

User manual

SLC-120S480GAH
LTE Network Outdoor CPE



www.seowonintech.co.kr

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Introduction to the Product

Thank you for choosing SLC-120S480GAH, Outdoor CPE.

SLC-120S480GAH 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.

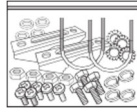
Please read this User Manual carefully to learn about the SLC-120S480GAH.

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-120S48OGAH
LTE	Technical Standard	LTE 3GPP Release 12, Category 15, TDD Configuration DL:580Mbps(4x4MIMO-2Layer,4CA,256QAM), UL:30Mbps(2CA,64QAM)
	Frequency Band	LTE Band48(3550MHz - 3700MHz)
	Max. Transmit Power	23dBm(+3 / -4 dB)
	Antenna	Internal Patch Antenna, 4x4 MIMO 15dBi 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		-30° 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

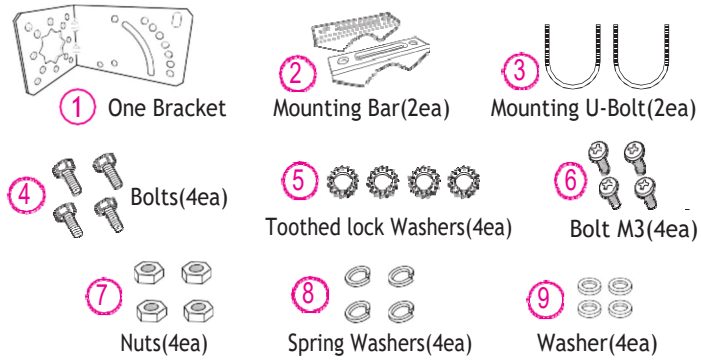


Status icon & LED indicator	
Boot in progress	Blinking Yellow LED (1), Blinking period = 1sec
Network connection	Number of LED depending on signal strength - Most Strong Signal: Five yellow LED - Strong Signal : Four yellow LED - Middle Signal : Three yellow LED - Weak Signal : Two yellow LED - Very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

4. Mounting Configuration

Package List

You need the following :



5. Assembly sequence optimization

Step 1

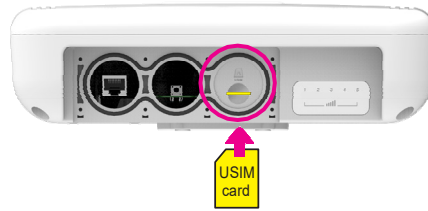
Remove the four Bolt M3 from the outdoor CPE.

* Remaining 4 screws are enclosed in the mounting kits as



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.



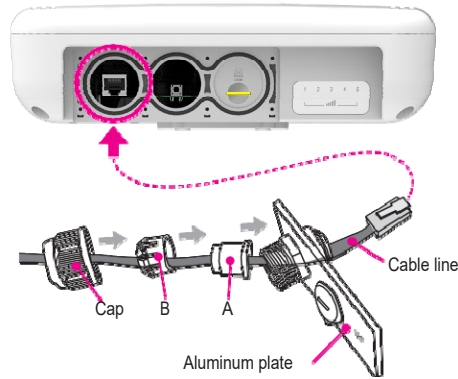
USIM card

IC

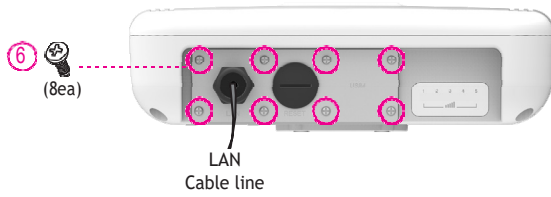
Step 3

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

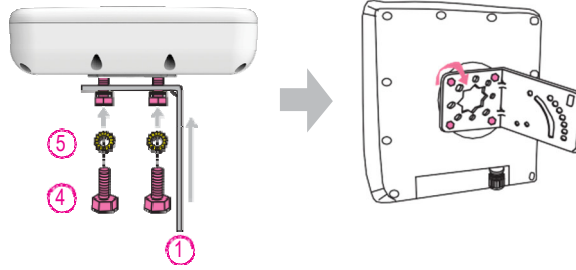
1. Remove the cap.
2. Put A, B, Cap and Aluminum plate to cable line in order.
3. Plug the cable line into the LAN hole of outdoor CPE.
4. Connect A and B in order.
5. Lastly, Connect Cap to Aluminum Plate by turning



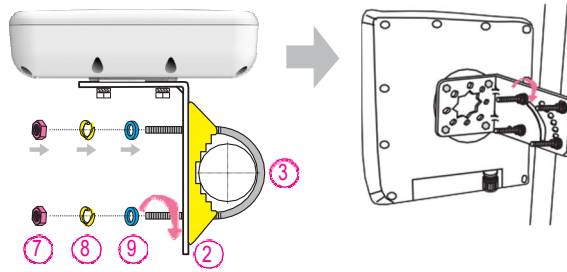
Step 4
Assemble the Aluminum plate and outdoor CPE using the screws Bolt M3(8ea)



