

User manual

SLC-120T420GA
LTE Network Outdoor CPE



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Introduction to the Product

Thank you for choosing SLC-120T420GA, Outdoor CPE.

SLC-120T420GA offers better performance over Outdoor CPE given that LTE reception is not impeded.

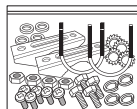
It offers easy installation, reliable network connection, advanced security & authentication features, and more.

Please read this User Manual carefully to learn about the SLC-120T420GA. It will help you to meet your diverse communication needs, at home and at the office.

1. Package Contents



Main Unit



Mounting Kits



User Manual



PoE



LAN Cable



AC Code
(100~240V)

Note :

- Please note that it performs the best with the accessories which are contained in the package, and the manufacturer will not be responsible for defects/damage or shortened product life resulting from the use of product in conjunction or connection with accessories, products, or ancillary/peripheral equipment not approved by the manufacturer.
- Please use the product with accessories which are contained in the package.
- The components, appearance of the product, specifications and etc. are subject to change without prior notice for performance improvement.

2. Functional Features

Function		Features
Model Name		SLC-120T420GA
LTE	Technical Standard	LTE 3GPP Release 12, Category 15, TDD Configuration 2 DL : 580Mbps (4x4 MIMO-2Layer, 4CA, 256QAM), UL : 30Mbps (2CA, 64QAM)
	Frequency Band	43(3650 ~3700MHz), 48(3550 ~3700MHz)
	Max. Transmit Power	11dBm
	Antenna	Internal Patch Antenna, 4x4 MIMO, 10.59dBi Gain
	HPBW (3dB Beam Width)	+/- 45 degree Dual Linear / Directional
External Interface		1 x Gigabit Ethernet RJ45 LAN port
		1 x Mini USIM Card Slot
		1 x Reset button
LED Indicators	Power	Sharing with Signal Strength
	Signal Strength	5 LEDs with 1 color (5 Level display)
Operating Temperature		-40° to +70°C
Power Supply		IEEE 802.3af, Giga PoE Injector (Input : 100~240VAC, Output : 48V/0.45A)
Dimension		275(W) x 285(D) x 78(H)mm

3. LED Presentation



Status icon & LED indicator	
Boot in progress	Blinking Yellow LED (1), Blinking period = 1sec
Network connection	Number of LED depending on signal strength - Most Strong Signal : Five yellow LED - Strong Signal : Four yellow LED - Middle Signal : Three yellow LED - Weak Signal : Two yellow LED - Very Weak Signal : One yellow LED

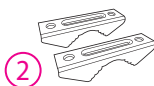
4. Mounting Configuration

Package List

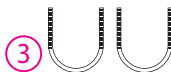
You need the following :



① One Bracket



② Mounting Bar(2ea)



③ Mounting U-Bolt(2ea)



④ Bolts(4ea)



⑤ Toothed lock washer(4ea)



⑥ Bolt M3(6ea)



⑦ Nuts(4ea)



⑧ Spring Washers(4ea)



⑨ Washer(4ea)

5. Assembly sequence optimization

Step 1

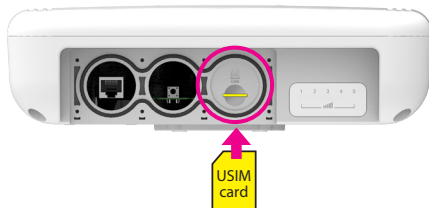
Remove the two Bolt M3 from the outdoor CPE.

* Remaining 6 screws are enclosed in the mounting kits as ⑥



Step 2 (Installing USIM Card)

Carefully insert the USIM Card into USIM slot.



CAUTION :

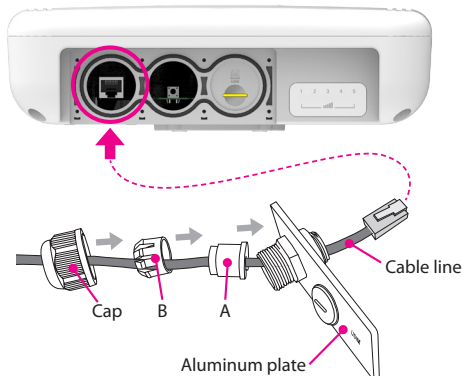
The surface of IC(metal) should be facing downward from the USIM card.



Step 3

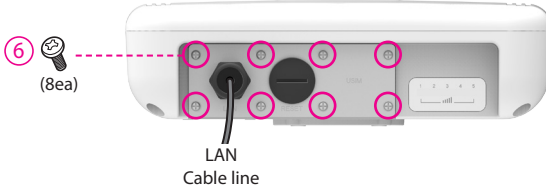
Remove the cap by turning. Then follow the next steps as shown below.

1. Remove the cap.
2. Put A, B, Cap and Aluminum plate to cable line in order.
3. Plug the cable line into the **LAN** hole of outdoor CPE.
4. Connect A and B in order.
5. Lastly, connect Cap to Aluminum plate by turning.



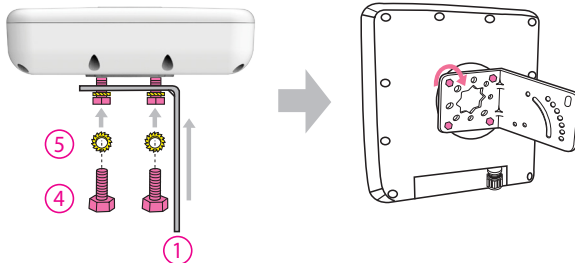
Step 4

Assemble the Aluminum plate and outdoor CPE using the screws Bolt M3(8ea).



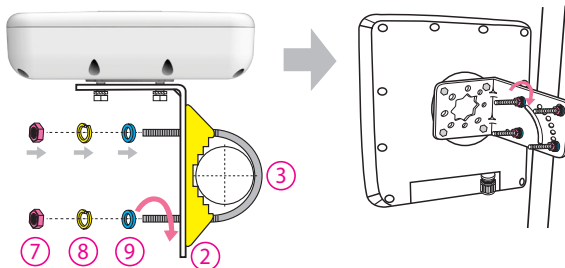
Step 5

Attach item 1 to the back side of the device using item 4 as shown.
(Insert item 5 into item 4 before installing)



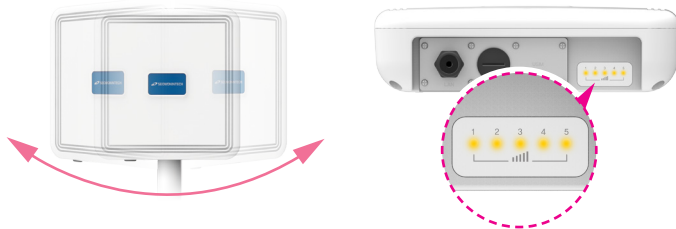
Step 6

Install the device to pole using item 2 and 3, tighten the bracket by using item 7, 8 and 9.



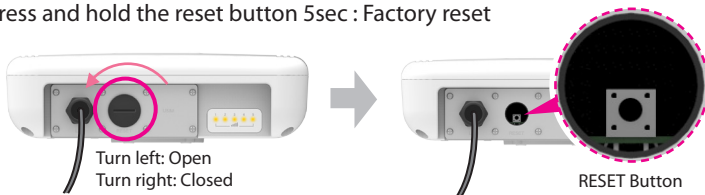
Step 7

Adjust the device, using the different position on the bracket.
Check the LED light (1~5).



