

# Astrawireless Evolution E5-BSQ

## PRODUCT DATASHEET

### Description

Evolution E5-BSQ, 5 GHz base station sector with beamforming antenna

### Antenna

Integrated dual-pol beamforming antenna 21 dBi 90x8° (20° AZ-steerable beam)

### Recommended distance

Up to 30 km

### Frequency range

4900-6050 MHz

### Channel width

10, 20, 40, 80 MHz

### Net throughput

Up to 800 Mbps in 80 MHz  
Up to 380 Mbps in 40 MHz  
Up to 220 Mbps in 20 MHz

### Packet performance

Up to 620 000 pps

### Transmit power

from -5 to 25 dBm\*, step 0.5 dBm

### Receiver sensitivity

down to -93 dBm

### Center frequency adjustment step

1 MHz



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\*May be limited by regional EIRP restrictions

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Wired Interfaces 1x GigabitEthernet, SFP, SYNC

Multiple access TDMA

Consumption Up to 35 W

Power options 90-240 VAC ~ @ 50/60 Hz, +-43..56 VDC

Part Number E5-BSQ  
Example

Form Factor and Dimensions Outdoor Unit (ODU)  
371 x 371 x 90 mm, 4.4 kg

Indoor Unit IDU-CPE-G (56W)  
137.5 x 62.5 x 33 mm 0.24 kg

### Packing List

- Outdoor unit E5-BSQ- 1 pcs
- Power Supply IDU-CPE-G(56W) - 1 pcs
- Power Cord - 1 pcs
- Cable Gland for RJ-45 - 2 pcs
- Cable Gland for SFP - 1 pcs
- Standard RJ-45 connector - 1 pcs
- Shielded RJ-45 connector - 1 pcs
- RJ-45 Plug Cap - 1 pcs
- MONT-KIT-85 Mounting kit - 1 pcs
- Quick Start Guide - 1 pcs

# RADIO FEATURES

- **Radio technology**  
MIMO 2x2, OFDM 64/128
- **Modulation types**  
From BPSK 1/2 to QAM256 5/6
- **Voice/RTP Aware Superpacketing**
- **Channel Time Adjustment**  
Spectrum Analyzer mode  
Channel testing tools
- **Air frame Configurable**  
from 1 to 10 ms
- **Uplink / Downlink ratio Configurable**  
from 50:50 to 92:8, in any direction
- **DFS / Radar detection**
- **Automatic Bitrate Control**  
**Automatic Power Control**  
**Automatic Distance Learning**

Wide range of  
network settings

Built-in spectrum analyzer  
and antenna alignment tools

Easy operation due to  
automatic control options

# NETWORKING FEATURES

- **Adaptive TDMA air protocol**  
Dynamic and fixed air frame duration  
Subscriber activity aware scheduling  
Permanent channel testing
- **Pseudo-radio interface**
- **Full-fledged 2nd layer switch**  
RIPv2 / OSPFv2 /static routing  
MAC/IP filtering  
L2/L3 Firewall
- **Quality of Service**  
IEEE 802.1p, IP TOS/DiffServ support  
Full voice support  
Traffic limiting (absolute, relative, mixed)
- **Proprietary MINT network protocol**
- **Ethernet-over-IP and IP-over-IP tunnels**  
ARP protocol support  
NAT (multipool, H.323-aware)  
DHCP client/server/relay



# MANAGEMENT AND SECURITY

|                                                                                                                  |                                                                                                        |                                                                                                                          |                                                                 |
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| ■<br><b>Various Management Protocols</b><br>HTTP, HTTPS, SSH, Telnet, SNMP v1/2c/3 (MIB-II and proprietary MIBs) | ■<br>Antenna alignment tool<br>Automatic software update<br>Online monitoring with EMS NEXT<br>WEB GUI | ■<br><b>Safety &amp; Security</b><br>Storm/flood protection<br>Password protection<br>Secure CLI access via SSH protocol | ■<br><b>LED Indication</b><br>Power status<br>Wired link status |
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# STANDARD COMPLIANCE

|                                                                                            |                                                                                                   |                                                                                                                             |                                                                                                                                                                                                                    |
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| ■<br><b>Radio</b><br>ETSI EN 301 893 v.2.1.1<br>ETSI EN 302 502 v.2.1.1<br>FCC part 15.407 | ■<br><b>EMC</b><br>ETSI EN 301 489-1 v.2.1.1<br>ETSI EN 301 489-17 v.3.1.1<br>FCC Part 15 Class B | ■<br><b>Safety</b><br>EN 62368-1:2014+A11:2017<br>UL 62368-1:2014<br>EN 62311:2008<br><br><b>RoHS3</b><br>EN IEC 63000:2018 | ■<br><b>Lightning protection</b><br>IEC 61000-4-2:<br>+/-4kV (contact discharge),<br>+/-8kV (air discharge)<br>IEC 61000-4-3:<br>+/-0.5kV<br>IEC 61000-4-4:<br>+/-1kV (line-to-ground),<br>+/-0.5kV (line-to-line) |
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# OPERATION OPTIONS

|                                                                                                |                                                                                                                                                                                                                                                              |                                                                                              |
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| ■<br><b>Power options</b><br>90–240 VAC @ 50/60 Hz<br>±43.56 VDC<br>802.3at or Proprietary PoE | ■<br><b>Outdoor Unit environmental conditions</b><br>-40..+60°C, can be extended to -55..+60°C (models with "t" index in PN)<br>100% humidity, condensing<br><br>Dust and water protection IP66, IP67<br>Wind load 160 km/h, operational; 200 km/h, survival | ■<br><b>Indoor Unit environmental conditions</b><br>0..+40°C<br>95% humidity, non-condensing |
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