

JATONTEC JT8500D LTE-A Pro CAT12 Outdoor CPE Administrator User Manual V2.0





PLEASE READ THESE SAFETY PRECAUTIONS!

RF Energy Health Hazard



The radio equipment described in this guide uses radio frequency transmitters. Although the power level is low, the concentrated energy from a directional antenna may pose a health hazard.

Do not allow people to come in close proximity to the front of the antenna while the transmitter is operating.

Protection from Lightning



Before connecting this instrument to the power line, make sure that the voltage of the power source matches the requirements of the instrument. The unit must be standards.

Disposal and Recycling Information



Pursuant to the WEEE EU Directive electronic and electrical waste must not be disposed of with unsorted waste. Please contact your local recycling authority for disposal of this product.

Reduction of Hazardous Substances



This CPE is compliant with the EU Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) Regulation (Regulation No 1907/2006/EC of the European Parliament and of the Council) and the EU Restriction of Hazardous Substances (RoHS) Directive (Directive 2002/95/EC of the European Parliament and of the Council).

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1. Overview

JATONTEC 8500D is highly advanced LTE-A Pro CAT12 outdoor data unit specially designed to meet the most challenging demands of today's high speed wireless backhaul and fixed wireless access deployments by the 4G service operators. The unit can support multiple TDD band operations. Multiple operator network support can also be provisioned on the unit to allow the deployment across entire country with different operators.

Model	Description & User Interface				
	- Panel antenna: 17dBi (2*2 MIMO 4CA),				
	13dBi (4*4 MIMO 2CA)				
	- 1 RJ45 10/100/1000M LAN Port				
JT8500D	- PWR, SYS, SIM, LINK, ACT, and LTE (1-5) LEDs				
•••••	- 48V/0.5A PoE supply, ODU Power <15 Watts				
	- Dimensions: 250 mm (L) × 250 mm (W) × 75 mm (D)				
	- Weight: <2.5 Kg				

■ User Interface Specification

2. Getting Started

1) Packing list

Upon receiving the product, please unpack the product package carefully. Each product is shipped with the following items:

Table 2-1 Packing List

Outdoor CPE Products	Quantity
ODU unit	1
PoE adapter	1
Power cord	1
Mounting brackets	1
PC Ethernet Cable	1

If you find any of the items is missing, please contact our local distributor immediately.

2) Unpacking the Equipment

 Table 2-1 lists all the standard parts that are supplied in your LTE CPE Unit Installation

 Package. Please take the time to unpack the package and check its contents against this list.





3) Installing the Equipment

Device Logic connection

For outdoor CPE product, it is suggested that the CPE device be installed in a shaded area to avoid direct sun light exposure which may cause over heat in certain extreme weather condition.

To power on the device, the outdoor CPE must use a 48V PoE integrated DC power supply adapter. The power adapters can operate in 100-240V AC range and therefore can be used in different country. Once the device is powered up, the user should wait for about 1 minutes before the device becomes operational. When the RF1 LED becomes blinking green, it indicates the system has completed the startup procedure.

To connect PC, LAN switch or other type of IP device to the CPE product, the user should use SFTP CAT5E Ethernet cable and connect to the appropriate LAN port. Once connected, the ETH LED indicator should come on.





Installing Mounting brackets



Header Connection





2 LED Display

Туре	LED	Function	Description				
	PWR	Power indicator	Solid green – Device is power on.				
	SYS	System run indicator	Solid green – Device is in normal operation.				
ODU	SIM	SIM card indicator	Light is on – SIM card state is ready, Blinking Green – SIM card is error.				
	LINK LAN port status		Solid Green – LAN port is up.				
	АСТ	LAN port status	Blinking Green – LAN data transmission.				
	RF (5LEDs) RF Signal Strength		5 level signal strengths indication by 5 gree LEDs. 1st Green LED: -115dBm < RSRP 2nd Green LED: -115dBm <= RSRP < -105dBm 3rd Green LED: -105dBm <= RSRP < -95dBm 4th Green LED: -95dBm <= RSRP < -85dBm 5th Green LED: -85 <= RSRP				

■ RF Signal Adjustment

After the CPE outdoor unit has installed, the direction of antenna's azimuth and pitch angle needs to adjust for the best signal strength. In near line of sight condition, the CPE will have the best signal when the antenna is directly pointing the base station.

User can adjust the holder to change the direction and angle of the antenna while observing the RF LED on the outdoor unit which indicates the signal strength.



3 Managing CPE Device

JT8500D is a user-friendly LTE CPE, and very easy to configure and setup. Subscribers can just connect the device to their computer or home switch/router and the device is ready to provide Internet Services.



WEB Login

It is a preferred to setup the CPE using a Web browser from a local PC connected to device LAN port. The user should ensure that the connected PC have acquired IP address via DHCP from the device. After IP connectivity is established between the PC and CPE device, the user may launch a Web browser and specify <u>http://192.168.0.1</u> in the address bar. A window will pop up requesting password. Input the user or administrator login password and then click the "Log in" button. After successful log on, the default home page will appear. Note the default user & administrator passwords are "user123" and "admin123" respectively.

Log in	
Please enter your login password Password	
Log in	

4 LTE Configuration

Overview

Once the user is logged in, the following window device status window will be prompted for viewing. It contains both the system information, networking and device information configured for the device.