RESET Button(When the device turned On)

- Press the reset button once : Device reboot
- Press and hold the reset button 5sec : Factory reset

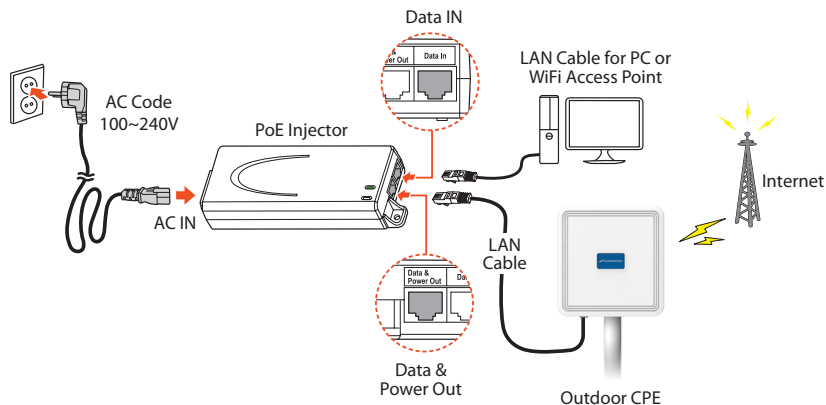


Note : If you forget the Login password for the Outdoor CPE or IP address after making changes, use the reset button to restore the Outdoor CPE to its original factory default settings.

Configuration

1. Network Configuration

External Network



Safety precaution : Do not allow the PSE adapter to get wet. Keep it inside of the building. Liquid could damage your device or cause you injuries. Water damage can void your warranty. It is recommended to use the accessory provided.

Install a Outdoor CPE after connecting to the network.

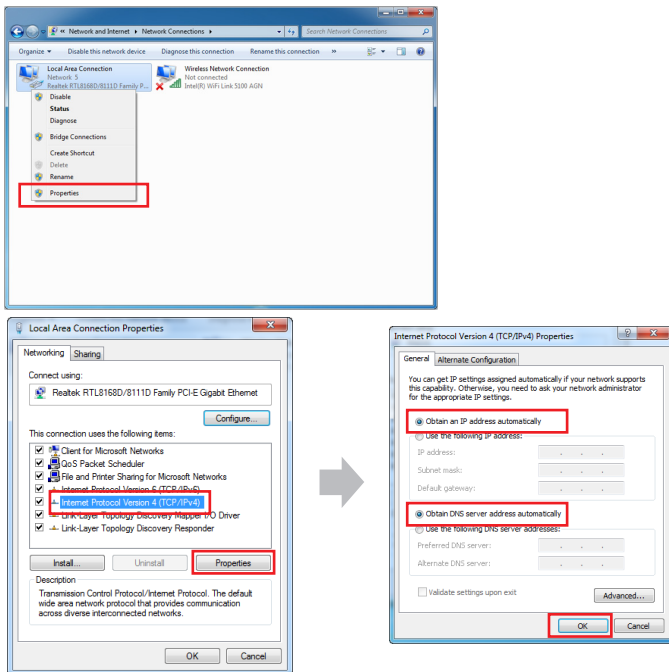
If normal connection between Outdoor CPE and PC is checked, you have to set up the PC and Outdoor CPE. The purpose of PC setup is to control network configuration for Windows Windows 7/8/10 or Mac OS X to use the Internet while the PC is connected to a Outdoor CPE.

The purpose of Outdoor CPE setup is to connect the Outdoor CPE to the Internet. Please refer to the Outdoor CPE Setup chapter.

2. PC Configuration(Windows 7)

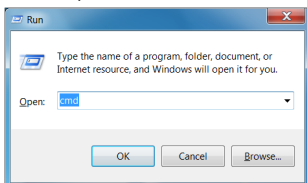
Most computers already have TCP/IP configuration enabled. For your computer to support CPE, please verify that the IP address and DNS settings are automatically generated in the Local Area connection of your Internet Protocol (TCP/IP) properties.

- In a Windows environment :
- Click **"Start"** button >> Click **"Control Panel"** >> Click **"Network and Internet Connection"** >> Click **"Network Connection"** >> Right-click **"Local Area Connection"** and Select **"Properties"** >> Select **"Internet Protocol 4 (TCP/IPv4)"** and click **"Properties"** >> Select **"obtain an IP address automatically"** and **"obtain DNS server address automatically"** >> Click **"OK"**.



3. How to check your IP address

- Open the Command Prompt window by clicking the “Start” button and selecting “Run”. Enter “cmd”, and click the “OK” button.



<Run cmd>

- When the Command Prompt window opens, enter the “ipconfig” command to verify the IP address, Subnet mask, and Gateway, which are automatically assigned to your PC.

Note: PCs connected to Device will receive own assigned IP address.

```
C:\>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : 
    IP Address. . . . . : 192.168.1.100
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1

C:\>_
```

<Verify IP address>

```
C:\Users\WSteve_Kin>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:
Reply from 192.168.1.1: bytes=32 time=1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 8ms, Average = 2ms
```

- If the host can reach the device using the ping command, the device has successfully attached.

Note: If an IP address is not assigned, check the following. and Then restart the PC and check whether an IP address is assigned.

- LAN cable connection between PC and CPE
- Check TCP/IP setup details

Log-in to Web Interface

The Web Browser allows you to manage the Device and to view.

In the Address Bar :

- Go to WEB "**http://192.168.1.1**" then press ENTER to access the login screen.
- The default one is "**user**" for both User Name and Password.
- You can change the Password after logging in (User Name and Password are case-sensitive).

Username = **user**
Password = **user**



Note : The Web Interface can be accessed by entering **http://192.168.1.1** in the Address Bar, regardless of the network connection status. When there is no input for 1 hour after your login to the Web Interface, you will be automatically logged out.

Setup on the web page

1. Dashboard

The screenshot displays the SEOWON INTECH web dashboard. At the top, there is a header bar with the company logo, a search icon, a user profile icon labeled 'user', a language dropdown set to 'English', and a 'Logout' button. On the left side, a 'Menu' sidebar lists 'Dashboard' (selected), 'Connection Mode', 'Status', and 'Settings'. The main content area, titled 'Dashboard', is divided into several sections: 'Mobile Network' showing 'Mode' as 'LTE Only' and 'Operator' as 'SEOWON'; 'Monitoring' showing data rates (all 0 Kbps) and 'Device Up Time' as '12:12:01 up 2 min'; 'About' showing 'Firmware Version' as '1.0.4' and 'Firmware Creation Date' as '2017.12.06-19:07'; 'LTE' showing 'UICC State' as 'UICC Ready', 'Connection State' as 'Not connected', and 'PDN Type'; 'Network' showing 'LAN IP Address' as '192.168.1.1', 'LAN IP Subnet Mask' as '255.255.255.0', 'WAN IP Address', 'WAN IP Subnet Mask', and 'Operation Mode' as 'NAT'; and 'Firewall' showing 'Status' as 'Enable'.

- Select “Dashboard” from the left menu.
- You can see the Mobile Network, LTE, Network, Firewall, Monitoring and Firmware Information.

2. Connection Mode

The screenshot shows a web interface for SEOWON INTECH. At the top, there is a header bar with the company logo, a search icon, a user profile icon labeled 'user', a language dropdown set to 'English', and a 'Logout' button. On the left side, there is a vertical menu with the following items: 'Menu' (with a sub-menu icon), 'Dashboard' (with a gear icon), 'Connection Mode' (with a person icon and highlighted in blue), 'Status' (with a status icon), and 'Settings' (with a gear icon). The main content area is titled 'Connection Mode' and contains two sections. The first section, 'Operation', has a label 'Auto-connect' and a dropdown menu currently set to 'Auto'. To the right of this is a blue 'Apply' button. The second section, 'Connect Manager', shows the 'Status' as 'Connecting'. Below this, the 'Action' row contains two buttons: a blue 'Connect' button and a greyed-out 'Disconnect' button.

- Select “**Connection Mode**” from the left menu.
- You can select operation mode Auto or Manual.
- You can see the status of Connect Manager.
- Start LTE Connection by clicking “**Connect**” or stop by clicking “**Disconnect**” button.

