adaptive coding & modulation) ATPC (adaptive transmit power control)
Channel Bandwidth	
CEPT/ETSI	7, 14, 28, 56 MHz
ANSI/FCC	10, 20, 30, 40 , 50 MHz
Data Rate	Up to 360 Mbps (56 MHz, 256QAM)
Tx Power	Up to 30 dBm, Depends on Frequency and Modulation
RF Sensitivity	-80dBm @16QAM, -75.5dBm @32QAM -72.5dBm @64QAM, -70dBm@128QAM -66dBm @256QAM(1)
QoS	802.1p/q, jumbo frame support, Prioritization (Port-based, VLAN, DiffServ),
Protocol Support	• Transparent MAC layer bridging • Transparent VLAN (802.1q)
Management	• HTTP web server, SSH & Telnet • SNMP V2, V3 (Private & Enterprise MIBs)
Latency	~ 200 microseconds
Power Consumption	45W, Typical
Power Supply	48V DC
MTBF	30 years
Compliance	FCC part 101, ETSI EN302 217-2-2

Mechanical and Environmental	
Configuration	All-in-one Outdoor Radio Unit Direct Mount to Antenna Outdoor POE unit
Material	Corro-Coat PE 71-190Z (power coat) Gloss White
Size (Radio)	26.7 cm (10.5 in) in Diameter 14.0 cm(5.5 in) in Height
Weight (Radio)	5.6 kg (12.3 lb)
Size (POE) (3)	15 x 8 x 5 cm, outdoor mount
Weight (POE)	1 kg (2.2 lb)
POE Module Mount	U-Bolt on mast Up to 4 inch think
Temperature	-40 to 55C (-45C Cold Start)
Interface	
Data	GigE (RJ-45), POE, In-Band NMS
Management	GigE (RJ-45), POE, Out-Of-Band NMS
POE ingress	Conduit into the junction box for power and data

Notes: 1. Rx Sens — Based on 18GHz, 40 MHz channel.
2. Available in Q2, 2011
3. Indoor POE/PS version available upon request.



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