LTE Network Security	Applications Management Maintenance Sta	tus Exit
Overview NDS PLMN	Settings Cell Selection PDN Settings SIM Card	Advanced LTE SMS Command Shell 🌡 admin
LTE Information		Help
System Information		System Information:
Manufacturer		This section shows the basic device
Model Name	LTE B42/43 Outdoor CPE	information.
Chip Model	GDM7243QT	
Serial Number		Radio Information:
IMEI		interface related information.
IMSI		
Supported Band	42/43	Connection: This section shows the status of radio
Firmware Version	0.3.2.5	and connection for 4G LTE.
Radio Information		Activity
RSRP	-114.3 / -106.4 / -110.2 / -117.6 dBm	Shows received and sent packet/byte
RSSI	-81.9 / -76.3 / -79 / -78.5 dBm	statistics from WAN side.
RSRQ	-12.8 / -10.3 / -11.3 / -18.4 dB	
SINR	0 dB	
CQI	0	
Rank Indication	0	
Transmit Mode	ТМЗ	
Band ID	42	
UL/DL Bandwidth	20000 / 20000 KHz	
UL/DL Earfcn	41790 / 41790	
UL/DL MCS	0 / 0	
RRC State	active	
EMM State	registered roaming	
PCI	11	
eNB ID	11	
Cell ID	0	
ECI	2816	
TX Power	13.9 dBm	
UL/DL Throughput	0 / 0 Kbps	
SCC Info	-	
Connection		
Media State	ATTACHED	
Connection Time	12min 34 sec	
SIM Card State	Ready	
Network Description	L3PDN	
Registered PLMN	00101	
IPv4 Address	10.0.161.123	
IPv4 DNS	202.96.128.86 202.96.134.33	
IPv6 Address		
IPv6 DNS		
Activity		
Sent	140 bytes / 2 packets	
Received	200 bytes / 2 packets	



■ ND&S Configuration

The LTE radio can be enabled or disabled via 4G Radio setting. The radio can also be reset via Reconnect.

LTE Network Security Applications Management Maintenance Status	🔁 Exit
Overview NDS PLMN Settings Cell Selection PDN Settings SIM Card Advanced LTE SMS	Command Shell 🌲 admin
Network Discovery and Selection	Help
4G Radio Setting	NDS:
4G Radio ON OFF Reconnect	In this page, you can turn on/off the 4G radio.You can also define the
Discrete Band Setting	discrete band/channel settings and radio scanning step to gain fast entry
Band ID Start Freq End Freq Start Earfcn End Earfcn Delete	to the network.
Add Cancel	Earfcn Range:
	B42 41590 - 43589 B43 43590 - 45589
Save & Apply Cancel	
	Frequency Range:
	B42 3400 - 3599.9 MHZ B43 3600 - 3709 9 MHz
	B43 3000 - 37 88.8 MHZ

Note: After configure any parameters of the device, you must click the "**Save & Apply**" button to save the configuration. Otherwise the configuration will not take effect.

PLMN Selection

The user can add and configure the PLMN list to restrict the CPE to attach. The CPE will attach to network according to the PLMN priority assigned.

LTE Network	Security Applications Management Maintenance Status	🖪 Exit
Overview NDS	PLMN Settings Cell Selection PDN Settings SIM Card Advanced LTE SMS	S Command Shell 🌷 admin
PLMN Settings		Help
PLMN Settings		PLMN Settings:
Network Search	Search	When the Selected PLMN setting is enabled, the UE will only connected to
Home PLMN-ID	46088	PLMN network specified. If the entry is empty or blank, the UE by default will
Selected PLMN	Enable (e.g. 00101,BLANK=USE USIM HPLMN ID)	be restricted to only connect to the Home PLMN-ID network defined by the SIM card.
	Save & Apply Cancel	

Cell Selection

The cell selection menu is used to configure how CPE will select the best cell. User can configure the "Auto Select" mode to select cell based 3GPP standard. When configured with



"preferred Listing", user add the desired cell ID to the list and the CPE will attach to the appropriate cell after a full scan.

LTE Network Security Applications Management Maintenance Status	🕻 Exit
Overview NDS PLMN Settings Cell Selection PDN Settings SIM Card Advanced LTE SMS	6 Command Shell 🌲 admin
Cell Selection	Help
Cell Selection	Cell Selection:
Cell Selection Preferred Listing Auto Select	Preferred Listing - UE will first scan the entire network and then decide to
Priority Earfcn Preferred Listing Delete	connect the most suitable cell according to the preference defined in
Add Cancel	the list
	Earfcn Range:
Save & Apply Cancel	B42 41590 - 43589 B43 43590 - 45589
Sorted Cell List	
Clear Last Found Channels	
Index Earlicn PCI RSRP(dBm) RSRQ(dB) RSSI(dBm) SINR(dB)	
Refresh Cell List	

PDN Setting

This menu is used to configure the operator APN profile. You can configure single or multiple APNs for the operator network. The below shows an example of two APN configuration.

LTE Network Security Applications Management Maintenance Status	🖪 Exit
Overview NDS PLMN Settings Cell Selection PDN Settings SIM Card Advanced LTE SMS	S Command Shell 🌲 admin
PDN Settings	Help
PDN List	PDN Settings:
Index APN Name Class ID IP Type Auth Username Password Priority Delete 1 1 I IPV4 None Up Delete	In this page, you can define up to 4 PDN settings for bearer. Length of APN name should not exceed 64 bytes.
Save & Apply Cancel	

You can view the APN status info in the Status menu.

■ SIM Card

The SIM card menu is used to view the SIM card status and perform PIN code management for SIM card. You disable or enable the SIM card PIN check on the CPE to bind the SIM card inserted.