3. Status

3.1 LTE

SEOWON INTECH

user English Logout

Menu

- Dashboard
- Connection Mode
- Status**
 - LTE**
 - Network
 - Device Details
 - Device Performance
- Settings
 - LTE
 - Network
 - Firewall
 - User Management
 - Firmware Management
 - Monitoring

LTE Status

LTE Information **LTE Status** LTE Statistics

LTE Status

UICC State	UICC Ready	Connection	Connected
Band	48		
APN Name		PDN Type	IPv4 & IPv6
IP v4 Address	192.168.3.18	IP v6 Address	2600:0:0:0:0:05:346
PLMN Search	Success	MCC	001
PLMN Selected	00101	MNC	01
Cell Global ID	0xdbc8602 (231572994)	EMM State	Registered [EMM-REGISTERED]
eNodeB ID	0xdbc86 (904582)	Cell ID	0x2 (2)
Current UL T/P	18 Kbps	Current DL T/P	15 Kbps
Service Cell State	RRC CONNECTED		
CQI	15		
Transmission Mode	TM [4]	Auto Refresh	<input type="checkbox"/>
Current CA	2 CA	Current Uplink CA	2 CA
Primary Cell			
Physical CELL ID	0x3c (60)	TX power	-10.6 dB
RSSI	-62.4/-60.6 dBm	RSRP	-88.4/-86.5 dBm

- Select “**Status**” “**LTE**” from the left menu.
- You can see the LTE Information, Status and Statistics by clicking each tab.

3.2 Network

SEOWON INTECH

user English Logout

Menu

- Dashboard
- Connection Mode
- Status**
 - LTE
 - Network**
 - Device Details
 - Device Performance
- Settings

Network Information

WAN LAN

LAN

DHCP Server	Enable	MAC Address	00:21:07:12:34:62
Gateway IP Address	192.168.1.1	Gateway Subnet Mask	255.255.255.0
Rx packets	1251	Tx packets	1722
Rx bytes	297523	Tx bytes	1985285

Lease Status Table

No.	Client Host Name	MAC Address	IP Address
1	oskwon-PC	C8:08:E9:6F:CF:57	192.168.1.2

- Select “Status” “Network” from the left menu.
- You can see the WAN, LAN status and Lease Status Table.

3.3 Device Details

SEOWON INTECH

TX user English Logout

Menu

- Dashboard
- Connection Mode
- Status**
 - LTE Network
 - Device Details**
 - Device Performance
- Settings

Device Details

Device Time

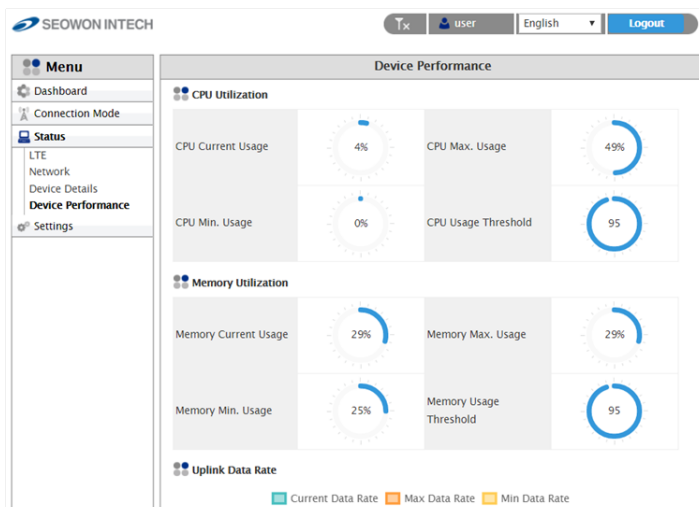
Current Local Time	2017-12-22 12:15:09	Time Server	my.pool.ntp.org
Synchronize With PC	Sync	Time Zone	Seoul
Daylight Saving Time	Disable		

Device Information

ODM	Seowonintech co., LTD.	Product Name	SLC-120T420GA
OUI	00:21:07	Serial Number	SEOWONXX130T03-0000001
Firmware Version	1.0.4	Firmware Creation Date	2017.12.06-19:07
Hardware Version	1.1		

- Select **“Status”** **“Device Details”** from the left menu.
- You can see the device time and device information.

3.4 Device Performance



- Select “Status” “Device Performance” from the left menu.
- You can see the system performance such as CPU, memory, UL/DL data rate and firewall status.

4. Settings

4.1 LTE

4.1.1 Cell Selection

The screenshot shows the Seowon Intech web interface. At the top, there is a header with the Seowon Intech logo, a signal strength indicator, a user profile icon labeled 'user', a language dropdown menu set to 'English', and a 'Logout' button. On the left side, there is a vertical menu with the following items: Menu, Dashboard, Connection Mode, Status, Settings (highlighted), LTE, Cell Selection (highlighted), Cell Lock, PCI Cell Lock, SIM Management, Default PDN, Multiple PDN, Internet MTU, IPv6 Settings, Network, Firewall, User Management, Firmware Management, and Monitoring. The main content area is titled 'Cell Selection' and contains two sections. The first section, 'Band Selection', has a 'Mode' dropdown set to 'Full Band', a 'Status' field showing '43.48', and a 'Band Selection' row with checkboxes for 'Band-43' (checked) and 'Band-48' (checked), followed by an 'Apply' button. The second section, 'Cell Selection Option', has a 'Power Scan Option' row with three radio button options: 'First Detected Cell' (selected), 'Strongest Cell(Power On)', and 'Strongest Cell(Always)', followed by an 'Apply' button.

SEOWON INTECH

user English Logout

Menu

- Dashboard
- Connection Mode
- Status
- Settings**
- LTE
- Cell Selection**
- Cell Lock
- PCI Cell Lock
- SIM Management
- Default PDN
- Multiple PDN
- Internet MTU
- IPv6 Settings
- Network
- Firewall
- User Management
- Firmware Management
- Monitoring

Cell Selection

Band Selection

Mode: Full Band

Status: 43.48

Band Selection: ☒ Band-43 ☒ Band-48 **Apply**

Cell Selection Option

Power Scan Option: ☒ First Detected Cell ☐ Strongest Cell(Power On) ☐ Strongest Cell(Always) **Apply**

- Select “Settings” → “LTE” → “Cell Selection” from the left menu.
- You can change the mode “Full Band” or “Frequency”.
- Check the box and click the “Apply” button.

4.1.2 Cell Lock

The screenshot displays the SEOWON INTECH web interface. At the top, there is a header with the company logo, a user profile icon labeled 'user', a language dropdown set to 'English', and a 'Logout' button. On the left side, a 'Menu' sidebar is visible, with 'Settings' expanded to show 'LTE' options, including 'Cell Lock'. The main content area is titled 'Cell Lock' and contains two sections: 'Search Cell' and 'Cell Lock List'. The 'Search Cell' section features a table with columns: Check, Index, DL-EARFCN, PCI, RSRP(dBm), RSRQ(dB), and SINR(dB). A single entry is shown with Index 1, DL-EARFCN 42890, PCI 0x23 (35), RSRP -106.4/-107.9, RSRQ -7.0/-7.1, and SINR 20.0/21.3. Below the table are 'Add' and 'Search' buttons. The 'Cell Lock List' section has an 'Add +' button and a table with columns: Check, DL-EARFCN, and PCI. Below this table are 'Delete', 'Delete All', and 'Apply' buttons.

Check	Index	DL-EARFCN	PCI	RSRP(dBm)	RSRQ(dB)	SINR(dB)
<input checked="" type="checkbox"/>	1	42890	0x23 (35)	-106.4/-107.9	-7.0/-7.1	20.0/21.3

Check	DL-EARFCN	PCI
-------	-----------	-----

- Select “Settings” “LTE” “Cell Lock” from the left menu.
- You can add current cell to lock or delete cell to unlock in the list.
- You can manually add cell by clicking “Add+” button.
- Finish setup by clicking the “Apply” button.

