AtomOD06LX

Outdoor Customer Premise Equipment Datasheet

INTRODUCTION

The Baicells AtomOD06LX Outdoor Customer Premise Equipment (CPE) provides superior performance and excellent routing capabilities, which delivers broadband data and voice services to end-users. It operates on standard LTE TDD to enable high-speed, wireless communications.

The AtomOD06LX is available in two variants: The CAT-B CBSD, which requires SAS connectivity and CPI certification, and the EUD, which does not require SAS connectivity or CPI certification.

The AtomOD06LX enables improved wireless coverage in environments where there is blockage or partial blockage, like dense trees or buildings, in the wireless signal path between the CPE and eNBs.

Wireless and wired devices, including mobile phones, laptops, tablets, and other smart devices, can simultaneously access the Customer Premise Equipment (CPE).

The product comes with a standard one-year warranty; an extended warranty is available.

HIGHLIGHTS

NOTE: Features can vary based on model or region.

- Supports LTE TDD Bands 42/43/48
- Complies with 3GPP Release 10 CAT6/7 standards
- 1000 Mbps Ethernet interface
- Peak data rate of up to DL 220 Mbps, UL 30 Mbps
- 64QAM for DL and 64QAM for UL as the highest order modulation formats.
- Built-in bipolar directional LTE antenna
- GUI-based local and remote Web management
- Excellent Non-Line-of-Sight (NLOS) coverage
- Supports TR069 network management protocol
- Cell lock, SIM lock, and pin lock
- User-friendly LED status indicators
- Pole or wall mounted
- Wi-Fi assisted alignment
- CBRS EUD option is available.
- Transparent bridge mode* (L2 Support).

TECHNOLOGY

LTE Standard	3GPP Release10, CAT6/7
LTE Mode	TDD
Channel Bandwidth	SC: 5/10/15/20 MHz CA: 40 MHz as maximum aggregated bandwidth
Frequency Bands	B42 (3400 MHz – 3600 MHz) B43 (3600 MHz – 3800 MHz) B48 (3550 MHz – 3700 MHz)
Multiplexing	DL 2x2MIMO, UL 2x2MIMO*
Security	Firewall: IP/MAC/URL filter; ACL rule

INTERFACE

Ethernet Interface	1 RJ-45 port 10/100/1000 auto-sensing, auto-MDX, PoE
Protocols Used	IPv4/IPV6, UDP, TCP, IP, ICMP, SNMPv2c, SNMPv3c, HTTPS, SSH, TELNET, TR069, CBSD
Network Management	Web GUI, ACS, OMC, SNMP
VLAN	802.1Q

PERFORMANCE

Peak Rate	2x20MHz (CA)	DL (2x2 MIMO, 64QAM)	UL (64QAM)
	TDD UL/DL Config. 1	160 Mbps	60 Mbps
	TDD UL/DL Config. 2	220 Mbps	30 Mbps
	20MHz (SC)	**DL (2x2 MIMO, 64QAM)**	**UL (64QAM)**
	TDD UL/DL Config. 1	80 Mbps	30 Mbps
	TDD UL/DL Config. 2	110 Mbps	15 Mbps
Modulation	DL: QPSK, 16QAM, 64QAM UL: QPSK, 16QAM, 64QAM		
Carrier Aggregation	DL: 2CA (2x2 MIMO), UL: 2CA (SISO)		
Receive Sensitivity	-96±2 dBm @QPSK, 20MHz, 25°C, -99±2 dBm @ 2RX Diversity		

MODULATION LEVELS (TDD 2:7)

DL MCS	DL Modulation	CQI Index	Theoretical Data Rate
0 - 9	QPSK	1 - 6	6Mbps - 47Mbps
10 - 16	16QAM	7 - 9	59Mbps - 96Mbps
17 - 28	64QAM	10 - 15	100Mbps - 220Mbps