LTE	Network	Security	Appli	cations Man	agement M	aintenance	Status			🖪 Exit
Overvie	w NDS	PLMN S	Settings	Cell Selection	PDN Setting	SIM Car	d Advanced	LTE SMS	Command Shell	🕺 admin
SIM C	ard								Help	
	Card Status								SIM Card Status:	
SIM C	ard State			Ready					This section shows the card status information	current SIM
RETRI	IES PIN			3						
PIN CI	heck Enabled			OFF					PIN/PUK Managemen	t: bled PIN you
PIN M	lanagement _								can enable the SIM car	rd PIN function
PIN M	anagement			Enable PIN T					by entering the current set a new PIN code. Th	PIN code and he PIN code
PIN Co	ode			Disable PIN Modify PIN	R	emaining PIN (3 RETRIES		length is 4-6 digits.If a (with PIN code enabled	new SIM card d) is placed for
SIM P	PLMN			Unlock PIN					use, the CPE will requi	re user to
SIM H	PLMN-ID Res	triction		Enable					GUI to get CPE connect	code via WEB
Index	x		MCC	Ν	INC	Dele	ete		network first time. But a SIM card is not change	as long as the ed, the CPE will
				Add	Cancel				not ask for PIN code ag	gain even the
									the correct PIN code up	p to three times.
				Save & Apply	Cancel				After three attempts, th locked out of use. The	e SIM will be user is required
									to enter the PUK code	manually via
									PUK code length is 8-1	2 digits.
									SIM PLMN Restriction	n:
									In this section, you can	enable the
									card. If the SIM card H	on the SIM
									not defined in the list pl SIM card will not be au	rovisioned, the ithorized to use
									by the CPE and wireles	ss connection
									will de defined.	

Advanced

In this menu, you can configure advanced options for the CPE operation.

Fast scan will allow you to quickly connect to good cell when they are first found instead of search the best cell. The ZUC encryption support is only required when your core network (EPC) force to use the ZUC encryption for access authentication. The operation mode allows you to select the UE capability for receiving and transmitting. Depending on the hardware implementation, 4x4 MIMO or 2x2 MIMO & CA can be selected for downlink operation. If the RF hardware supports 2TX, then 2Tx operation can be enabled.

In addition, the PSM timer and location service UE settings can also be configured for advanced users. Default settings should be used for normal operation.



LTE Network Security Appli	cations Management Maintenance Status	E Exit
Overview NDS PLMN Settings	Cell Selection PDN Settings SIM Card Advanced LTE SMS	6 Command Shell 🕺 admin
Advanced Settings		Help
Fast Scan Settings	✓ Enable	ZUC Support: Optional setting to support ZUC 128- EEA3/EIA3 encryption.
ZUC Support	Enable	PSM Timer: Power Save Management Timer.
DL Operation Mode UL Operation Mode	 ○ 2x2 ○ 4x4 ● CA ○ 1Tx ● 2Tx 	Once expired, the UE goes power saving mode and will not listen to paging but remain registered in the network. The default setting is 2 seconds
Mode T3324 T3412	□ Enable 20 2 seconds 1 10 hours	T3412: Once expired, the UE will perform Tracking Area Update. The default setting is 10 hours.
Location Service LCS Mode	Enable Enable	LCS Mode: Location Service Mode. LPP Mode: LTE Positioning Protocol Mode.
	Save & Apply Cancel	

■ LTE SMS

The LTE SMS page allows user to retrieve and display short messages received by the UE device. Message format, storage place and message filter can be configurere to screen and archieve the messages.

LTE Network Security Applications Management Maintenance Status	E Exit
Overview NDS PLMN Settings Cell Selection PDN Settings SIM Card Advanced LTE SMS	Command Shell 🕺 admin
Receive Message	Help
Receive Message	Receive Message:
Format TEXT 3GPP V	This page can be used to retrieve and show the short message service.
Storage NV V	
Filter ALL V	
Priority Storage Direction Type Time Message Delete	
Refresh	

Command Shell

The Command Shell is used to run LTE command via the WEB GUI interface. You can type the



command and click the APPLY button to execute.

LTE Network Security Applications Management Maintenance Status	🗲 Exit
Overview NDS PLMN Settings Cell Selection PDN Settings SIM Card Advanced LTE SM	IS Command Shell 🔥 admin
Command Shell	Help
Command Running Results	Commands: You can run command lines via the web interface. Fill the text area with your command and click <i>Apply</i> <i>Commands</i> to submit.
Command Apply Clear	

5 Network Configuration

Internet

This section allows user to configure the CPE operation mode, device name, MTU and etc. The CPE default Operation Mode is Router, and the LAN PC connected to device LAN port will obtain IP address via DHCP server of the device. The default MTU Size is 1500, user can modify the MTU Size if necessary.



LTE Network Security	Applications Management Maintenance Status	🖪 Exit
Internet LAN VPN O	2oS DDNS Traffic Control	🗍 admin
Internet Setup		Help
Internet Connection		Internet Connection:
Connection Mode	Router / NAT	Specify how the network connection will be established.
NAT	Enable	
MGMT and Data Interface	Combine Separate	Host Name: Enter the host name provided by your service provider.
Optional		Domain Name:
Device Name		Enter the domain name provided by
Host Name		your service provider .
Domain Name		
MTU	Default 1400	
	Save & Apply Cancel	

Note when setting the connection mode as L2 Bridge or L3 Bridge, there will be a warning window pops up. Remember the management IP address 192.168.0.1 and click the "**ok**" button.

When the user wants to manage the home page again, the PC should be configured a static IP address as 192.168.0.x manual in order to visit the CPE managing page http://192.168.0.1.

LAN Setting

The LAN setting allows user to specify the device LAN IP, DHCP server setting, Local DNS and etc. When Router mode is selected, the DHCP server should be enabled by default.

User is advised to leave the default setting unchanged for quick configuration and smooth device operation.