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)

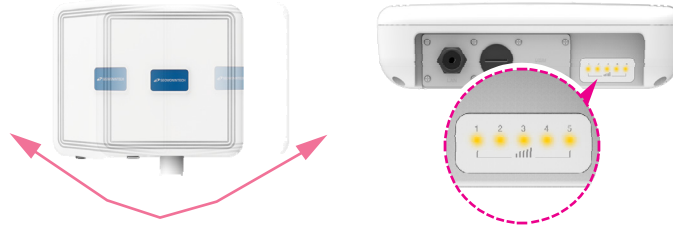


Step 6
Install the device to pole using item 2 and 3, tighten the bracket by using item 7, 8 and 9



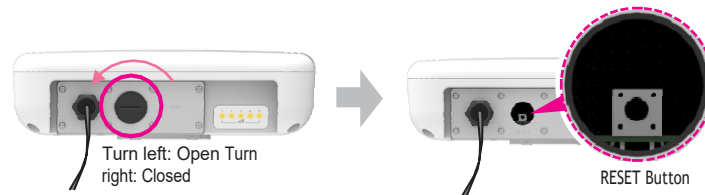
Step 7

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 5 sec : Factory reset

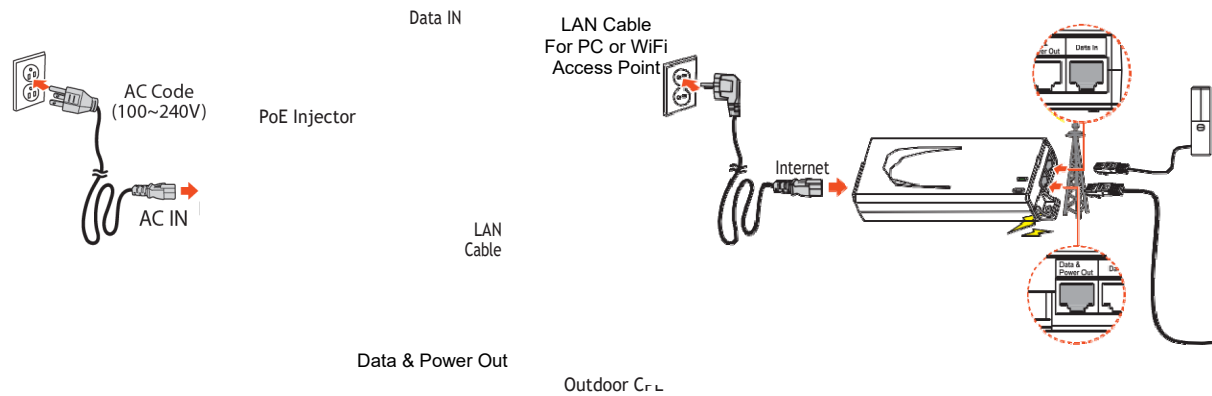


Note : If you forget the Login password for the Outdoor CPE or IP address after making changes, use the reset button to restore the Outdoor CPE to its original factory default settings.

Configuration

1. Network Configuration

External Network



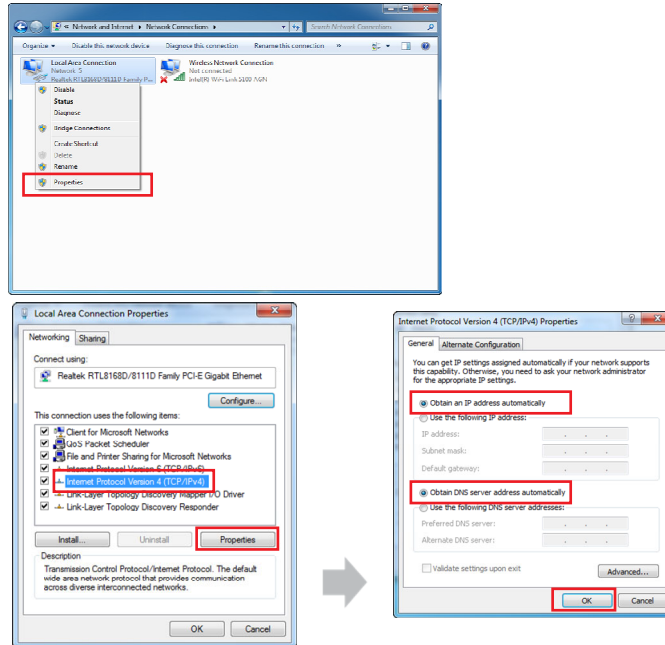
Safety precaution : Do not allow the PSE adapter to get wet. Keep it inside of the building. Liquid could damage your device or cause you injuries. Water damage can void your warranty. It is recommended to use the accessory provided.