4.1.3 SIM Management

The screenshot shows the SEOWON INTECH web interface. At the top, there is a header with the company logo, a language dropdown set to 'English', and a 'Logout' button. On the left, a 'Menu' sidebar lists various options: Dashboard, Connection Mode, Status, Settings, LTE, Cell Selection, Cell Lock, SIM Management (highlighted), Default PDN, Multiple PDN, Internet MTU, IPv6 Settings, Network, Firewall, User Management, Firmware Management, and Monitoring. The main content area is titled 'SIM Management' and contains three sections: 1. PIN Information: A table showing 'PIN Status' as 'PIN DISABLED', 'RETRIES PIN' as '3', and 'RETRIES PUK' as '10'. A 'Refresh' button is to the right. 2. PIN Management: A form with a 'PIN Code' input field, a 'Verify' button, and 'Enable' and 'Disable' buttons. 3. PIN Change: A form with 'PIN Code', 'New PIN Code', and 'Confirm New PIN Code' input fields, and a 'Change' button. 4. PIN Unblock: A form with 'PUK Code' and 'New PIN Code' input fields, and an 'Unblock' button.

SIM Management	
PIN Information	
PIN Status	PIN DISABLED
RETRIES PIN	3
RETRIES PUK	10
Refresh	
PIN Management	
PIN Code	<input type="text"/>
Verify Enable Disable	
PIN Change	
PIN Code	<input type="text"/>
New PIN Code	<input type="text"/>
Confirm New PIN Code	<input type="text"/>
Change	
PIN Unblock	
PUK Code	<input type="text"/>
New PIN Code	<input type="text"/>
Unblock	

- Select “Settings” “LTE” “SIM Management” from the left menu.
- You can see the current status of SIM.
- Only the button operation is enabled to match the current status.
 - If you SIM card is locked, PIN Status shows “PIN ENABLED NOT VERIFIED”.
 - Then you should enter the PIN code and click the “Verify” button.
 - After success unlock PIN then you can attached the LTE network.
 - You can set new PIN code by unblocking with PUK code.
 - If you failed to unblock PIN, you never use this SIM card.

4.1.4 Default PDN

The screenshot shows the SEOWON INTECH web interface. At the top, there is a header with the company logo, a user profile icon labeled 'user', a language dropdown set to 'English', and a 'Logout' button. On the left, a 'Menu' sidebar lists various options: Dashboard, Connection Mode, Status, Settings (highlighted), LTE (expanded), Cell Selection, Cell Lock, SIM Management, Default PDN (highlighted), Multiple PDN, Internet MTU, IPv6 Settings, Network, Firewall, User Management, Firmware Management, and Monitoring. The main content area is titled 'Default PDN' and contains a 'Default PDN Connection' section. This section has three fields: 'APN Name' (a text input box), 'Authentication Type' (a dropdown menu currently showing 'NONE'), and 'PDN Type' (a dropdown menu currently showing 'IPv4v6'). An 'Apply' button is located at the bottom right of the configuration area.

- Select “Settings” “LTE” “Default PDN” from the left menu.
- You can set the PDN data such as APN, Authentication Type and PDN type(IPv4, IPv6).
- Put in the data to box then click “Apply” button.
- If you set wrong data, the device doesn’t attach the LTE network.

4.1.5 Multiple PDN

SEOWON INTECH

Tx user English Logout

Menu

Dashboard

Connection Mode

Status

Settings

LTE

Cell Selection

Cell Lock

SIM Management

Default PDN

Multiple PDN

Internet MTU

IPv6 Settings

Network

Firewall

User Management

Firmware Management

Monitoring

Multiple PDN

PDN Configure

PDN cid

2

PDN Label

ims

APN Name

Authentication Type

NONE

PDN Type

IPv4v6

Enable

☐

Apply

Cancel

PDN list

	Cid	PDN Label	PDN Type	APN Name	Auth Type	Username	Enable
<input checked="" type="radio"/>	2	ims	IPv4v6		NONE		Off
<input type="radio"/>	3	admin	IPv4		NONE		Off
<input type="radio"/>	4	app	IPv4		NONE		Off

- Select “Settings” “LTE” “Multiple PDN” from the left menu.
- You can set the multiple PDN data for IMS, admin, App service.
- Select “Cid”, check “Enable”, put in the data to box then click “Apply” button.

4.1.6 Internet MTU

The screenshot shows the SEOWON INTECH web interface. At the top, there is a header with the company logo, a user profile section showing 'user', a language dropdown set to 'English', and a 'Logout' button. On the left is a vertical menu with options: Menu, Dashboard, Connection Mode, Status, Settings (highlighted), LTE, Cell Selection, Cell Lock, SIM Management, Default PDN, Multiple PDN, Internet MTU (highlighted), IPv6 Settings, Network, Firewall, User Management, Firmware Management, and Monitoring. The main content area is titled 'Internet MTU' and contains the text: 'This page display the maximum number of bytes in the packets transmitted over the internet port.' Below this is a section for 'Internet MTU Settings' with a label 'Internet MTU' and a text input field containing '1500'. To the right of the input field is a note: '(The default is 1500, do not change unless necessary.)'. An 'Apply' button is located at the bottom right of the settings section.

- Select “Settings” “LTE” “Internet MTU” from the left menu.
- You can change the internet MTU size.
- Put in the data to box then click “Apply” button.

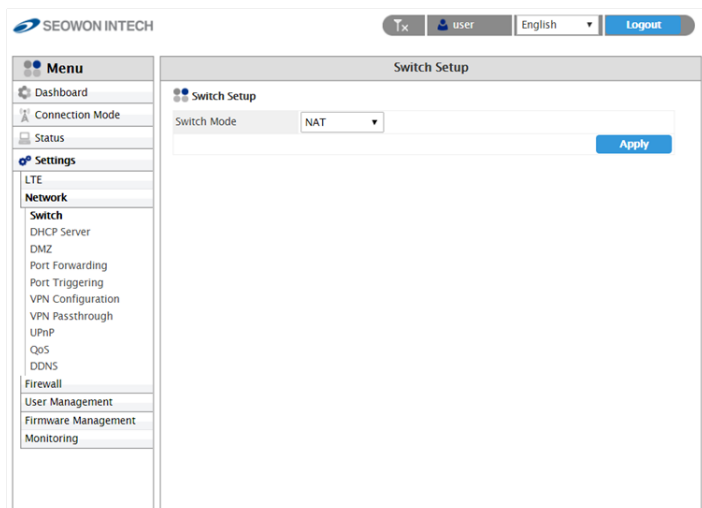
4.1.7 IPv6 Settings

The screenshot displays the SEOWON INTECH web management interface. At the top, there's a header with the company logo, a language dropdown set to 'English', and a 'Logout' button. On the left, a sidebar menu shows 'Menu' with options like 'Dashboard', 'Connection Mode', and 'Status', followed by 'Settings' with sub-options including 'LTE', 'Cell Selection', 'SIM Management', and 'IPv6 Settings' (which is highlighted). The main content area is titled 'IPv6 Settings' and contains two sections: 'IPv6 Setup' and 'DHCPv6 Address Settings'. In the 'IPv6 Setup' section, the 'IPv6 Enable' dropdown is set to 'Enable'. The 'DHCPv6 Address Settings' section shows 'DHCPv6 Autoconfiguration Mode' set to 'Stateless' and 'DNS Server Address Mode' set to 'Auto'. An 'Apply' button is located at the bottom right of the settings area.

- Select “Settings” “LTE” “IPv6 Setup” from the left menu.
- You can Enable or Disable IPv6 function by selecting the list.
- You can set DHCPv6 Auto-configuration mode by selecting the list.
- You can set DNS Server Address Mode to “Auto” or “Manual”.
- After selecting the each mode, put in the data to all boxes.
- Finish setup by clicking the “Apply” button.


4.2 Network

4.2.1 Switch



- Select **“Settings”** **“Network”** **“Switch”** from the left menu.
- You can select Switch Mode to **“NAT”** or **“BRIDGE”**.
- Finish setup by clicking the **“Apply”** button.