LTE Network Security Applications Management Maintenance Status	E Exit
Internet LAN VPN QoS DDNS Traffic Control	🤱 admin
LAN Setup	Help
Link MaxBitRate & Duplex	Link MaxBitRate & Duplex: In this page, you can configure Max Bit Rate and Duplex Negotiation.
Max Bit Rate Auto	Local IP Address: This is the address of the device.
Device IP Local IP Address 192. 168. 0. 1	Subnet Mask: This is the subnet mask of the device.
Subnet Mask 255 255 0 Local DNS	DHCP Server: Allows the device to manage your IP addresses.
Network Address Server Settings (DHCP)	Start IP Address: The address you would like to start with.
DHCP Server Image: Comparison of the server DNS Proxy Image: Comparison of the server Start IP Address 192.168.0.	Maximum DHCP Users: You may limit the number of addresses your device hands out.
Maximum DHCP Users 100 Client Lease Time 86400 seconds WINS Server 0, 0, 0, 0	Deny IP Address: IP address that device will refuse to grant access.
DHCP Static Leases Map	1
Index IP Address MAC Address 1 192.168.0. Image: State Stat	
2 192.168.0. 1 1 1 1 3 192.168.0. 1 1 1 1	
4 192.168.0. 192.168.0. 5 192.168.0. 192.168.0.	
Deny IP Address Delete	
Add Cancel	
Save & Apply Cancel	

■ VPN Setting Under Router Mode

This section allows user to configure VPN service for selected connection mode. In router mode, PPTP, L2TP and GRE can be selected. In L2 Bridge mode, only L2 GRE can be configured.



The router mode VPN configuration is shown below.

LTE Network Security	Applications Management Maintenance Status	🗲 Exit
Internet LAN VPN Q	oS DDNS Traffic Control	🖡 admin
VPN Setup		Help
VPN Protocol		Protocol Type:
Protocol Type	None None	In this page, you can configure data for PPTP VPN and L2TP VPN and
	PPTP L2TP GRE Save & Apply Cancel	GRE VPN.

The PPTP configuration under router mode is shown below.

LTE Network Security Appl	ications Management Maintenance Status	🖪 Exit
Internet LAN VPN QoS [DDNS Traffic Control	🧍 admin
VPN Setup		Help
VPN Protocol		Protocol Type:
Protocol Type	PPTP V	In this page, you can configure data for PPTP VPN and L2TP VPN and GRE VPN.
PPTP		
PPTP State	Disconnected	
PPTP IP Address		
Gateway (PPTP Server)		
User Name		
Password	Unmask	
PPTP MTU	1314	
PPTP MRU	1314	
Connection Strategy	Keep Alive	
	Redial Period 60 Second.	
PPTP Encyption	Enable	
Disable Packet Reordering	Enable	
Additional PPTP Options		
	Save & Apply Cancel	

The L2TP configuration under router mode is shown as follows.



LTE Network Security App	ications Management Maintenance Status	E Exit
Internet LAN VPN QoS I	DDNS Traffic Control	👗 admin
VPN Setup		Help
VPN Protocol		Protocol Type:
Protocol Type	L2TP V	In this page, you can configure the VPN services for PPTP, L2TP and GRE.
L2TP		
L2TP State	Disconnected	
L2TP IP Address		
Host Name		
User Name		
Password	Unmask	
L2TP Server		
L2TP MTU	1310	
L2TP MRU	1310	
Require CHAP	✓ Yes	
Refuse PAP	Yes	
Require Authentication	✓ Yes	
Connection Strategy	Keep Alive 🔻	
	Redial Period 60 Second.	
	Save & Apply Cancel	

The L2 GRE configuration under router mode is shown below.

LTE Network Security Applications Management Maintenance Status	🖪 Exit
Internet LAN VPN QoS DDNS Traffic Control	🧍 admin
VPN Setup	Help
VPN Protocol	Protocol Type:
Protocol Type GRE	In this page, you can configure the VPN services for PPTP, L2TP and GRE
GRE	
GRE Destination IP Address	
Host IP Address	
Remote IP Address	
Remote Private IP Address / 24	
Save & Apply Cancel	

■ VPN Setting Under L2 Bridge Mode

Under the L2 Bridge connection mode, only L2 GRE can be configured as follows.



LTE Network Security Management Maintenance Status	E Exit
Internet LAN VPN L2 Service QoS	🖇 admin
VPN Setup	Help
VPN Protocol	Protocol Type:
Protocol Type GRE T	In this page, you can configure the VPN services for PPTP, L2TP and GRE.
_ GRE	
GRE Destination IP Address	
Save & Apply Cancel	

■ L2 Service Under L2 Bridge Mode

Under the L2 Bridge connection mode, the user can use L2 Service configuration to manage and tag 802.1p or DSCP for different VLAN packets.

LTE Network Security Management Maintenance Status	🖻 Exit
Internet LAN VPN L2 Service QoS	🧍 admin
L2 Service Configuration	Help
ETH User VLAN Setting	VLAN Configuration:
 Enable untagged L2 user traffic Encapsulation DSCP (0-63) Enable tagged L2 user traffic 	In this page, you can configure tagged and untagged VLAN data passthrough settings.Meanwhile
r Classification criterias list	you can define classfication criterias' priority,VLAN ID,802.1P
Priority(0-255) VLAN ID(1-4094 or untag) 802.1P or DSCP Value (0-7) or (0-63) E-DSCP(0-63) Delete	or DSCP, and encapsulation DSCP corresponding to VLAN ID.
Add Cancel	
Save & Apply Cancel	

QoS Setting

This configuration menu allows user to tag DSCP or TOS value for CPE local data (Management) and LAN port data (Data).