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(Windows10)

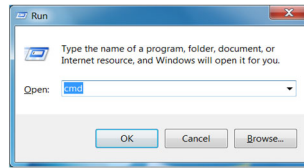
- Most computers already have TCP/IP configuration enabled. For your computer to support CPE, please verify that the IP address and DNS settings are automatically generated in the Local Area connection of your Internet Protocol (TCP/IP) properties.
- In a Windows environment :
- Click “Start” button >> Click “Control Panel” >> Click “Network and Internet Panel” >> 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\Steve_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=8ms 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

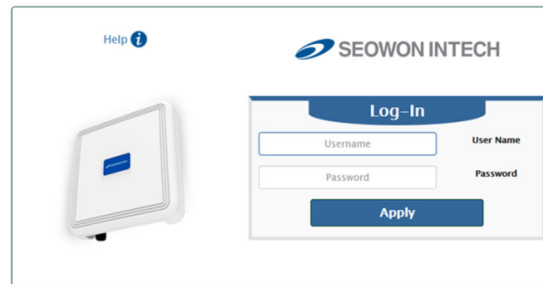
Log-in to Web Interface

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)..

User name = **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 left is the logo and name 'SEOWON INTECH'. To the right, there is a navigation bar with a signal strength indicator, a user profile labeled 'user', a language dropdown set to 'English', and a 'Logout' button. On the left side, a vertical 'Menu' contains options for 'Dashboard', 'Connection Mode', 'Status', and 'Settings'. The main content area, titled 'Dashboard', is divided into several sections: 'Mobile Network' (Mode: LTE Only), 'Monitoring' (UL Data Rate: 3 Kbps, UL Max Data Rate: 192 Kbps, DL Data Rate: 6 Kbps, DL Max Data Rate: 6.94 Mbps, Device Up Time: 00:08:24), 'About' (Firmware Version: 1.28.501, Firmware Creation Date: 2021.05.14-10:07), 'LTE' (UICC State: UICC Ready, Connection State: Connected, Signal Status: 4 bars, RSRP/RSSI/SINR: -82dBm/-56dBm/31dB, Connection Time: 06:10), 'Network' (LAN IP Address: 192.168.1.1, LAN IP Subnet Mask: 255.255.255.0, WAN IP Address: 192.168.3.25, WAN IP Subnet Mask: 255.255.255.0, Operation Mode: NAT), and 'Firewall' (Status: 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 displays the SEOWON INTECH web interface. At the top, there is a navigation bar with a user profile icon labeled 'user', a language dropdown set to 'English', and a 'Logout' button. On the left, a sidebar menu is visible with the following items: 'Menu', 'Dashboard', 'Connection Mode' (highlighted), 'Status', and 'Settings'. The main content area is titled 'Connection Mode' and features a 'Connect Manager' section. This section shows a status of 'Connecting' and two buttons: a blue 'Connect' button and a grey 'Disconnect' button.

- Select “Connection Mode” from the left menu.
- 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

LTE Information | **LTE Status** | LTE Statistics

LTE Status

UICC State	UICC Ready	Connection	Connected
Band	48		
APN Name		PDN Type	IPv4
IP v4 Address	192.168.3.22	IP v6 Address	
PLMN Search	Success	MCC	001
PLMN Selected	00101	MNC	01
Cell Global ID	0x1 (1)	EMM State	Registered [EMM-REGISTERED]
eNodeB ID	0x0 (0)	Cell ID	0x1 (1)
Current UL T/P	0	Current DL T/P	0
Service Cell State	RRC CONNECTED		
CQI	15		
Transmission Mode	TM [4]	Auto Refresh	<input type="checkbox"/>
Current Downlink CA	Non - CA	Current Uplink CA	Non - CA
Primary Cell			
Physical CELL ID	0x1f6 (502)	TX power	11.7 dB
RSSI	-76.6/-60.3/-59.0/-60.4	RSRP	-102.8/-86.3/-85.1/-86.4

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

3.2 Network

The screenshot shows the SEOWON INTECH web interface. At the top left is the logo and name 'SEOWON INTECH'. At the top right, there is a signal strength indicator, a user profile labeled 'user', a language dropdown set to 'English', and a 'Logout' button. On the left side, there is a 'Menu' sidebar with options: 'Dashboard', 'Connection Mode', 'Status', 'LTE', 'Network', 'Device Details', 'Device Performance', and 'Settings'. The 'Status' section is expanded, showing 'Network' as the selected item. The main content area is titled 'Network' and has two tabs: 'WAN' and 'LAN'. The 'LAN' tab is selected and displays the following information:

LAN

DHCP Server	Enable	MAC Address	00:21:07:35:36:37
Gateway IP Address	192.168.1.1	Gateway Subnet Mask	255.255.255.0
Rx packets	2797	Tx packets	3147
Rx bytes	3927816	Tx bytes	22918976

Lease Status Table

No.	Client Host Name	MAC Address	IP Address
1	NB-0099-PC	C8:0A:A9:13:0B:7C	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 user English Logout

