Photon OD63H EG8561A

Outdoor Customer Premise Equipment Datasheet

Baicells
Connect More with Less

INTRODUCTION

Baicells 5G outdoor CPE supports two network architectures, 5G Standalone (SA) and non-Standalone (NSA), with faster transmission speed, better bearing capacity and lower network delay.

CPE supports 5G Sub6 band access to base station, LAN side supports WIFI6 access, providing perfect experience for customers in laptop, gateway, industrial monitoring, telemedicine, unmanned aerial vehicle, virtual reality and immersive experience (VR and AR).

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

HIGHLIGHTS

NOTE: Features can vary based on model or region.

- 5G SA/NSA Dual mode
- Supports NR Bands N77/78
- Supports TDD Bands B43
- Complies with 3GPP Release 16 standards
- 1000 Mbps Ethernet interface
- Peak data rate of up to NR SA DL 2500 Mbps, UL 900 Mbps; NR NSA DL 3500Mbps, UL 555Mbps
- 256QAM for DL and 256QAM for UL as the highest order modulation formats.
- Built-in bipolar directional 5G 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
- Transparent bridge mode* (L2 Support).

Photon OD63H EG8561A

Outdoor Customer Premise Equipment Datasheet

TECHNOLOGY

Standard	3GPP Release16
Mode	TDD/FDD
Channel Bandwidth	NR: 5~100 MHz LTE: 20 MHz
Frequency Bands	N77 (3300 MHz - 4200 MHz) N78 (3300 MHz - 3800 MHz) B43 (3600 MHz - 3800 MHz)
Multiplexing	LTE: DL 4x4 MIMO NR: DL 4x4 MIMO, UL 2x2MIMO
Security	Firewall: IP/MAC/URL filter; ACL rule

INTERFACE

Ethernet Interfaced	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, TR104, CBSD
Network Management	Web GUI, ACS, OMC, SNMP
VLAN	802.1Q

PERFORMANCE

Peak Rate		DL (Mbps)	UL (Mbps)
	NR SA	Max. 2500	Max. 900
	NR NSA	Max. 3500	Max. 555
	LTE	Max. 1600	Max. 211
Modulation	DL: QPSK, 16QAM, 64QAM, 256QAM UL: QPSK, 16QAM, 64QAM, 256QAM		
Carrier Aggregation	LTE: 2CA(CA_43A-43A) NR SA: Up to 2DL* / 2UL		
Transmit Power	Power Class 2 (26dBm±1.5dBm) for B43 Power Class 1.5 (26dBm±1.5dBm) for N78		

Receive Sensitivity	N41 (100MHz), -85dBm
	N48 (20MHz), -94dBm
	N77 (100MHz), -86dBm

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
CBRS	Automatic installation of CBSD certificate*

LINK BUDGET

Antenna Type	Internal directional, 2T4R
Antenna Gain	S78: 17dBi , only for 3700-3800MHz
Max Transmit Power	LTE: 26dBm for 43
	NR: 29dBm for77/78
	(combined, to regional EIRP limit)
Maximum EIRP	LTE: 43dBm
	NR: 46dBm

PHYSICAL

IP Protection Rating	IP67
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	<24 W
Power Supply	With PoE Adaptor: • INPUT 100-240VAC • OUTPUT 24VDC 1A
Weight	About 4.4 lbs / 2 kg
Dimensions	9.8 x 9.8 x 3.2 inches / 248 x 248 x 80 millimeters

WI-FI SPECIFICATIONS

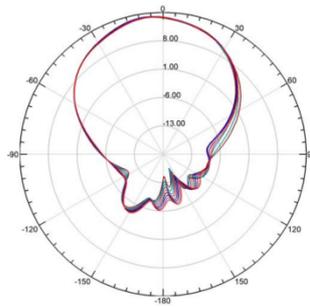| Alignment	Alignment: EG8561A-S78, it only use to debug the CPE with wifi
Standard	IEEE 802.11b/g/n/ax
Channel Bandwidth	20MHz,40MHz,80 MHz
Frequency	2.4 GHz, 5GHz, 6GHz*
MIMO	2x2
Peak Rate	802.11ax: 567 + 1200 Mbps
Modulation	DSSS/CCK, OFDM
Receive Sensitivity	802.11b BW20 : -99.5dBm (1M), -91dBm (11M) 802.11g BW20 : -96dBm (6M), -78dBm (54M) 802.11n: HT20 : -95.5dBm (MCS0), -75dBm (MCS7) 802.11n: HT40 : -93dBm (MCS0), -72dBm (MCS7) 802.11ac: VHT20: -95.5dBm (MCS0), -71dBm (MCS9) 802.11ac: VHT40: -93dBm (MCS0), -69dBm (MCS9) 802.11ax: HE20: -95.5dBm (MCS0), -65.5dBm (MCS11) 802.11ax: HE40: -93dBm (MCS0), -63dBm (MCS11)
Max Output Power	24 dBm * 2 + 24 dBm * 2
Antenna (WLAN only)	N-type external omni antenna
Active Users (WLAN only)	256

MODEL NUMBERS

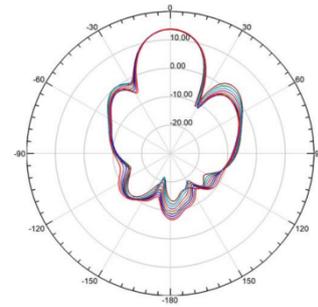| EG8561A-S78	Photon OD63H Outdoor NR CPE, 2T4R, 17 dBi, only for 3700-3800MHz, internal directional antenna, 1 GE, PoE 24V, IP67
	5G Sub-6: N77/N78
	LTE TDD: 43
	• FCC certification: TBD • IC certification: TBD

NOTE: Customized versions can be requested.

* Planned for future release

ANTENNA PATTERN

EG8561A-S78

H-Pattern

V-Pattern