LTE Network Security	Applications Management Maintenance Status	E Exit
Internet LAN VPN	QoS DDNS Traffic Control	🧍 admin
Quality Of Service (QoS)	Help
DSCP Configuration		DSCP Configuration:
MGMT DSCP	Enable ID 0 (0~63)	In this page, you can configure data classfication for DSCP and TOS
Data DSCP	Enable ID 0 (0~63)	
TOS Configuration		
MGMT TOS	Enable ID 0 (0~255)	
Data TOS	Enable ID 0 (0~255)	
	Save & Apply Cancel	

DDNS Setting Under Router Mode

This configuration menu allows user to configure use of different DDNS service for router mode operation.

LTE Network Security Appl	ications Management Maintenance Status	🖪 Exit
Internet LAN VPN QoS	DDNS Traffic Control	🧍 admin
Dynamic Domain Name System	(DDNS)	Help
DDNS		DDNS Service:
DDNS Service	DynDNS.org V	DDNS allows you to access your network using domain names instead
User Name	DynDNS.org	of IP addresses. The service manages
Password	ZoneEdit.com	domain information dynamically. You
Host Name	Dvnamic V	must sign up for service through TZO.com or DynDNS.org.
Wildcard		
DDNS Status		
Status	ddnsm.all_disabled	
Internet IP Address	10.11.102.35	
	Save & Apply Cancel	

■ Traffic Control Setting Under Router Mode

This configuration menu allows user to configure the data priority and allowed bandwidth for LAN data traffic.



LTE Network Security Applications Management Maintenance Status	E Exit
Internet LAN VPN QoS DDNS Traffic Control	🧍 admin
Traffic Control	Help
TC Settings	TC Settings:
TC Enable Status Enable Total Bandwidth UL/DL Bandwidth 0 / 0 Kbps	On this page you could set IP Traffic Control settings.
	Netmask Priority:
Netmask Priority	You may specify priority for all traffic from a given IP address or IP range.
Add Cancel	UL/DL Bandwidth:
Save & Apply Cancel	Value of UL/DL Bandwidth is 0 represent the UL/DL Bandwidth is Disable.

6 Security Configuration

■ Firewall

This allows user to configure CPE firewall.

LTE Network Security Applications Management Maintenance Status	🖪 Exit
Firewall ALG Defense Access Restrictions	🧍 admin
Security	Help
Firewall Protection	Firewall Protection:
SPI Firewall 🖉 Enable	Enable or disable the SPI firewall.
	Block WAN Requests
Block WAN Requests Block Anonymous Internet Requests Filter IDENT (Port 113)	By enabling the Block WAN Request feature, you can prevent your network from being "pinged" or detected, by other Internet users. The Block WAN Request feature also reinforces your
Save & Apply Cancel	network security by hiding your network ports. Both functions of the Block WAN Request feature make it more difficult for outside users to work their way into your network. This feature is disabled by default.

■ ALG

This allows user to configure the application level gateways for many common applications.



LTE Network Security	Applications Management Maintenance Status	E Exit
Firewall ALG Defense	Access Restrictions	🗍 admin
Application Layer Gatewa	ay (ALG)	Help
ALG Passthrough		ALG Passthrough:
IPSec Passthrough	Enable	You may choose to enable PPTP, FTP.H323 and so on passthrough to
L2TP Passthrough	Enable	allow your network devices to
PPTP Passthrough	Enable	communicate via ALG.
FTP Passthrough	Enable	
H323 Passthrough	Enable	
SIP Passthrough	Enable	
RTSP Passthrough	Enable	
	Save & Apply Cancel	

Defense

This allows user to configure defense policy for the LTE and local LAN interface to prevent hostile attack.





Access Restrictions

This allows user to define access policy for LAN devices. It can support URL blocking as well.

LTE Network Security Appl	ications Management Maintenance Status	E Exit
Firewall ALG Defense Acces	s Restrictions	🖡 admin
Access Restrictions		Help
Filter Access	Enable	Access Restrictions Policy: You may define up to 10 access policies. Click <i>Delete</i> to delete a policy
Policy Status	1 ▼ Delete Summary ● Enable ● Disable	or Summary to see a summary of the policy.
Policy Name	Edit List of PCs	Status: Enable or disable a policy.
Deny	Internet access during selected days and hours.	Policy Name:
		Days:
Everyday		Choose the day of the week you would like your policy to be applied.
Week	Sun Mon Tue Wed Thu Fri Sat	Times: Enter the time of the day you would like your policy to apply.
24 Hours	۲	Blocked Services:
From Blocked Services	0 12 v 00 v AM v To 12 v 00 v AM v	You may choose to block access to certain services. Click Add/Edit Service to modify these settings.
Catch all P2P Protocols	•	Website Blocking by URL:
P2P Protocol1 P2P Protocol2	None None	You can block access to certain websites by entering their URL.
P2P Protocol3	None	Website Blocking by Keyword:
P2P Protocol4	None Add/Edit Service	You can block access to certain website by the keywords contained in their webpage.
Website Blocking by URL Address		
	Save & Apply Cancel	



7 Applications Configuration

Port Range Forwarding

This allows user to configure the port range forwarding rules for the CPE in router mode.

LTE Network Security Applications Management Maintenance Status	E Exit
Port Range Forwarding Port Forwarding DMZ UPnP Port Triggering	👗 admin
Port Range Forwarding	Help
Forwards	Port Range Forwarding:
Application Start End Protocol IP Address Enable Delete	Certain applications may require to open specific ports in order for it to
Add Cancel	function correctly. Examples of these applications include servers and
	certain online games. When a request
Save & Apply Cancel	for a certain port comes in from the Internet, the device will route the data to the computer you specify Due to
	security concerns, you may want to
	ports you are using, and uncheck the
	Enable checkbox after you are
	iinisnea.

Port Forwarding

This menu allows user to configure the port forwarding rules for the CPE in router mode.