4.2.2 DHCP Server

 SEOWON INTECH

Tx

user

English

Logout

Menu

Dashboard

Connection Mode

Status

Settings

LTE

Network

Switch

DHCP Server

DMZ

Port Forwarding

Port Triggering

VPN Configuration

VPN Passthrough

UPnP

QoS

DDNS

Firewall

User Management

Firmware Management

Monitoring

DHCP Server

DHCP Server Settings

Enable DHCP Server

On

Gateway IP Address

192

168

1

1

Gateway Subnet Mask

255

255

255

0

Starting IP Address

192

168

1

2

Number of users

253

From ISP

☒

Primary DNS

Secondary DNS

Optional

Tertiary DNS

Optional

DHCP Lease Time

3600

seconds

Lease Reservation Table

Add

Del

Searched List

Add

Select	Host Name	MAC Address	IP Address	Enable
<input type="checkbox"/>	192.168.1.2	C8:08:E9:6F:CF:57		

Up to 10 rules can be set

Apply

- Select “Settings” “Network” “DHCP Server” from the left menu.
- Configure DHCP Server Setting.
 - IP address is used in the LAN cable that the device manages.
 - Setup IP address in “Gateway IP Address/ Gateway Subnet Mask” text boxes.
 - Initial Value is “192.168.1.1/255.255.255.0” and only the last byte in “Gateway Subnet Mask” box can be modified.
 - Finish setup by clicking the “Apply” button.

4.2.3 Port Management : DMZ/Port Forwarding/Port Triggering

The screenshot shows the SEOWON INTECH web interface. At the top, there is a header with the logo, a language dropdown set to 'English', and a 'Logout' button. On the left, a 'Menu' sidebar lists various options: Dashboard, Connection Mode, Status, Settings, Network (selected), LTE, Switch, DHCP Server, DMZ (highlighted), Port Forwarding, Port Triggering, VPN Configuration, VPN Passthrough, UPnP, QoS, DDNS, Firewall, User Management, Firmware Management, and Monitoring. The main content area is titled 'DMZ' and contains the following configuration options:

- Enable DMZ: ☐ Enable ☒ Disable
- Redirect ICMP To The Host: ☐ Enable ☒ Disable
- Exclude Web Server Port: ☒ Enable ☐ Disable
- Private LAN IP Address: 192 . 168 . 1 . 2

An 'Apply' button is located at the bottom right of the configuration area.

- Select “Settings” “Network” “DMZ” from the left menu.
- Configure DMZ(Demilitarized Zone)
 - Select whether or not to enable the DMZ function.
 - You can set “Redirect ICMP To The Host” and “Exclude Web Server Port”.
 - Set the IP address to have all ports opened in “Private LAN IP Address” content.
 - Finish setup by clicking the “Apply” button.

Tx
user
English
Logout

Menu
Dashboard
Connection Mode
Status
Settings
LTE
Network
Switch
DHCP Server
DMZ
Port Forwarding
Port Triggering
VPN Configuration
VPN Passthrough
UPnP
QoS
DDNS
Firewall
User Management
Firmware Management
Monitoring

Port Forwarding

Port Forwarding
Name [View Existing Application](#)
Protocol **BOTH**
Start Port
End Port (Blank or Start Port-65535)
Destination IP . . .
Destination Port (Blank or 1-65535)
[Add](#) [Cancel](#)

Port Forwarding List

No.	Name	Start Port	End Port	Protocol	IP Address	Destination Port
Up to 10 rules can be set						

- Select “Settings” “Network” “Port Forwarding” from the left menu.
- Configure Port Forwarding
 - Enter the Name.
 - Select one of the listed Protocols (BOTH, TCP, UDP).
 - Enter Start Port, End Port, Destination IP and Destination Port.
 - Click the “Add” button when you finished.
 - You can change the data by clicking “Edit” or “Del” button in the list.

SEOWON INTECH

Tx user English Logout

Menu
Dashboard
Connection Mode
Status
Settings
LTE
Network
Switch
DHCP Server
DMZ
Port Forwarding
Port Triggering
VPN Configuration
VPN Passthrough
UPnP
QoS
DDNS
Firewall
User Management
Firmware Management
Monitoring

Port Triggering

Port Trigger Settings Table

Name	<input type="text"/>	Port Type	RANGE ▼
Trigger Protocol	ALL ▼	Trigger Port	<input type="text"/> - <input type="text"/>
Open Protocol	ALL ▼	Open Port	<input type="text"/> - <input type="text"/>

Add Cancel

Port Trigger List

No.	Name	Trigger Protocol	Trigger Port(s) StartPort EndPort	Open Protocol	Open Port(s) StartPort EndPort	Edit	Del
Up to 10 rules can be set							

- Select “Settings” “Network” “Port Triggering” from the left menu.
- Configure Port Triggering
 - Enter the Name.
 - Select one of the Port Type(RANGE or SINGLE).
 - Select Trigger Protocol and Open Protocol(ALL, TCP, UDP)
 - Enter Trigger Port Range and Open Port Range.
 - Click the “Add” button when you finished.
 - You can change the data by clicking “Edit” or “Del” button in the list.

4.2.4 VPN Configuration

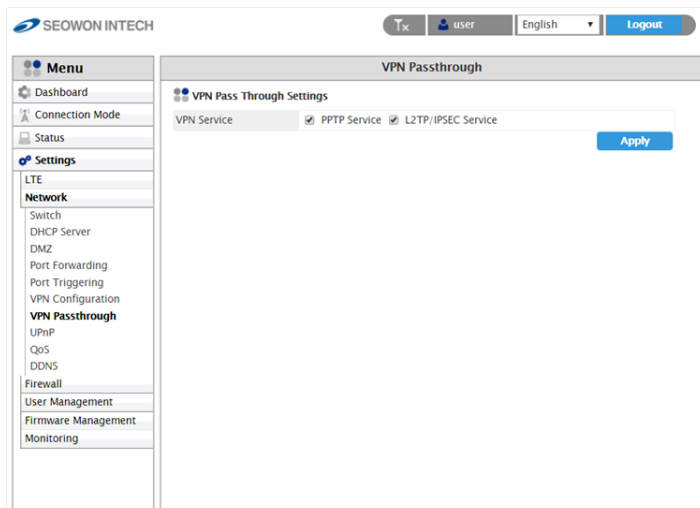
The screenshot shows the SEOWON INTECH web interface for VPN Configuration. The top navigation bar includes the logo, a language dropdown set to 'English', and a 'Logout' button. The left sidebar menu is expanded to 'Settings' > 'Network' > 'VPN Configuration'. The main content area is titled 'VPN Configuration' and contains the following settings:

- VPN Configuration Settings**
 - VPN: L2TP (dropdown)
- L2TP Mode**
 - Server Address: (text input)
 - Server Address(Private): Disable (dropdown)
 - Username: (text input)
 - Password: (text input)
 - Pre Shared Key: (text input)
 - Connect Mode: Keep Alive (dropdown)
 - Redial Period: Seconds (text input) Seconds (text input)

At the bottom right of the settings area are 'Apply' and 'Cancel' buttons.

- Select “Settings” “Network” “VPN Configuration” from the left menu.
- You can set VPN mode by selecting “GRE”, “L2TP” or “PPTP”.
- After selecting the mode, put in the data to all boxes.
- Then click “Add” button.
- Finish setup by clicking the “Apply” button.

4.2.5 VPN Passthrough



- Select “Settings” “Network” “VPN Passthrough” from the left menu.
- The device support 2 types of service : PPTP Service, L2TP/IPSEC Service.
- Select the type(s) of VPN pass-through to use with the checkboxes.
- Finish setup by clicking the “Apply” button.

4.2.6 UPnP

SEOWON INTECH

Tx user English Logout

Menu

- Dashboard
- Connection Mode
- Status
- Settings**
 - LTE
 - Network**
 - Switch
 - DHCP Server
 - DMZ
 - Port Forwarding
 - Port Triggering
 - VPN Configuration
 - VPN Passthrough
 - UPnP**
 - QoS
 - DDNS
 - Firewall
 - User Management
 - Firmware Management
 - Monitoring

Universal Plug & Play

UPnP Enable/Disable ☒ Enable ☐ Disable [Apply](#)

Client List

No.	Client Program	Protocol	External Port	IP Address	Internal Port
-----	----------------	----------	---------------	------------	---------------

[Refresh](#)

- Select “Settings” “Network” “UPnP” from the left menu.
- Select whether or not to Enable the Universal Plug & Play function.
- Finish setup by clicking the “Apply” button.
- When UPnP Client is connecting, it will appear on the Client List.