Menu

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

Device Details

Device Time

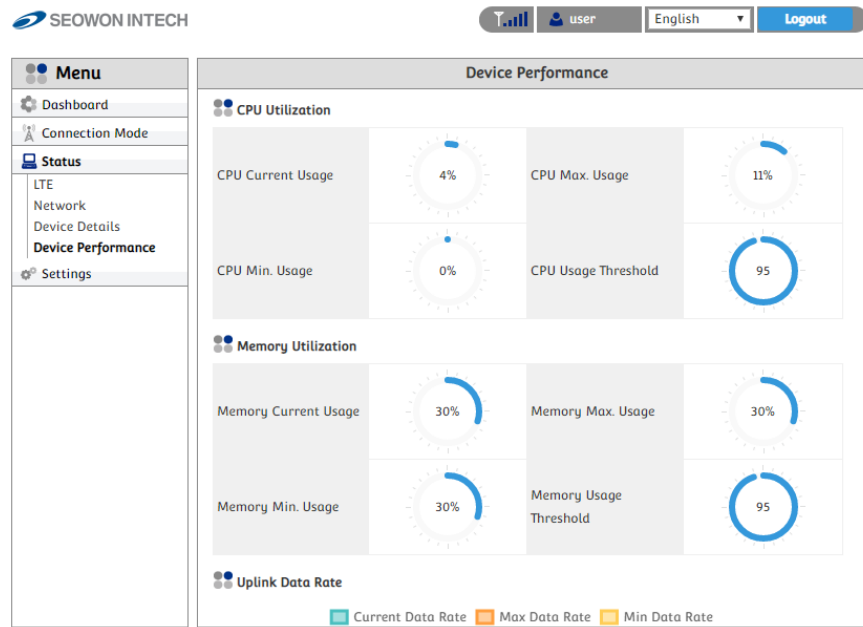
Current Local Time	2021-05-16 21:14:29	Time Server	us.poolntp.org
Synchronize With PC	Out of sync	Time Zone	Eastern Time (US and Canada)
Daylight Saving Time	Disable		

Device Information

ODM	Seowonintech co., LTD.	Product Name	SLC-120S480GAH
OUI	00:21:07	Serial Number	SEOWONXX150S07GQ-000001
Firmware Version	1.28.501	Firmware Creation Date	2021.05.14-10:07 (Mon May 17 11:04:11 EST 2021) Reboot by Factory Reset
Hardware Version	1.0	Last reboot cause	

- 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. Setting

4.1 LTE

4.1.1 Cell Selection

The screenshot displays the SEOWON INTECH web interface. At the top, there is a navigation bar with a signal strength indicator, a user profile 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', 'Cell Selection', 'Cell Lock', 'PCI Cell Lock', 'SIM Management', 'Default PDN', 'Multiple PDN', 'Internet MTU', 'IPv6 Settings', 'Network', 'Firewall', 'User Management', 'Firmware Management', and 'Monitoring'. The 'Cell Selection' page is active, showing a 'Band Selection' section with three fields: 'Mode' set to 'Full Band', 'Status' set to '48', and 'Band Selection' with a checked checkbox for 'Band-48'. An 'Apply' button is located at the bottom right of the configuration area.

- 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 shows the SEOWON INTECH web interface. The top navigation bar includes a signal strength indicator, a user profile labeled 'user', a language dropdown set to 'English', and a 'Logout' button. The left menu is titled 'Menu' and contains the following items: 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, and Monitoring. The main content area is titled 'Cell Lock' and contains two sections. The first section is 'Search Cell', which displays a table with the following data:

Check	Index	DL EARFCN	PCI	RSRP(dBm)	RSRQ(dB)	SINR(dB)
<input checked="" type="checkbox"/>	1	55440	0x1f6 (502)	-103.8/-87.0/-84.8/-86.3	-6.1/-5.9/-6.0/8	-5.23.0/28.4/29.5/29.6

Below the table are 'Add' and 'Search' buttons. The second section is 'Cell Lock List (If not Selected, Fixed to Strongest Cell)', which displays a table with the following data:

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

Below the table are 'Delete', 'Delete All', and 'Apply' buttons.

- 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 PCI Cell Lock

The screenshot shows the SEOWON INTECH web interface. At the top, there is a header with the company logo, a signal strength indicator, a user profile labeled 'user', a language dropdown set to 'English', and a 'Logout' button. On the left, a 'Menu' sidebar lists various system settings, with 'LTE' expanded to show 'Cell Selection', 'Cell Lock', and 'PCI Cell Lock' (which is selected). The main content area is titled 'PCI Cell Lock' and contains a 'Search Cell' section with a table of cell parameters. Below the table are 'Add' and 'Search' buttons. A 'PCI Cell Lock List' section below has an 'Add +' button and a table with 'Check' and 'PCI' columns, and 'Delete', 'Delete All', and 'Apply' buttons.