LTE Network Security Applications Management Maintenance Status	🖪 Exit
Port Range Forwarding Port Forwarding DMZ UPnP Port Triggering	👗 admin
Port Forwarding	Help
Forwards Application Port from Protocol IP Address Port to Enable Delete Add Cancel	Port Forwarding: Certain applications may require to open specific ports in order for it to function correctly. Examples of these applications include servers and certain online games. When a request for a certain port comes in from the Internet the device will route the data
	to the computer you specify. Due to security concerns, you may want to limit port forwarding to only those ports you are using, and uncheck the <i>Enable</i> checkbox after you are finished.

■ DMZ

This menu allows user to configure the DMZ setting for CPE in router mode. Web server, Telnet/SSH and Ping Service port can be exempted from DMZ mapping if required. By enabling DMZ option will make the specified local LAN host (DMZ IP) exposed to Internet.



LTE Network Security	Applications Management Maintenance Status	E Exit
Port Range Forwarding Port F	orwarding DMZ UPnP Port Triggering	🖡 admin
Demilitarized Zone (DMZ)		Help
DMZ		DMZ:
DMZ Enable Status	Enable	Enabling this option will expose the specified best to the Internet. All ports
DMZ Host IP Address	192.168.0. 0	will be accessible from the Internet.
Exclude Web Server Port	Enable	
Exclude Telnet/SSH Port	Enable	
Exclude Ping Service	enable	
	Save & Apply Cancel	

■ UPnP

This menu allows user to configure the uPnP application for on-demand "DMZ" support. The current forwarding rules created can be viewed and cleared if required.

LTE Network Security Applications Management Maintenance Status	🖪 Exit
Port Range Forwarding Port Forwarding DMZ UPnP Port Triggering	🖡 admin
Universal Plug and Play (UPnP)	Help
Forwards Description From (WAN) To (LAN) IP Address Protocol Delete - None - Delete All Auto-Refresh is On	Forwards: Configure Port forwarding for UPnP. Click the delete to delete individual entry.
UPnP Configuration	Allows applications to automatically setup port forwardings.
UPnP Service Enable UPnP Notification Interval 60 (30~600s)	
Save & Apply Cancel	

Port Triggering

This menu allows user to configure forward certain port range to different port range for specific protocol.



LTE Network Security Applications Management Maintenance Status	🖪 Exit
Port Range Forwarding Port Forwarding DMZ UPnP Port Triggering	🗍 admin
Port Triggering	Help
Forwards Triggered Port Range Forwarded Port Range Application Start End Protocol Start End Enable	Application: Enter the application name of the trigger.
- None -	Triggered Port Range:
Add Remove Save & Apply Cancel	For each application, list the triggered port number range. Check with the Internet application documentation for the port number(s) needed.
	Forwarded Port Range:
	For each application, list the forwarded port number range. Check with the Internet application documentation for the port number(s) needed.
	Start:
	Enter the starting port number of the Triggered and Forwarded Range.
	End:
	Enter the ending port number of the Triggered and Forwarded Range.

8 Management

Device Management

The menu allows user to configure device management mode and various control. Telnet, SSH, and HTTPs can be enabled or disabled via configuration. Auto WEB GUI logout can also be configured.

evice Management Setting		Help
Remote Management		Remote Management:
R069 Management	Enable •	This section configures whether to enable TR069 management for the device.
Device Management Options		Device Management Options:
elnet Service	Enable	This section defines the device access permission setting
SH Service	Enable	besides involge and management options.
ccess Control	Remote Management 🔻	Access Control:
TTPs From WAN	Enable HTTPs Port 443	It defines the login restriction for Web and SSHD access, well controls how hard RESET works
emote IP Address Pool:	0, 0, 0, 0, 0, 0	weil controls now hard NEGET works.
uto-Logout Timeout	Enable • 20 (minutes:1~25)	

When Telnet is enabled, user can telnet to CPE according to the below steps:

- cmd shell and run command:
- telnet 192.168.0.1
- > Login: root
- Password: root123



TR069

The menu allows user to configure the necessary setting for TR069 management of the CPE device.

LTE Network Security Applications Managemen	t Maintenance Status	🖬 Logout 🛛 🙂 Reboot
Device Management TR069 Configuration SNMP		• 🏅 admin
TR069 Management Setting		Help
TR069 Configuration		TR069 Configuration
ACS URL		This part contains TR069 ACS server and ACS STUN server configuration
ACS Username		
ACS Password		
Re-enter Password		
Periodic Inform Enable	✓	
Periodic Inform Interval	3600 seconds(90~604800)	
Periodic Inform Time	2001 - 01 - 01 T 00 : 00 : 00	
Connection Request Username		
Connection Request Password		
Re-enter Password		
L		
ACS STUN Configuration		
STUN Enable Status	Enable	
Server Address		
Server Port	(0~65535)	
Username		
Password		
Re-enter Password		
Minimum Keep Alive Period	10 seconds(10~90)	
Maximum Keep Alive Period	90 seconds(10~90)	
)	
Save & App	ly Cancel Connect ACS	

■ SNMP

The menu allows user to configure the SNMP setting.

LTE Network Security Applications Management	Maintenance Status	🖪 Logout 🖞 Reboot
Device Management TR069 Configuration SNMP		• 🏃 admin
SNMP		Help SNMP:
SNMP Agent Read-Only Community Read-Write Community Agent Port	Enable public private 161	Simple Network Management Protocol. Read-Only Community: Enables a remote host to retrieve 'read-only' information from this device.
Sa	ve & Apply Cancel	Read-Write Community: Used in requests for information from a remote host and to modify settings on this device.
		Agent Port The listening UDP port number on this device.



9 Maintenance

General

The menu allows user to configure the WEB GUI login password, time and language setting.