4.2.7 QoS

SEOWON INTECH

user English Logout

Menu

- Dashboard
- Connection Mode
- Status
- Settings**
 - LTE
 - Network**
 - Switch
 - DHCP Server
 - DMZ
 - Port Forwarding
 - Port Triggering
 - VPN Configuration
 - VPN Passthrough
 - UPnP
 - QoS**
 - DDNS
 - Firewall
 - User Management
 - Firmware Management
 - Monitoring

QoS

QoS Setup

QoS Enable/Disable ☐ Disable ☒ Enable

Download(kbps) 10000

Setting QoS on device might be mandatory for access control and usage tracking, but suffering a performance hit is strictly optional.

QoS Rule Setup

QoS Mode Down

IP Address/Mask 192.168.1.1

Protocol ALL

Start Port

End Port

Rate(Kbps) to

Priority HIGH

Save Cancel

QoS List

Download(WAN -> LAN)

No.	IP Address/Mask	Protocol	Port	Rate(Kbps)	Priority
-----	-----------------	----------	------	------------	----------

Up to 10 rules can be set

- Select “Settings” “Network” “QoS” from the left menu.
- To set the QOS, check “Shaping”.
 - The desirable service quality class can be set.
 - Setup download speed in “Download(kbps)” text box.
 - By selecting “Upload” and “Download” in the list, you can adjust each speed.
 - Setup IP address/mask, protocol, port and rate.
 - Click the “Add” button after setting all items.
 - Finish setup by clicking the “Apply” button.

4.2.8 DDNS

SEOWON INTECH

Tx user English Logout

Menu

- Dashboard
- Connection Mode
- Status
- Settings**
 - LTE
 - Network**
 - Switch
 - DHCP Server
 - DMZ
 - Port Forwarding
 - Port Triggering
 - VPN Configuration
 - VPN Passthrough
 - UPnP
 - QoS
 - DDNS**
 - Firewall
 - User Management
 - Firmware Management
 - Monitoring

DDNS

Dynamic DNS

DDNS Enable ☒ Enable ☐ Disable

DDNS Setting

Service	dyndns.org
Hostname	hostname
Username	username
Password	password
Check for change IP every	300
Check-time unit	seconds
Force update every	80
Force-Time unit	minutes

Apply

- Select “Settings” “Network” “DDNS” from the left menu.
- Set the DDNS environment
 - If you want to set the DDNS, check “Enable” in the checkbox to enter necessary inputs.
 - After entering all the necessary information for DDNS Setting, finally, click the “Apply” button to finish setting.

4.3 Firewall

4.3.1 Basic

The screenshot shows the SEOWON INTECH web interface. At the top, there's a header with the logo, a search bar, a user profile, a language dropdown set to 'English', and a 'Logout' button. On the left, a 'Menu' sidebar lists: Dashboard, Connection Mode, Status, Settings (selected), LTE, Network, Firewall (selected), Basic (selected), Filter Setup, Access Control, IP-MAC Binding, User Management, Firmware Management, and Monitoring. The main content area is titled 'Firewall' and contains two sections. The 'Firewall Setup' section has five rows of settings, each with an 'Enable' (radio button) and 'Disable' (radio button) option. The 'SIP ALG Settings' section includes a text description, a checkbox for 'Enable SIP ALG', and a text input field for 'SIP port' containing the value '5060'. Both sections have an 'Apply' button at the bottom right.

Firewall Setup	
Firewall Enable/Disable	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Allow Ping From WAN	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Allow HTTP login from WAN	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Allow HTTPS login from WAN	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
Multicast Filter	<input type="radio"/> Enable <input checked="" type="radio"/> Disable

SIP ALG Settings

The modem supports the SIP ALG function. The SIP application can run and communicate with other internet application.

Enable SIP ALG ☒

SIP port

- Select “Settings” “Firewall” “Basic” from the left menu.
- If you want to use the default Firewall function, check the “Enable” checkbox.
- You can set other firewall rules as Ping, HTTP, HTTPS login and Multicast Filter.
- If you want to use SIP ALG function, check enable and type port number in the box.
- For filter set up, select the filter item (IP, MAC, ACCEPT, DROP, BOTH, etc) and fill the blank.
- Finish setup by clicking the “Add” button.
- You can also delete the filter rule by clicking “remove” button in the Filter List.

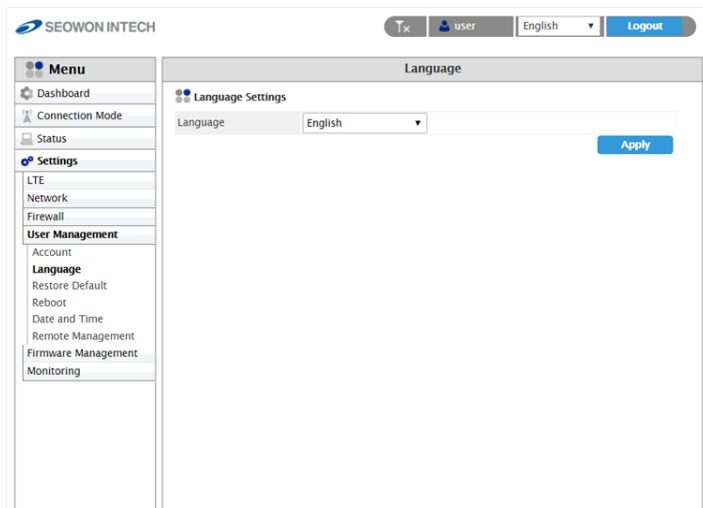
4.4 User Management

4.4.1 Account

The screenshot displays the SEOWON INTECH web interface. At the top, there is a header bar with the company logo, a user profile icon labeled 'user', a language dropdown set to 'English', and a 'Logout' button. On the left side, a 'Menu' sidebar lists various system functions: Dashboard, Connection Mode, Status, Settings (highlighted), LTE, Network, Firewall, User Management (expanded), Account (highlighted), Language, Restore Default, Reboot, Date and Time, Remote Management, Firmware Management, and Monitoring. The main content area is titled 'Account' and contains the 'Account Management' section. This section includes a 'Privilege' dropdown menu set to 'user', and input fields for 'Username' (containing 'user'), 'Current Password', 'New Password', and 'Confirm Password'. An 'Apply' button is located at the bottom right of the form.

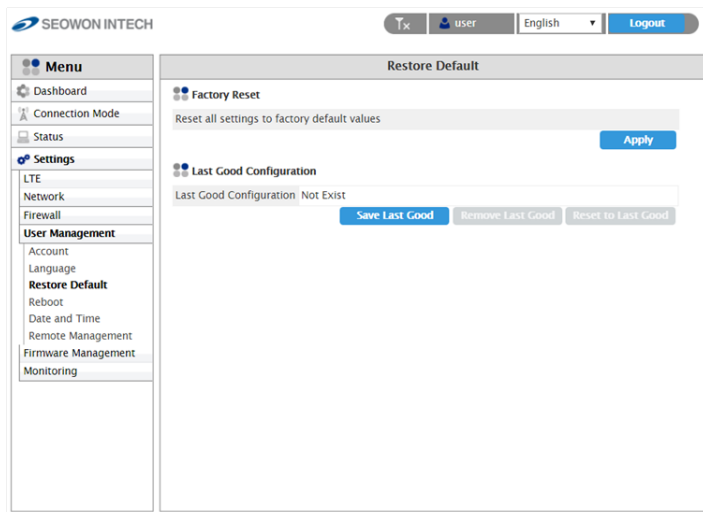
- Select **“Settings”** **“User Management”** **“Account”** from the left menu.
- Set the password to be given to the administrator who manages the device.
- Enter the new password.
- Finish setup by clicking the **“Apply”** button.