Check	Index	DL EARFCN	PCI	RSRP(dBm)	RSRQ(dB)	SINR(dB)
<input checked="" type="checkbox"/>	1	55440	0x1f6 (502)	-103.7/-87.1/-84.5/-86.9	-5.9/-6.0/-5.9/5.7	22.4/26.5/28.9/28.1

Check	PCI
-------	-----

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

4.1.4 SIM Management

The screenshot displays the SIM Management interface. On the left, a menu lists various settings, with 'SIM Management' selected under the 'LTE' category. The main panel is titled 'SIM Management' and is divided into three functional sections:

- PIN Information:** A table showing the current status of the SIM card. The 'PIN Status' is 'PIN DISABLED', 'RETRIES PIN' is 3, and 'RETRIES PUK' is 10. A 'Refresh' button is located to the right of the table.
- PIN Management:** A section for managing the PIN. It features a 'PIN Code' input field and three buttons: 'Verify', 'Enable', and 'Disable'. The 'Enable' button is currently active.
- PIN Change:** A section for changing the PIN. It includes three input fields: 'PIN Code', 'New PIN Code', and 'Confirm New PIN Code', followed by a 'Change' button.
- PIN Unblock:** A section for unblocking the PIN. It includes two input fields: 'PUK Code' and 'New PIN Code', followed by an 'Unblock' button.

- 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.

4.1.5 Default PDN

The screenshot displays the SEOWON INTECH web interface. At the top, there is a header with the company logo, a signal strength indicator, a user profile 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', and 'Monitoring'. The 'Settings' option is expanded to show 'LTE', which is further expanded to show 'Default PDN'. The main content area is titled 'Default PDN' and contains a 'Default PDN Connection' section with three input fields: 'APN Name' (a text box), 'Authentication Type' (a dropdown menu currently set to 'NONE'), and 'PDN Type' (a dropdown menu currently set to 'IPv4 Only'). An 'Apply' button is located at the bottom right of this section.

- 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.

4.1.6 Multiple PDN

SEOWON INTECH

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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

Multiple PDN

PDN Configure

PDN cid: 2
PDN Label: ims
APN Name:
Authentication Type: NONE
PDN Type: IPv4v6
Enable:

Apply Cancel

PDN Configure

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.

4.1.7 Internet MTU

The screenshot shows the SEOWON INTECH web interface. At the top left is the logo and name "SEOWON INTECH". At the top right, there is 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: Dashboard, Connection Mode, Status, Settings (highlighted), LTE (highlighted), Cell Selection, Cell Lock, PCI 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 following text: "This page display the maximum number of bytes in the packets transmitted over the internet port." Below this is a section titled "Internet MTU Settings" with a single input field labeled "Internet MTU" containing the value "1500". To the right of the input field is the text "(The default is 1500, do not change unless necessary.)" and an "Apply" button.

- 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.

4.1.8 IPv6 Settings

The screenshot displays the SEOWON INTECH web interface for IPv6 Settings. At the top, there is a navigation bar with signal strength, user, language (English), and Logout options. On the left, a menu lists various settings categories: 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, and Monitoring. The main content area is titled 'IPv6 Settings' and contains two sections: 'IPv6 Setup' with an 'IPv6 Enable' dropdown set to 'Enable', and 'DHCPv6 Address Settings' with a 'DHCPv6 Autoconfiguration Mode' dropdown set to 'Stateless'. 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.

4.1.9 CBSD Settings

The screenshot displays the 'CBSD Settings' page in the SEOWON INTECH web interface. The top navigation bar shows the user is logged in as 'engineer' in 'English' mode. The left sidebar menu is expanded to show the 'Settings' section, with 'CBSD Settings' selected. The main content area has four tabs: 'Enable', 'Registration', 'Spectrum Inquiry', and 'Grant'. The 'Enable' tab is active, showing the following settings:

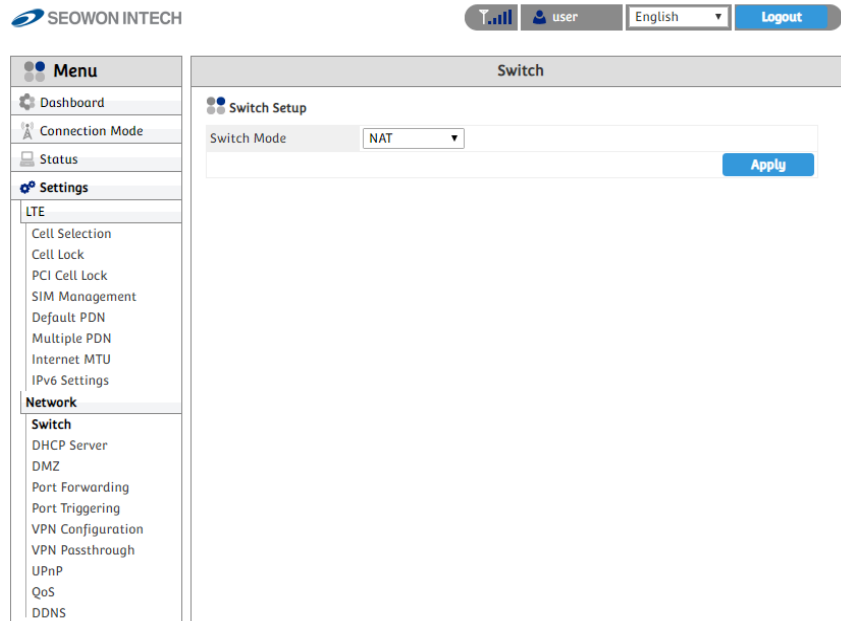
- CBSD**
 - CBSD Enable: Enable Disable
 - Select Category:
- CBSD Status**
 - CPI Enable: Enable Disable
 - Status: FCC ID: V7MBHSLCTOGA is not recognized
 - CBSD ID:
 - Grant1 ID: Grant2 ID:
 - Grant3 ID: Grant4 ID:

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

- You can check the enable and disable status in the CBSD item.
- The default setting is category B.

5. Network

5.1 Switch



The screenshot displays the SEOWON INTECH web interface. At the top left is the logo and name 'SEOWON INTECH'. At the top right, there is a signal strength indicator, a user profile labeled 'user', a language dropdown set to 'English', and a 'Logout' button. The left sidebar menu is expanded to 'Settings' > 'Network' > 'Switch'. The main content area is titled 'Switch' and contains a 'Switch Setup' section. This section has a 'Switch Mode' dropdown menu currently set to 'NAT' and an 'Apply' button to its right.

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

5.2 DHCP Server

The screenshot shows the SEOWON INTECH web interface for configuring the DHCP Server. The top navigation bar includes the logo, a signal strength indicator, a user profile, a language dropdown set to 'English', and a 'Logout' button. The left sidebar menu is expanded to 'Settings' > 'Network' > 'DHCP Server'. The main content area is titled 'DHCP Server' and contains the following 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

Below the settings is a 'Lease Reservation Table' with an 'Add' button and a 'Det' button. The table has columns for 'Select', 'Host Name', 'MAC Address', 'IP Address', and 'Enable'. A 'Searched List' section with an 'Add' button shows a search result for '192.168.1.2 / C8:0A:A9:13:0B:7C'. An 'Apply' button is located at the bottom right of the table. A note at the bottom left of the table states 'Up to 10 rules can be set'.

- 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.

5.3 DMZ

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**
 - Switch
 - DHCP Server
 - DMZ**
 - Port Forwarding
 - Port Triggering
 - VPN Configuration
 - VPN Passthrough
 - UPnP
 - QoS
 - DDNS

DMZ

Enable DMZ Enable Disable

Redirect ICMP To The Host Enable Disable

Exclude Web Server Port Enable Disable

Private LAN IP Address . . .

Apply

- 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.

5.4 Port Forwarding

The screenshot displays the SEOWON INTECH web interface. At the top, there is a header with the logo, signal strength, user name, language (English), and a Logout button. On the left, a 'Menu' sidebar is visible, with 'Settings' > 'Network' > 'Port Forwarding' selected. The main content area is titled 'Port Forwarding' and contains two sections:

Port Forwarding Configuration Form:

- Name: [View Existing Application](#)
- Protocol: **BOTH** (dropdown)
- 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.

5.5 Port Triggering

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**
 - Switch
 - DHCP Server
 - DMZ
 - Port Forwarding
 - Port Triggering**
 - VPN Configuration
 - VPN Passthrough
 - UPnP
 - QoS
 - DDNS

Port Triggering

Port Trigger Settings Table

Name: Port Type: RANGE

Trigger Protocol: ALL Trigger Port: -

Open Protocol: ALL Open Port: -

Add **Cancel**

Port Trigger List

No.	Name	Trigger Protocol	Trigger Port(s)	Open Protocol	Open Port(s)	Edit	Del
			StartPort EndPort		StartPort EndPort		
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.

5.6 VPN Configuration

The screenshot shows the SEOWON INTECH web interface. At the top left is the logo and name 'SEOWON INTECH'. At the top right, there is a signal strength indicator, a user profile labeled 'user', a language dropdown set to 'English', and a 'Logout' button. On the left side, there is a 'Menu' sidebar with the following items: Dashboard, Connection Mode, Status, Settings (expanded), LTE, Cell Selection, Cell Lock, PCI Cell Lock, SIM Management, Default PDN, Multiple PDN, Internet MTU, IPv6 Settings, Network (expanded), Switch, DHCP Server, DMZ, Port Forwarding, Port Triggering, VPN Configuration (selected), VPN Passthrough, UPnP, QoS, and DDNS. The main content area is titled 'VPN Configuration' and contains 'VPN Configuration Settings'. It features a 'VPN' label, a dropdown menu currently set to 'Disable', and an 'Apply' button.