LTE Network Security Ap	pplications Management Maintenance Status	🖪 Exit
General Firmware Upgrade Co	onfig Management Ping Iperf System Reset	🖡 admin
Change Password		Help
Change Password Username Old Password New Password Re-enter to Confirm	admin	Old Password: The password currently in use. New Password: The new password length is 4 to 20 characters, the characters of 0~9 or a~Z Enter the new password a conserved time to confirm it
Time Settings		
Time Settings	✓ Enable UTC / none ▼	Time Settings: Choose the time zone you are in and Summer Time (DST) period. The device can use local time or UTC time.
NTP Server Use Local Host Time Refresh Interval	0.pool.ntp.org (e.g. time.nist.gov) Tue 10 Oct 2017 01:35:09 Sync 720 (minutes:5 ~ 1440)	Language Management: The language selection allows user to select the prefered laguange for Web GUI interface.
Language Management		Auto-Refresh:
Language Selection	English •	This option controls whether the Web page contains dynamica data will be automatically refreshed when the page is open.
Auto-Refresh		
Auto-Refresh Auto-Refresh	✓ Enable	
	Save & Apply Cancel	

■ Firmware Upgrade

This menu allows user to perform firmware upgrade via WEG GUI with option to reset to factory setting. It can also configure the remote upgrade using FTP, TFTP or HTTP.



LTE Network Security	Applications Management Maintenance Status	🖪 Exit
General Firmware Upgrade	Config Management Ping Iperf System Reset	👗 admin
Firmware Management		Help
Local Firmware Upgrade		Local Firmware Upgrade:
Reset to defaults after upgrade Please select a file to upgrade	No Reset Reset to Factory Defaults Choose File No file chosen	Click on the <i>Browse…</i> button to select the firmware file to be uploaded to the device.
	Upgrade	Click the Upgrade button to begin the upgrade process which must not be interrupted.
Firmware Rollback		Pomoto Eirmwaro Ungrado:
Current Firmware Version:	V1.2.0 PACK 0 (Ver.645) Build on: Jun 6 2017	You need to fill in the connection
Rollback Firmware Version:	V1.2.0 PACK 0 (Ver.645) Build on: Jun 6 2017	configs of HTTP,FTP or TFTP server.
	Rollback	Click the Upgrade button to begin the upgrade process which must not be
Remote Firmware Upgrade		interruptea.
Update Method	None	Upgrade:
		Link with eNB is reached in less than
	Save & Apply Cancel	
		automatically

Config Management

This menu allows user to backup or restore device configuration file.

LTE Network Security Applications Management Maintenance Status	E Exit
General Firmware Upgrade Config Management Ping Iperf System Reset	🧍 admin
Backup Configuration	Help
Backup Settings	Backup Settings:
Click the "Backup" button to download the configuration backup file to your computer.	You may backup your current configuration in case you need to reset the device back to its factory
Backup	default settings.
Restore Configuration	Click the Backup button to backup your current configuration.
Restore Settings	Restore Settings:
Please select a file to restore Choose File No file chosen	Click the Browse button to browse for a configuration file that is currently saved on your PC
W A R N I N G Only upload files backed up using this firmware and from the same model of device. Do not upload any files that were not created by this interface!	Click the Restore button to overwrite all current configurations with the ones in the configuration file.
Restore	



■ Ping

This menu allows user to perform PING tests using WEB GUI interface. Both IPv4 and IPv6 can be supported.

LTE Network Security Applications Management Maintenance Status	E Exit
General Firmware Upgrade Config Management Ping Iperf System Reset	🧍 admin
Ping Test	Help
Ping Test	Ping Test:
IP Protocol Ping Start	The Ping test tool is used to check the network connectivity and latency. Enter the destination address and click on the start button to begin the Ping test.

■ Iperf

This menu allows user to configure iPerf testing using WEB GUI interface. Both TCP and UDP tests can be supported. Remote iPerf server is required to conduct the tests.

LTE	Network Security	Applications Management	Maintenance Status	🖬 Exit
Gene	eral Firmware Upgrade	Config Management Ping	Iperf System Reset	👃 admin
Ipe	rf			Help
lpe	erf Settings			Iperf Configuration:
Stat	tus	Enable Disable		In this page, you can configure data classfication for Iperf.
Ser	ver Address			Noto:
Ser	ver Port	5001	(1024~65535)	Please insure the firewall is disabled
Mar	nagement Port	5001	(1024~65535)	when testing WAN throughput with
Mea	asurement Time	60	Seconds	Iperf.
Pro	tocol Type	TCP V	_	Measurement Time:
Win	ndow size	256	KB	The measurement time and client time
TCF	P Client Number	1		must be consistent.
Re	sult			
Upi	ink Speed	- Mbps		
Dov	vnlink Speed	- Mbps		



System Reset

This menu allows user to reboot the device or restore the device to factory defaults. Special care needs to be taken when restoring factory defaults.

LTE Network Security Applications Management Maintenance Status	E Exit
General Firmware Upgrade Config Management Ping Iperf System Reset	🧍 admin
System Reset	Help
System Reboot	System Reboot:
System Reboot Reboot	Click the Reboot button to restart the device.
Reset Device Settings	Restore Factory Defaults:
Restore Factory Defaults Restore	This will restore the device to original factory setting. User will need to reconfigure the authentication setting in order to get the device operational.



10 Status

System

The menu shows the general system info of the CPE device. It includes connection, system, CPE and memory usage information.

