

Product Spec

LTE Cat.12 Outdoor Gateway OA-335, OA-336

Version	V1.3
Date	Jan. 2019



Green Packet Berhad Company

1. Overview

OA-335/ OA-336 series is a highly advanced LTE outdoor gateway solution, compliant with 3GPP Release 12 standard.

A high quality patch antenna is integrated inside to ensure stable connectivity and extended coverage. Peak gain can reach 16 dBi if it is pure 3.4~3.8GHz model.

OA-335 enclosure is compliant with IP-67 (Ingress Protection ratings), and its operating temperature is from -40 to +55 degree C. All those factors contribute to a rugged yet cost-effective solution to operate in extreme weather condition.



2. Hardware Specifications

2.1 Basic Description

Feature	Description	Remarks
3GPP Release Version	Release 12	
UE Category	Cat.12	
LTE supported band combination	Band B42, B43	Different band combination may result in extra cost. For details, please contact us.
	Band 1/3/7/8/20/38/41/42/43/48	
Carrier Aggregation	DL 2CA (4x4 MIMO 64 QAM); DL 4CA (2x2 MIMO 256QAM)	
	UL 2CA	
MIMO	DL 2x2 MIMO (4CA). DL 4x4 MIMO (2CA). UL 2x2 MIMO.	
Ethernet port	Gigabit RJ-45 port x 1	
Antenna Number	4	
Antenna Peak Gain	16dBi (pure B42/43 model)	Pure 3.4~3.8GHz model.
	12dBi, 3.4~3.80 GHz.	for multi-band model
	7 dBi, 1.7~2.69 GHz	
	3 dBi, 0.7~0.86 GHz	
LED Indicators	Power, SIM/ Internet, LAN, Signal Strength x 4	8 LEDs in total
Reset/ Reboot button	Tact switch	In side the housing
Power supply	Input: Universal range 100~240VAC Output: 24V/ 1A DC	
WR-1200 Indoor unit, Wi-Fi VoIP Router	11 ac/b/g/n compliant	WR-1200 is required for OA-336. For details, please see 3. Appendix.
	Gigabit WAN RJ-45 port x1 (for PoE injector)	
	Gigabit LAN RJ-45x 2	
	RJ-11 port x 1	
	LED indication: Power/ Internet/ Wi-Fi 2.4G/ Wi-Fi 5G/ USIM/ Voice/ Signal Strength	
	AC 90~240V DC 24V 1A	

2.2 ID Design

2.2.1 Appearance Index_OA-335, OA-336

Index	Description
Dimension	288(H) x 288 (W) x 88 (T) mm
Weight	About 2.5 kg
Color	Grey



Front view



Side view

2.2.2 Appearance Index_WR-1200

Index	Description
Dimension	186.3 x 170.3 x 64.3 mm
Weight	< 500 g
Color	Black

2.3 Interface and Button

OA-335, OA-336

Interface	Description
RJ-45 x 1	Gigabit RJ45 x 1
SIM Slot x 1	Mini SIM. Support 1.8V and 3.3V SIM and USIM)
Reset/ Reboot button	Tact switch

WR-1200

Interface	Description
RJ-45 WAN	Gigabit WAN X 1
RJ-45 LAN	Gigabit LAN X 2
WPS	X 1
Reset	X 1
DC Jack	24V / 1A
LED indicator	Power/ Internet/ Wi-Fi 2.4G/ Wi-Fi 5G/ USIM/ Voice/ Signal Strength

2.4 Software Specs

SW Spec	Description
LTE Standard	3GPP Release 12
MIMO	DL 2x2 MIMO (4CA). DL 4x4 MIMO (2CA). UL 2x2 MIMO.
UE Category	Cat.12
Full band search	Support
Multiple APN	Support
SIM Lock	Support
SIM function	1.8V and 3.3V SIM and USIM card
PIN / PUK Code	

2.5 Networking

Networking Spec	Description	Remarks
IPv4		
IPv6	only under LTE mode	
IPv4/IPv6 dual stack	only under LTE mode	
Network Mode - NAT Mode		
Network Mode - Tunnel Mode	supported L2/L3 L2TP, GRE VPN	Customization Feature
Network Mode - Bridge Mode		Customization Feature
Network Mode - Router Mode		supported NAT, VPN route
DHCP Client in WAN		supported, no DHCP client but get IP from LTE signaling
DHCP Server in LAN	For NAT Mode, Supports 253 clients max.	
NTP Client		
Network QoS		
DDNS Client		
UPNP		
HTTP(s) Server		
DSCP Tag		Customization Feature
ALG Support (FTP/SIP/ etc...)		
Port trigger/ Port forward		
Packet Counter		
VLAN Passthrough		
1Tx/ 4Rx		