4.4.2 Language



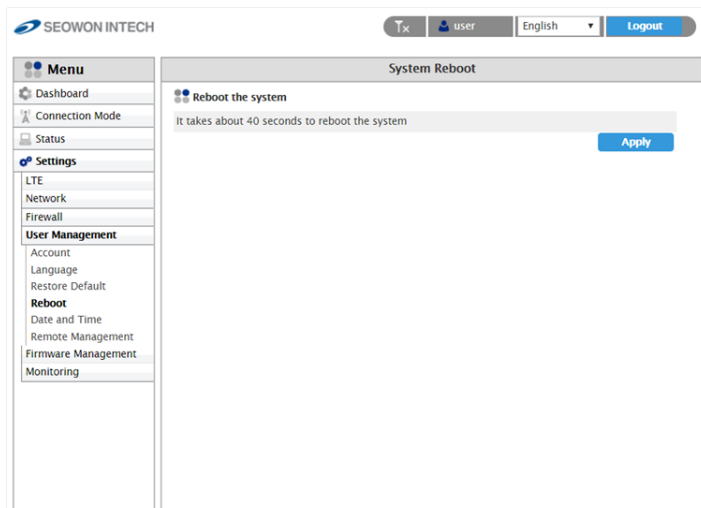
- Select “Settings” “User Management” “Language” from the left menu.
- Select the Language.
- Finish setup by clicking the “Apply” button.

4.4.3 Restore Default



- Select “Settings” “User Management” “Restore Default” from the left menu.
- To initialize all configurations the device, click “Apply” button.
- If you want to save, remove or reset this configuration click the button.
- The device will reboot automatically and it takes about 70 seconds.

4.4.4 Reboot



- Select “Settings” “User Management” “Reboot” from the left menu.
- To reboot by software, click “Apply” button.
- The device will reboot automatically and it takes about 60 seconds.

4.4.5 Date and Time

SEOWON INTECH

user English Logout

Menu

- Dashboard
- Connection Mode
- Status
- Settings**
- LTE
- Network
- Firewall
- User Management**
- Account
- Language
- Restore Default
- Reboot
- Date and Time**
- Remote Management
- Firmware Management
- Monitoring

Date and Time

Time Zone Setup

NTP Client ☒ Enable ☐ Disable

Local Time 2017-12-22 12:30:41

Time Server

Time Zone Select

Enable Daylight Saving ☐

Start Date First Sunday of April at 2 o'clock

End Date Last Sunday of October at 2 o'clock

Apply

- Select “Settings” “User Management” “Date and Time” from the left menu.
- Configure Time Zone.
 - If you want to set the NTP Client, select “Enable”.
 - Set the “Time Server”.
 - Select the “Time Zone Select”.
 - If you want to set the “Daylight Saving”, check “Enable Daylight Saving”.
 - If you want to set the duration of “Daylight Saving”, set the below.
 - Finish setup by clicking the “Apply” button.
 - Changed configuration is applied immediately.

4.4.6 Remote Management

The screenshot shows the SEOWON INTECH web interface. At the top, there is a header with the company logo, a language dropdown set to 'English', and a 'Logout' button. On the left, a 'Menu' sidebar lists various options: Dashboard, Connection Mode, Status, Settings, LTE, Network, Firewall, User Management, Remote Management (highlighted), Firmware Management, and Monitoring. The main content area is titled 'Remote Management' and contains two sections: 'HTTP Server' and 'HTTPS Server'. The 'HTTP Server' section has input fields for 'Remote IP Address' and 'Port Number' (set to 80, with a note '(The default is 80)'). The 'HTTPS Server' section has a checkbox for 'Enable' and a 'Port Number' field (set to 443, with a note '(The default is 443)'). An 'Apply' button is located at the bottom right of the main content area.

- Select “Settings” “User Management” “Remote Management” from the left menu.
- You can set HTTP Server port and HTTPS Server port.
- If you want to set https server, check “Enable” and type Port Number.
- Finish setup by clicking the “Apply” button.

4.5 Firmware Management

4.5.1 Software

The screenshot displays the SEOWON INTECH web interface. At the top, there is a header with the company logo, a user profile icon labeled 'user', a language dropdown set to 'English', and a 'Logout' button. On the left side, a 'Menu' sidebar is visible, containing options like Dashboard, Connection Mode, Status, Settings, LTE, Network, Firewall, User Management, Firmware Management (which is expanded to show Software and Monitoring), and Monitoring. The main content area is titled 'Software' and contains a 'Software Upgrade' section. This section includes a table for selecting files for four different filenames, each with a 'Choose File' button and a 'No file chosen' status. Below the table, there is a 'Status' field with the instruction 'Please select the update package file'. The 'Device Software Version' is listed as '1.0.4'. A blue 'Update' button is located at the bottom right of the upgrade section.

Software Upgrade		
Filename 1	Choose File	No file chosen
Filename 2	Choose File	No file chosen
Filename 3	Choose File	No file chosen
Filename 4	Choose File	No file chosen
Status	Please select the update package file	
Device Software Version	1.0.4	
Update		

- Select **“Settings”** **“Firmware Management”** **“Software”** from the left menu.
- Select the firmware file by clicking the **“Browse...”** button.
- To start the firmware update, click **“Update”** button.
- The device will be restart automatically.

4.6 Monitoring

4.6.1 Iperf

The screenshot displays the 'Performance Measurement Tool' interface. On the left is a sidebar menu with options: Menu, Dashboard, Connection Mode, Status, Settings, LTE, Network, Firewall, User Management, Firmware Management, Monitoring, Iperf, Diagnostic, and Log. The 'Monitoring' section is expanded, showing 'Iperf' as the selected option. The main area is titled 'Iperf Settings' and contains the following fields: Status (with 'Enable' selected), Last Measurement Date/Time, Server Address, Server Port (5001), Management Port (5001), Measurement Time (60), Protocol Type (TCP), and TCP Client Number (1). A large empty box is present below these fields. At the bottom right are 'Refresh' and 'Apply' buttons. The top header includes the Seowon Intech logo, a 'Tx' button, a user profile icon, a language dropdown set to 'English', and a 'Logout' button.

- Select **“Settings”** **“Monitoring”** **“Iperf”** from the left menu.
- You can use iperf by clicking the **“Enable”** button.
- Set the all data in the field.
- Finish setup by clicking the **“Apply”** button.
- Whenever you want to see the result, click **“Refresh”** button.

4.6.2 Diagnostic

The screenshot shows the SEOWON INTECH web interface. At the top, there is a header with the company logo, a user profile dropdown showing 'user', a language dropdown set to 'English', and a 'Logout' button. On the left is a 'Menu' sidebar with categories: 'Menu' (containing Dashboard, Connection Mode, Status), 'Settings' (containing LTE, Network, Firewall, User Management, Firmware Management), 'Monitoring' (containing Iperf, **Diagnostic**, Log), and 'Log'. The main content area is titled 'Diagnostic' and has two tabs: 'Ping' (selected) and 'Trace router'. Under the 'Ping' tab, there is a 'Ping' section with a header icon. Below the header are four input fields: 'IP Address (URL)' (a text box), 'Ping Packet Size (Bytes)' (a numeric box with '56'), 'Ping Timeout (sec)' (a numeric box with '30'), and 'Ping Count' (a dropdown menu with '4'). Below these fields is a large, empty rectangular area for results. At the bottom right of this area is a blue 'Apply' button.

- Select “Settings” “Monitoring” “Diagnostic” from the left menu.
- Configure the Ping.
 - If you want to test ping, enter IP Address to “IP Address (URL)”.
 - Set the all data in the field.
 - Click the “Apply” button to test.
 - The results come out below.