- 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.

5.7 VPN Passthrough

The screenshot displays the SEOWON INTECH web interface. At the top, there is a logo for SEOWON INTECH, a signal strength indicator, a user profile labeled 'user', a language dropdown set to 'English', and a 'Logout' button. On the left, a 'Menu' sidebar lists various settings: Dashboard, Connection Mode, Status, Settings, LTE (Cell Selection, Cell Lock, PCI Cell Lock, SIM Management, Default PDN, Multiple PDN, Internet MTU, IPv6 Settings), Network (Switch, DHCP Server, DMZ, Port Forwarding, Port Triggering, VPN Configuration), VPN Passthrough (UPnP, QoS, DDNS). The main content area is titled 'VPN Passthrough' and shows 'VPN Pass Through Settings'. It includes a 'VPN Service' label, two checked checkboxes for 'PPTP Service' and 'L2TP/IPSEC Service', and an 'Apply' button.

- 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.

5.8 UPnP

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**
 - Switch
 - DHCP Server
 - DMZ
 - Port Forwarding
 - Port Triggering
 - VPN Configuration
 - VPN Passthrough
 - UPnP**
 - QoS
 - DDNS

UPnP

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.

5.9 QoS

The screenshot shows the SEOWON INTECH web interface. At the top, there is a logo and navigation elements including a signal strength indicator, a user profile labeled 'user', a language dropdown set to 'English', and a 'Logout' button. On the left, a 'Menu' sidebar is expanded to 'QoS'. The main content area is titled 'QoS Setup' and features a 'QoS Enable/Disable' section with two radio buttons: 'Disable' (which is selected) and 'Enable'. An 'Apply' button is located at the bottom right of the main content area.

- 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

5.10 DDNS

The screenshot displays the SEOWON INTECH web interface. At the top, there is a navigation bar with a signal strength indicator, a user profile labeled 'user', a language dropdown set to 'English', and a 'Logout' button. On the left, a 'Menu' sidebar is visible, with 'Settings' selected and expanded to show 'Network' > 'DDNS'. The main content area is titled 'DDNS' and contains a 'Dynamic DNS' section. This section includes a 'DDNS Enable' label followed by two radio buttons: 'Enable' (unselected) and 'Disable' (selected). An 'Apply' button is located at the bottom right of the configuration area.

- 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.

6. Firewall

6.1 Basic

The screenshot displays the SEOWON INTECH web interface. At the top, there is a header with the logo, signal strength, user profile, language (English), and a Logout button. On the left, a 'Menu' sidebar lists various settings categories: 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 'Basic' and contains two sections: 'Firewall Setup' and 'SIP ALG Settings'. The 'Firewall Setup' section includes five rows of radio button options: 'Firewall Enable/Disable' (Enable selected), 'Allow Ping From WAN' (Enable selected), 'Allow HTTP login from WAN' (Enable selected), 'Allow HTTPS login from WAN' (Disable selected), and 'Multicast Filter' (Disable selected). An 'Apply' button is located at the bottom right of this section. The 'SIP ALG Settings' section includes a text box for 'Enable SIP ALG' (checkbox selected) and a text box for 'SIP port' with the value '5060'. An 'Apply' button is also present at the bottom right of this section.

- 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.

7. UserManagement

7.1 Account

The screenshot displays the SEOWON INTECH web interface. At the top, there is a logo and navigation elements including a signal strength indicator, a user profile labeled 'user', a language dropdown set to 'English', and a 'Logout' button. On the left, a 'Menu' sidebar is visible, with 'Settings' expanded to show 'User Management', which is further expanded to 'Account Management'. The main content area, titled 'Account', contains two sections: 'Account Management' and 'Customer Name'. The 'Account Management' section includes a 'Privilege' dropdown menu (set to 'user'), a 'Username' text input (containing 'user'), and three password input fields: 'Current Password', 'New Password', and 'Confirm Password'. A blue 'Apply' button is positioned to the right of these fields. The 'Customer Name' section features a single text input field for the customer name and another blue 'Apply' button below it.

- 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.

7.2 Language

The screenshot shows the SEOWON INTECH web interface. At the top left is the logo and name 'SEOWON INTECH'. At the top right, there is a signal strength indicator, a user profile icon labeled 'user', a language dropdown menu currently set to 'English', and a 'Logout' button. On the left side, there is a 'Menu' sidebar with the following items: Dashboard, Connection Mode, Status, Settings (expanded), LTE, Network, Firewall, Basic, Filter Setup, Access Control, IP-MAC Binding, User Management (expanded), Account, Language (selected), Restore Default, Reboot, Date and Time, Remote Management, Firmware Management, and Monitoring. The main content area is titled 'Language' and contains 'Language Settings'. It features a 'Language' dropdown menu with 'English' selected and an 'Apply' button.