2.6 Device Management

Spec	Description	Remarks
User Name / Password configuration	Support password configuration only	
Two-level User Name/ Password configuration	support 2 levels: user and admin	
Web Access (Remote/Local)	Supported.	
Local Firmware Update	Supported.	
SNMP Agent	Require customization.	
TR069	Ready for IOT	
TR-143	Not supported.	
OMA-DM	Not supported.	
FOTA Firmware Upgrade	Require IOT with different networks	

2.7 Security

Spec	Description	Remarks
User Name/Password configuration	Support password configuration only	
L2/L3 Firewall - Basic firewall - Port Forwarding - Port trigger - DMZ - Remote WAN Ping - Remote Web Access Control	MAC/IP Filter supported supported supported supported supported supported	

2.8 VoLTE* (at WR-1200, Optional Item)

Feature	Description
Registration	Registration event package
	Network-initiated de-registration
	IMS Communication Service Identifier (ICSI)
	Public user identity in the first (or only) record in the Elementary File in the ISIM
	Temporary public user identity derived from the IMSI
Authentication	IMS Authentication and Key Agreement (IMS-AKA), Sec-Agree and IPSec
	ISIM based authentication
	USIM based authentication
	Authentication at the Ut reference point
Address	SIP URIs (alphanumeric) and Mobile Subscriber ISDN Number (MSISDN) based IMPU.
	"Phone-context" parameter
	P-Called-Party-ID header field
Basic Call	AMR-NB
	AMR-WB
	Caller ID Name and Number displayed
Supplementary Features	Call
	Originating/Terminating Identification Presentation
	Originating/Terminating Identification Restriction
	Communication Forwarding unconditional/ on not Logged/ on Busy/ on not Reachable/ on No Reply
	Barring of All Incoming/Outgoing Calls
	Barring of Outgoing International Calls –ex Home Country
	Barring of Incoming Calls -When Roaming
	Communication Hold
	Message Waiting Indication
	Communication Waiting
	Ad-Hoc 3-Party Conference
	Three Way Session creation
Communication Diversion/Forward (CDIV)	
IMS-SIP	Session Initiated Protocol (SIP) registration procedures.
	SIP preconditions framework
	Session Description Protocol (SDP) offer/answer for voice media
	Real Time Protocol (RTP) profile
	RTP over UDP
	RTP Control Protocol (RTCP)
	DTMF
	Guaranteed Bit Rate (GBR) bearer
	IETF RFC 4575
	PDN type: IPv4v6

Note: either VoLTE or VoIP; cannot support both at the same time.

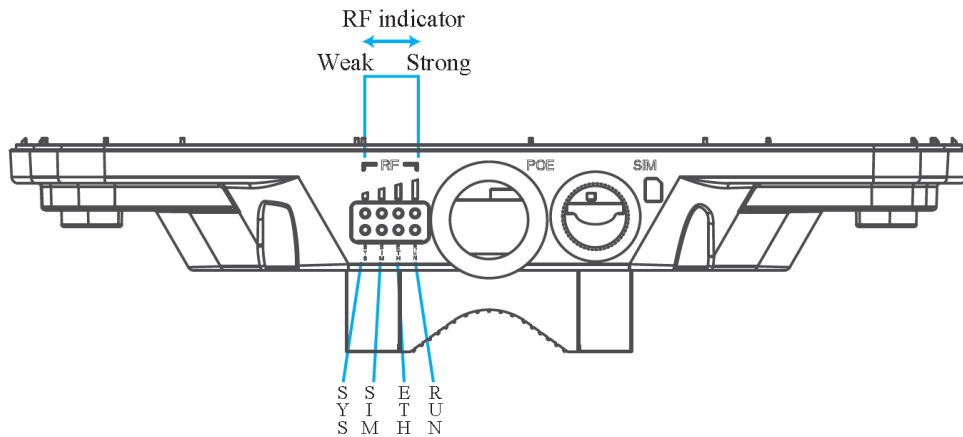
2.9 VoIP* (at WR-1200, Optional Item)

Feature	Description
Call Features	Call Waiting
	Call Hold /Resume
	Call Forward
	On busy
	No condition
	No answer
	Call Transfer
	Blind transfer
	Attended transfer
	Early attended transfer
	3-Way conferencing
	Digit Map / Dial plan
	Caller ID display/blocking
	RTP monitor
	RTP Redundancy
SBC (session border control) Redundancy	
Session Timer (INVITE/ UPDATE)	
Codec	G.711 A/Mu Law
	Appendex I
	Appendex II
	G.726 (16,24,32,40 Kbps)
	G.729AB
	G.723.1 (6.3Kbps / 5.3Kbps)
	AMR-NB
	AMR-WB
	G.722
Echo Canceller	G.167 AEC (AcousticEcho Cancellation)
	G.168 LineEchoCanceller
Voice Enhancement	Adaptive Jitter
	Buffer/ Fixed JitterBuffer
	VAD/ CNG/ SID
	PLC (Packet Lost Concealment)
	LGC (Linear Gain Control)
	Gain calibration
	Mixer
Caller ID	DTMF CID Generation
	Bellcore CID Type I/II
	Generation/ Detection
	ETSI CID Type I/II
	Generation/Detection

	CID CAS/DTAS/SAS Tones generation
DTMF	Generation
	Out-of-band DTMF Relay (RFC2833)
	In-band DTMF relay Detection
CPT	Generation
	Detection
FAX/ Modem	G3/ SG3Faxpass-through
	T.38 fax relay
	V.22/ V.32 modem pass-through

Note: either VoLTE or VoIP; cannot support both at the same time.

