

SLOKA



Broadband Wireless Everywhere!



3.3-3.6 GHz  
Technical Specifications  
Sloka WiMAX Base Stations

Sloka Telecom Pvt. Ltd.

<http://www.sloka.in>

## Functional

|                                |   |
|--------------------------------|---|
| Models                         | Sloka Med power Base Station – BX3324<br>Sloka Low power Base Station – BX3318  |
| Standard                       | IEEE 802.16-2004  |
| Frequency                      | 3.3-3.4 GHz, 3.4-3.5 GHz, 3.5-3.6 GHz   |
| Modulation                     | OFDM - 64QAM 3/4, 64QAM 2/3, 16QAM 3/4,<br>16QAM 1/2, QPSK 3/4, QPSK 1/2, BPSK 1/2  |
| Duplex Method                  | TDD   |
| Channel bandwidth              | 3.5 MHz, 7 MHz (Software Configurable)  |
| Configurable Cyclic Prefix     | 1/4, 1/8, 1/16, 1/32  |
| Traffic Classification         | IP traffic  |
| Subchannelization support      | No  |
| Voltage                        | 48V POE   |
| FEC                            | Convolutional coding with tail biting   |
| Port                           | Connector RJ-45   |
| Serial Port / GPS Port         | RJ-45 Connector   |
| NLOS & Interference            | OFDM 256 FFT, Adaptive Modulation, FEC  |
| Frame Duration                 | 2.5, 4, 5, 10, 12 and 20 ms   |
| VLAN                           | Support for 802.1Q VLAN tagging and filtering;<br>Support for transparent passing of 802.1Q - compliant<br>VLAN tagged frames |
| CINR                           | 23 dB   |
| Midamble                       | Supported   |
| Transmit power control         | Automatic transmit power control  |
| ARQ (Automatic Repeat Request) | Yes   |
| Subscriber Integrated Antenna  | Optional  |
| Base Station Antenna           | No  |
| Gain                           | Tested with Max 18dBi   |
| Throughput                     | 20 Mbps User Data on 7 MHz channels   |
| Range                          | 10 -11 km (BX3324); 2-3 Km (BX3318)   |

## Services and Provisioning

|          |   |
|----------|---|
| QoS      | UGS, rt-PS, nrt-PS, BE                        |
| Security | X.509 certificate, PKv1, 3-DES key encryption |

## Interfaces

|          |   |
|----------|---|
| Backhaul | 10/100 BaseT; PoE (Power over Ethernet)     |
| Antenna  | N-type (Any Antenna - Omni, 60/90/120, etc) |

## RF Characteristics

|  |  |
|--|--|
| Sensitivity, typical (at antenna port) dBm | -93.1dBm at 3.5MHz   |
| Spectral flatness                          | =+/-0.17dB between carriers ; +/-0.75dB for [-50,1]<br>and +/- 0.84 for [1,50] ; +/- 0.58dB for [-100,-50] |
| Maximum Rated Output Power                 | +29 dBm at Antenna Port  |

## System Capacity

|                                   |               |
|-----------------------------------|---------------|
| Max # Sectors                     | Single sector |
| Active Connected Subscriber Units | 64            |

## Mechanical

|                              |   |
|------------------------------|---|
| Operating Temperature        | -45° C to +55° C  |
| Dimensions Mounting          | 11" X 9" X 4" (maximum) - Pole Mount (1.5" to 2" diameter pole) |
| Enclosures                   | IP67 compliant  |
| Maximum cell radius          | 10-11 Km (BX3324); 2-3 Km(BX3318)                               |
| Outdoor/Indoor               | Available in outdoor / PoE models                               |
| Central frequency resolution | 250KHz  |

## Data Communication

|                                |  |
|--------------------------------|--|
| Protocols                      | IPv4, VLAN   |
| Bridging/Routing               | Supported  |
| Networking modes               | Bridging (802.1D)  |
| Filtering/Forwarding           | Ethernet Protocol Filtering; Broadcast / Multicast Storm Threshold filtering |
| VLAN support                   | Supported  |
| Layer-3 Traffic Prioritization | Supported  |

## Configuration and Management

|                                    |   |
|------------------------------------|---|
| Local Monitoring                   | Serial/CLI RJ45 Port; Logging feature which logs to serial port, flash, RAM, or a syslog server |
| Password                           | Multi-Level Password (user, administrator)  |
| TFTP support                       | Yes   |
| NMS and AAA                        | Sloka NMS and AAA Server  |
| Management Protocol                | Yes   |
| Remote upgrade & Remote Management | Yes   |
| Local & Remote Management          | Yes   |
| Remote Management Access           | Yes   |
| Management Access Protection       | Yes   |
| Software upgrade                   | Yes   |
| Configuration Up/Download          | Yes   |
| SNMP Agents                        | Yes   |

## Radio Performance at BER=1e-6

| Bandwidth | Modulation | CP size | Rx Sensitivity (dBm) | SNR (dB) | Burst Data Rate (Mbps) | Spectral Efficiency |
|-----------|------------|---------|----------------------|----------|------------------------|---------------------|
| 3.5 MHz   | BPSK       | 1/2     | -93.1                | 9.5      | 1.012                  | 0.3bps/Hz           |
|           | QPSK       | 1/2     | -90.1                | 12.1     | 2.024                  | 0.3bps/Hz           |
|           | QPSK       | 3/4     | -87.6                | 14.8     | 3.047                  | 0.9bps/Hz           |
|           | 16QAM      | 1/2     | -84.6                | 17.5     | 4.047                  | 1.2bps/Hz           |
|           | 16QAM      | 3/4     | -81.1                | 19.9     | 6.166                  | 1.8bps/Hz           |
|           | 64QAM      | 2/3     | -77.1                | 23.4     | 8.214                  | 2.4bps/Hz           |
|           | 64QAM      | 3/4     | -75.1                | 24.3     | 9.285                  | 2.7bps/Hz           |
| 7MHz      | BPSK       | 1/2     | -90                  | 8.8      | 2.381                  | 0.4bps/Hz           |
|           | QPSK       | 1/2     | -87                  | 12.1     | 4.476                  | 0.7bps/Hz           |
|           | QPSK       | 3/4     | -84.5                | 14.6     | 6.738                  | 1.0bps/Hz           |
|           | 16QAM      | 1/2     | -81.5                | 17.2     | 8.928                  | 1.3bps/Hz           |
|           | 16QAM      | 3/4     | -78                  | 19.9     | 13.451                 | 2.0bps/Hz           |
|           | 64QAM      | 2/3     | -74                  | 23.2     | 17.975                 | 2.6bps/Hz           |
|           | 64QAM      | 3/4     | -78                  | 24.5     | 20.237                 | 2.9bps/Hz           |