LTE Network Security A	pplications Management Maintenance	e Status	E Exit
System Network LAN			🧍 admin
Internet			Help
Connection Info			Connection Info:
Login Type	LTE PDN		This shows the information required by your ISP for connection to the
IP Address	10.11.102.78		Internet.
Subnet Mask	255.255.255.255		Device Info:
Default Gateway			This is the specific name for the
DNS	202.96.128.86 202.96.134.33		device, which you set on the Setup
IPv6 Address			tad.
IPv6 DNS			MAC Address:
Device Info			This is the device's MAC Address, as seen by your ISP.
System			
Manufacturar			Firmware Version:
Braduat Tuna	LTE R42/42 Outdoor CRE		
Product Type Reard Name			Current Time:
Board Version	0.64		This is the time, as you set on the Setup Tab
Hardware Version	V1 0		
Firmware Version	V1.3 0 PACK 0 (Ver.818) Build on: Sep 27	2017	Up Time:
MAC Address	6C:AD:EF:FF:FF:4B	2011	This is a measure of the time the device has been "up" and running
Host Name			
Domain Name			Load Average:
Current Time	Tue 10 Oct 2017 01:37:10		This is given as three numbers that represent the system load during the
Up Time	9 min		last one, five, and fifteen minute
Load Average	0.15, 0.20, 0.11	15%	periods.
CPU			
CPU Model	0		
CPU Clock	400 MHz		
Total Available	75544 kB / 131072 kB	58%	
Free	43196 kB / 75544 kB	57%	
Used	32348 kB / 75544 kB	43%	
Buffers	0 kB / 32348 kB	0%	
Cached	8456 kB / 32348 kB	26%	
Active	7740 kB / 32348 kB	24%	
Inactive	5612 kB / 32348 kB	17%	
L			



■ Network

The menu shows the general network status that includes PDN interface info, device routing info, and ARP table.

System Network LAN & admin Network Status Itelp PDN Info PDN Info APN internet PDN Info: IP Address 10.11.102.78 PDN Info: DNS 202.96.128.86 202.96.134.33 IPv6 Address IPv6 DNS Route: Network The routing table information. ARP: The ARP table information. 10.00.177 255.255.255.0 U 0 0 10.0.0177 255.255.255.0 U 0 0 IteOpdn0 10.1.1.0 255.255.255.0 U 0 0 br/depdn0 127.0.0 255.255.255.0 U 0 0 br/depdn0 192.168.0.0 255.255.255.0 U 0 0 br/depdn0 192.168.0.0 255.255.255.0 U 0 0 br/depdn0 192.168.0.0 255.255.255.0 U 0 0 br/depdn0	LTE Network Security Appl	ications Manager	nent Mainte	nance	Status		🗲 Exit
Network Status Help PDN Info PDN Info APN Internet IP Address 10.11.102.78 DNS 202.96.128.86 202.96.134.33 IPv6 Address IPv6 Address IPv6 DNS Route Route The routing table information. ARP: The ARP table information. 10.0.0.177 255.255.255.0 10.0.0.177 255.255.255.0 10.0.0.177 255.255.255.0 11.1.0 255.255.255.0 127.0.0.0 255.255.255.0 122.168.0.0 255.255.255.0 V 0 ARP PAddress HW type	System Network LAN						🤱 admin
PDN Info Internet PDN Info: APN internet Image: Construction of the second of the secon	Network Status						Help
192.168.0.71 0x1 0x2 ac:a2:13:6a:12:09 * br0	Network Status PDN Info APN IP Address DNS IPv6 Address IPv6 DNS Route Destination Default & * 10.0.0177 10.1.1.0 * 127.0.0.0 * 192.168.0.0 IP Address HW type 192.168.0.71	internet 10.11.102.78 202.96.128.86 202 Genmask 0.0.0 255.255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	▼ 2.96.134.33 2.96.134.33 U 0 U 0 U 0 U 0 U 0 U 0 U 0 U 0	etric F 0 0 0 0 0 0	Ref Use O O O O O Aask	liface IteOpdn0 IteOpdn0 br0 Io br0 Device br0	Help PDN Info: When the wanprotol is PDN show PDN IP Map. Route: The routing table information. ARP: The ARP table information.



■ LAN

The menu shows the local LAN network status including the LAN interface and DHCP Server setting and current DHCP clients connected.





11 FAQ and Troubleshooting

1) My PC cannot connect to the CPE.

- Re-plug the PC Ethernet cable and check if the PC LAN connection is up or showing activity.
- Check if the PoE power adapter LED is on. If it is not, check the power cord and make sure it is connected properly. Also verify that the AC power supply is available.
- If the PC LAN shows no activity and PoE adapter LED is off but the power cord is connected properly and there is AC supply, then it is likely the PoE adapter is damaged. Please contact distributor to obtain replacement part.

2) My PC cannot acquire IP from the CPE.

- First check if the PC NIC interface is up and working properly. Then check the PC NIC configuration. If the device is running in router mode, then make sure the PC DHCP is enabled. Open the MS-DOS or CMD window, enter "ipconfig /release" and "ipconfig /renew" commands and see if PC can obtain IP correctly.
- If the device is configured to operate in bridge mode, the PC NIC IP should be manually configured to be 192.168.0.10 / 255.255.255.0 in order to gain access to the device WEB GUI. When you are done with the device configuration, the PC NIC IP should be reconfigured to use DHCP for proper LTE networking.
- If the problem persists, please contact the operator or distributor for further diagnose.

3) My CPE networking is not working properly.

- You may want to check if the LTE connection is up and running properly. You can do this by login the WEB GUI and check the Interface Info page.
- You may want to perform a factory reset and see if the problem is being corrected. You can do this by log into the WEB GUI using the "admin123" administrator password and perform restore the unit to default factory setting.
- If the problem cannot be corrected by factory reset, please contact the operator or distributor for further diagnose.

4) I forget the login password and like to reset the unit to factory default.

- Please look up the IMEI number in the CPE unit label. The unit can be reset to factory default setting by entering the IMEI number in the WEB login window.
- After the unit is reset to factory default, you can login using the default password.