2.10 LED Indicators



State	Description	LED Behavior	LED illustration
Signal Strength weak	Signal strength is weak	Only first signal LED steady on, the other three off	
Signal Strength medium	Signal Strength is medium	The first two signal LEDs steady on, the last two off	
Signal Strength good	Signal strength is good	The first three signal LEDs steady on, the last one off	
Signal Strength strong	Signal strength is strong	All signal LEDs steady on	
LTE Scanning	The CPE is searching for a frequency channel or is performing network entry	All signal LEDs blinking simultaneously	
LAN Connected	The CPE has a successful connection with a device on the LAN	The ETH LED On	
LAN Disconnected	The CPE does not have an Ethernet connection with the LAN	The ETH LED Off	
SIM card abnormal	The SIM Card in abnormal state	The SIM LED Blinking	
No SIM card	The SIM Card is Undetected	The SIM LED Off	
SIM card normal	The SIM Card is ready	The SIM LED On	

State	Description	LED Behavior	LED illustration
SYS linked	The CPE attached to LTE network	The SYS LED On	
SYS no link	The CPE not attached to LTE network	The SYS LED Off	
CPE Operation	The CPE is operating properly	The RUN LED Blinking	
Firmware Upgrading	The CPE is upgrading the firmware	All signal LEDs scrolling blink one by one	

2.11 RF Specifications

LTE RF Spec	Capability				Remarks
	Description			Unit	
LTE Supported Bands	Band 42,43				
LTE Channel Band Width	1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz			MHz	3GPP compliant
MIMO	DL 2x2 MIMO (4CA). DL 4x4 MIMO(2CA). UL 2x2 MIMO.				Different band combination may result in extra cost. For details, please contact us.
Carrier Aggregation	DL 2CA (4x4 MIMO 64 QAM); DL 4CA (2x2 MIMO 256QAM) UL 2CA				
LTE Output Power @ 25 °C	23			dBm	3GPP compliant mode will be 23dBm +/- 2dB
LTE Receiver Sensitivity	-99dBm/10MHz			dB	
LTE RF Standard	All RF specification should reference with 3GPP Release 12 TS 36.101				Compliant with 3GPP with margin
LTE Antenna Efficiency		> 50%			
Wi-Fi Spec	Capability				(at WR-1200 is required for OA-336)
	Min	Typical	Max	Unit	
2.4 GHz Wi-Fi	802.11b/g/n (2.4 GHz) 2T2R				
5 GHz Wi-Fi	802.11ac (5.0 GHz) 2T2R				
Wi-Fi Antenna number					On-board printed antenna
Antenna Efficiency		> 50%			

2.12 Environment Specifications_OA-335 / OA-336

No.	Feature	Capability				Remarks
		Min	Typical	Max	units	
1	Operating temperature	-40		55	°C	
2	Storage temperature	-40		60	°C	
3	Operating humidity	0		95	%	
4	Storage humidity	0		95	%	
5	IP Rating		IP67			

2.12 Regulatory Specification

Feature	Requirement Specification	Comments
Radio_LTE	EN 301 908-13 V 6.1.1	Follow CE regulatory
Radio_WiFi	EN 300 328 (V1.8.1)	Follow CE regulatory
Safety	EN 60950-1	Follow CE regulatory
EMC	EN 301 489-1/-4/-17/-24;	Follow CE regulatory
FCC		To be confirmed

3. Appendix-Deliverable

Article Number	Content	Remark
OA-335 (Option 1)	- 1 x Assembled product ODU - 1 x Quick installer guide - Mounting kit - 1x RJ45 cable (1 meter)	Detailed deliverables need to be defined by customer agreement.
	PoE Injector x 1 Power adapter 24V / 1A x 1	There will be price difference among the optional items.
OA-336 (Option 2)	- 1 x Assembled product ODU - 1 x Quick installer guide - Mounting kit - 1x RJ45 cable (1 meter)	
	WR-1200 "VoLTE or VoIP" Wi-Fi Router x 1 Power adapter 24V / 1A x 1	

Installation Quick Guide

QIG (Logo can be customized)

Packaging

White Box, Device Label, Box Label

Greenpacket will provide customers with comprehensive technical support. Any problem please contact support department directly.	
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