UL MCS	UL Modulation	Theoretical Data Rate
0 - 10	QPSK	0.5Mbps - 7Mbps
11 - 20	16QAM	7Mbps - 17Mbps
21 - 28	64QAM	17Mbps - 30Mbps

FEATURES

Network Mode	NAT or Bridge
SIM	PIN management, SIM lock
Network Connection	Auto or manual
LTE Scan Mode	Full band scan or frequency lock
VPN	L2TP L2/L3, GRE L2/L3
NAT	Port forwarding, port trigger, DMZ, ALG
Diagnostics	TCP dump, ping, traceroute
Statistics	LTE status; connection/system up time; device status; DHCP client list; Wi-Fi station list; firewall status
Maintenance	Date and time setting; reboot; restore factory settings; restore or back up configuration file; firmware upgrade locally or OTA

LINK BUDGET

Antenna Type	Internal directional, 2T2R
Antenna Gain	14dBi
Max Transmit Power	M11: 26dBm (combined, to regional EIRP limit) M11-EUD: 9dBm (combined, to regional EIRP limit)
Maximum EIRP	M11: 40dBm M11-EUD: 23dBm

PHYSICAL

IP Protection Rating	IP65
LED Indicators	MIU, LTE, SIM, LAN, PWR, LTE Signal
USIM	1.8V/3V 2FF
Restore Button	Press for 10 seconds to restore the CPE to its factory settings
Temperature	• Operating Temperature: -40°F to 131°F / -40°C to 55°C • Storage Temperature: -40°F to 158°F / -40°C to 70°C
Humidity	5%~95%
Power Consumption	<10 W
Power Supply	With PoE Adaptor: • INPUT 100-240VAC • OUTPUT 24VDC 0.5A
Weight	About 23oz / 660g
Dimensions	9.5 x 6.0 x 3.4 inches / 242 x 152 x 86 millimeters

WI-FI ALIGNMENT SPECIFICATIONS

Standard	IEEE 802.11b/g/n
Channel Bandwidth	20/40 MHz
Frequency	2.4 GHz
MIMO	1x1
Peak Rate	802.11b: 11 Mbps 802.11g: 54 Mbps 802.11n: 150 Mbps
Modulation	DSSS/CCK, OFDM
Receive Sensitivity	-64 dBm @ 65 Mbps, typical for 802.11n -65 dBm @ 54 Mbps, typical for 802.11g -76 dBm @ 11 Mbps, typical for 802.11b
Max Output Power	10 ± 3 dBm
Antenna Type	Internal omni, 1T1R
Antenna Gain	<1 dBi

GLOBAL PART NUMBERS

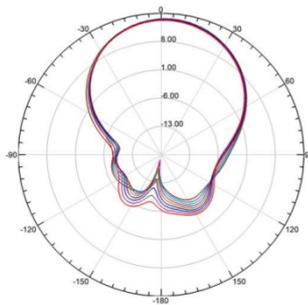| EG8013L-M11	Atom Outdoor CAT6/7, 2T2R, 14 dBi, Band42/43/48, internal directional antenna, 1 GE, PoE 24V, IP65
	• FCC certification: 2AG32EG8013LM11 (3550-3700 MHz)
	• IC certification: 20982-EG8013LM11 (3450-3700 MHz)
EG8013L-M11-EUD	Atom Outdoor CAT6/7, 2T2R, 14 dBi, Band42/43/48, internal directional antenna, 1 GE, PoE 24V, IP65
	FCC certification: 2AG32EG8013LM11EUD (3550-3700 MHz)

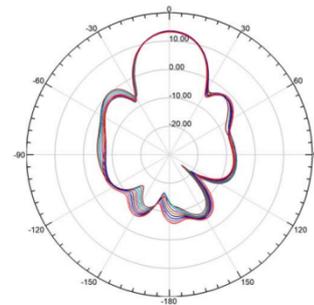NOTE: Customized versions can be requested.

* Planned for future release

ANTENNA PATTERN

EG8013L-M11

EG8013L-M11-EUD
3701000163

H-Pattern

V-Pattern