SEOWON INTECH

Tx
 user
 English
 Logout

Menu

- Dashboard
- Connection Mode
- Status
- Settings**
 - LTE
 - Network
 - Firewall
 - User Management
 - Firmware Management
- Monitoring**
 - Iperf
 - Diagnostic**
 - Log

Diagnostic

Ping

Trace router

Trace router

IP Address (URL)

Set Maximum TTL(Max Hops) (Max Hops)

30

Set the number of queries at each TTL

3

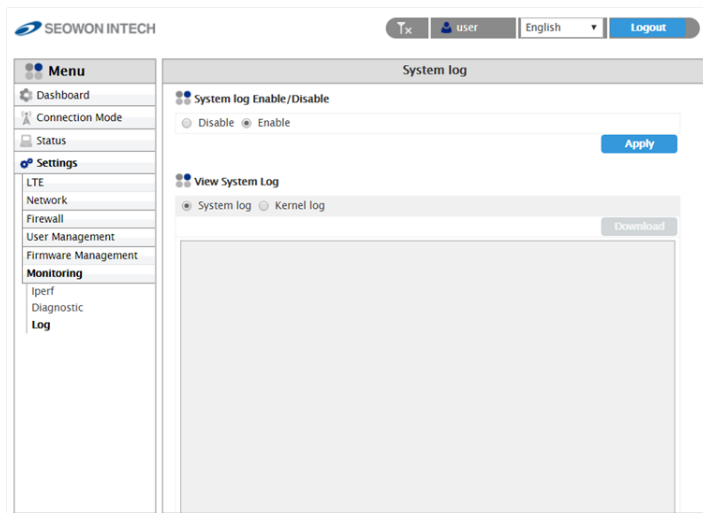
Report IP Address Only

☐

Apply

- Configure the Trace route.
 - If you want to test trace route, enter IP Address to “IP Address (URL)”.
 - Select the “Set Maximum TTL” and “Set the number of queries at each TTL”.
 - If you want to see report consisting of IP Address, check the “Report IP Address Only”.
 - Click the “Apply” button to test.
 - The results come out below.

4.6.3 Log



- Select **“Settings”** **“Monitoring”** **“Log”** from the left menu.
- The device support 2 types of log : System log and Kernel log.
- Configure System log.
 - Check **“Enable”** in **“System log Enable/Disable”**.
 - Check **“System log”** in **“View System Log”**.
 - Click **“Refresh”** button or **“Clear”** button for each action.
 - If you want to download the log to your PC, click **“Download”** button.

SEOWON INTECH

user English Logout

Menu

- Dashboard
- Connection Mode
- Status
- Settings**
 - LTE
 - Network
 - Firewall
 - User Management
 - Firmware Management
- Monitoring**
 - Iperf
 - Diagnostic
 - Log**

System log

System log Enable/Disable

☐ Disable ☒ Enable [Apply](#)

View System Log

☐ System log ☒ Kernel log [Download](#)

☐ Detailed ☒ Simple

Note: It could take a longer time to display detailed log

Log lines (Display/Total) = 288/424
Log level = Simple

```

0001 -----
0002 KERNEL LOGGING
0003 -----
0007 [Thu Jan 1 09:00:15 LST 1970] <5>Linux version 3.10.0-uc0 (release1@SeowonSW73) (gcc
0008 [Thu Jan 1 09:00:15 LST 1970] <4>CPU: ARMv7 Processor [410fc075] revision 5 (ARMv7), c
0009 [Thu Jan 1 09:00:15 LST 1970] <4>CPU: PIPT / VIPT nonaliasing data cache, VIPT aliasing li
0010 [Thu Jan 1 09:00:15 LST 1970] <4>Machine: GCT GDM7243
0011 [Thu Jan 1 09:00:15 LST 1970] <4>Boot device: nand
0012 [Thu Jan 1 09:00:15 LST 1970] <4>boot mem size: 256MB
0013 [Thu Jan 1 09:00:15 LST 1970] <4>FW Checksum: disable
0014 [Thu Jan 1 09:00:15 LST 1970] <4>Active linux : linux2
0015 [Thu Jan 1 09:00:15 LST 1970] <4>Active rootfs: rootfs
0016 [Thu Jan 1 09:00:15 LST 1970] <4>Active rk : rk
  
```

- Configure Kernel log.
 - Check "Kernel log" in "View System Log".
 - Check "Detailed" or "Simple" in below.
 - Click "Refresh" button or "Clear" button for each action.
 - If you want to download the log to your PC, click "Download" button.

Troubleshooting

Refer to the following if you are having trouble connecting to the Internet:

1 Check the status of outdoor CPE.

- Check if the USIM Card is inserted.
- Check if the each Cable is connected. (Adapter, LAN Cable, PoE Cable)

2 Check the IP address of PC.

- For Windows 7/8/10
- Run [Command Prompt] and enter the [ipconfig] command to check the [IP address].

3 If IP Address is not normal – Set the IP Address of the PC manually.

- For Windows 7/8/10

- ① Start > Control Panel > Network and Internet > Network Connections > Mouse right-click > Local Area Connection and Select Properties
 - ② Click Properties of [Internet Protocol Version 4 (TCP/IPv4)] among Components.
 - ③ Click [Use the following IP address]
 - ④ Enter [192.168.1.2] for IP Address, [255.255.255.0] for Subnet Mask, and [192.168.1.1] for Default Gateway.
 - ⑤ Click [Use the following DNS Server Address].
 - ⑥ For [Preferred DNS Server], enter the communication company server of each country.
 - ⑦ Click [OK]. Click [OK] again in the [Local Area Connection Properties] window.
- For MAC OS X
 - ① From the “Apple” menu, Choose “System Preference.”
 - ② Click on the [Network] icon in the [Internet & Network] category.
 - ③ Click on the [Ethernet] option from the left hand side of the Network setting window.
 - ④ Select [Manually] option from the [Configure] drop-down menu.
 - ⑤ Enter [192.168.1.2] for IP Address, [255.255.255.0] for Subnet Mask, and [192.168.1.1] for Default Gateway.
 - ⑥ For [DNS Server], enter the communication company server of each country.
 - ⑦ Click [Apply].

4 Run [MS-DOS] or [Command Prompt] and then perform PING Test with [192.168.1.1].

A message [Reply from 192.168.1.1: bytes=32 time=1ms TTL=64] should appear when running [ping 192.168.1.1] command. If the result of the Ping test does not arrive properly, please contact the Customer Support Center.

Safety Information

Minor injury or product damage can occur the following directions are violated.



Caution

- Do not put any object on the product.
- Avoid heating devices.
- Do not disassemble, repair or redesign the product.
- Be careful not to allow any foreign matter inside the product.
- Do not leave the Product in a location where it is exposed to severe static electricity, as this can cause the product to malfunction.
- Do not put any metallic object (coin, hair pin) or flammable object inside the product, or drop the product.
- The device must be installed to provide a minimum of 20cm between the device and persons to comply with RF exposure limits.
- The device must be turned off during the flight.

Legal Information

FCC Part 15.105

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Part 15.19

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Part 15.21

Changes or modifications not expressly approved by the manufacturer (or party responsible) for compliance could void the user's authority to operate the equipment.

FCC Radiation Exposure Statement:

The output power from the device is below the threshold for requiring RF exposure evaluation. The device must be installed to provide a minimum of 20cm between the device and persons to comply with RF exposure limits.

"This product meets the applicable Innovation, Science and Economic Development Canada technical specifications"



FCC ID : V7MESLC-120T420GA

Warranty Information

This product is the result of high-class craftsmanship based on strict quality control procedures.

- In case of Product failure or malfunction during normal usage, your product will be repaired free of charge within the Limited Warranty period.
- The Consumer shall bear any labor or parts charges not covered by this Limited Warranty.
- At the request for repair, you must provide the proof of purchase and the warranty.
- Keep the warranty in a safe location because it is not reissued.

Purchase date		
Quality warranty period	1(one) year	
Seller		
Telephone number		
Consumer	Name	
	Address	
	Telephone number	
	E-mail	

The Consumer shall have no coverage or benefits under this Limited Warranty if the Product has been:

- Subjected to inappropriate use, improper storage, unauthorized repair, unauthorized modifications, neglect abuse, inadequate installation, misuse, damage caused by shipping, etc.
- Damaged from fire, flooding, windstorm, lighting, earthquake, theft, blown fuse, internet viruses, worms, Trojan Horses, etc.
- Treated with its Product Serial # removed or defaced.



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