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

7.3 Restore Default

The screenshot displays the SEOWON INTECH web interface. At the top, there is a header with the logo, signal strength, user name 'user', language 'English', and a 'Logout' button. On the left, a 'Menu' sidebar lists various settings categories: Dashboard, Connection Mode, Status, Settings (expanded), LTE, Network, Firewall (with sub-items: Basic, Filter Setup, Access Control, IP-MAC Binding), User Management (with sub-items: Account, Language), Restore Default (highlighted), Reboot, Date and Time, Remote Management, Firmware Management, and Monitoring. The main content area is titled 'Restore Default' and contains two sections: 'Factory Reset' with a text box 'Reset all settings to factory default values' and an 'Apply' button; and 'Last Good Configuration' with a text box 'Last Good Configuration Not Exist' and three buttons: 'Save Last Good', 'Remove Last Good', and 'Reset to Last Good'.

- 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.

7.4 Reboot

The screenshot displays the SEOWON INTECH web interface. At the top, there is a navigation bar with the company logo, a signal strength indicator, a user profile labeled 'user', a language dropdown menu set to 'English', and a 'Logout' button. On the left side, a 'Menu' sidebar is visible, containing options such as Dashboard, Connection Mode, Status, Settings, LTE, Network, Firewall, Basic, Filter Setup, Access Control, IP-MAC Binding, User Management, Account, Language, Restore Default, Reboot, Date and Time, Remote Management, Firmware Management, and Monitoring. The 'Reboot' page is active, showing a heading 'Reboot the system' and a message: 'It takes about 40 seconds to reboot the system'. A blue 'Apply' button is located at the bottom right of the message area.

- 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.

7.5 Date and time

Menu

- Dashboard
- Connection Mode
- Status
- Settings**
- LTE
- Network
- Firewall
- Basic
- Filter Setup
- Access Control
- IP-MAC Binding
- 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

Enable/Disable

Local Time 2020-03-22 21:11:59

Time Server

Time Zone Select

Enable Daylight Saving

Start Date of at o'clock

End Date of at 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.

7.6 Remote Management

The screenshot shows the SEOWON INTECH web interface. At the top, there is a logo for SEOWON INTECH, a signal strength indicator, a user profile labeled 'user', a language dropdown set to 'English', and a 'Logout' button. The left sidebar contains a 'Menu' with the following items: Dashboard, Connection Mode, Status, Settings, LTE, Network, Firewall, Basic, Filter Setup, Access Control, IP-MAC Binding, User Management, Account, Language, Restore Default, Reboot, Date and Time, Remote Management, Firmware Management, and Monitoring. The 'Remote Management' page is displayed, featuring two sections: 'HTTP Server' and 'HTTPS Server'. The 'HTTP Server' section has a 'Remote IP Address' field and a 'Port Number' field with the value '80' and a note '(The default is 80)'. The 'HTTPS Server' section has an 'Enable' checkbox (unchecked) and a 'Port Number' field with the value '443' and a note '(The default is 443)'. An 'Apply' button is located at the bottom right of the settings 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.

8. Firmware Management

8.1 Software

The screenshot displays the SEOWON INTECH web interface. At the top left is the logo and name 'SEOWON INTECH'. At the top right, there are navigation elements: a signal strength indicator, a user profile 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: Dashboard, Connection Mode, Status, Settings (highlighted), LTE, Network, Firewall, User Management, Firmware Management (highlighted), Software (highlighted), and Monitoring. The main content area is titled 'Software' and contains a 'Software Upgrade' section. This section includes a 'Filename' field with a 'Choose File' button and the text 'No file chosen'. Below it is a 'Status' field with the text 'Please select the update package file'. A 'Device Software Version' field shows '1.10.4'. A blue 'Update' button is positioned to the right of the version field.

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

9. Monitoring

9.1 Iperf

The screenshot shows the SEOWON INTECH web interface. At the top, there is a logo on the left and a navigation bar on the right containing a signal strength indicator, a user profile labeled 'user', a language dropdown set to 'English', and a 'Logout' button. On the left side, there is a 'Menu' sidebar with categories: 'Menu', 'Dashboard', 'Connection Mode', 'Status', 'Settings', 'LTE', 'Network', 'Firewall', 'User Management', 'Firmware Management', and 'Monitoring'. Under 'Monitoring', 'Iperf' is selected, with sub-items 'Diagnostic' and 'Log'. The main content area is titled 'Iperf' and contains 'Iperf Settings'. It features a 'Status' section with radio buttons for 'Start' and 'Stop', where 'Stop' is selected. Below this are fields for 'Last Measurement Date/Time', 'Server Address', 'Server Port' (set to 5001), 'Measurement Time' (set to 60 secs), 'Protocol Type' (set to TCP), and 'Number of parallel client' (set to 1). A large empty box is present below the settings. At the bottom right of the settings area, there are 'Refresh' and 'Execute' buttons.

- 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.

9.2 Diagnostic Ping

The screenshot displays the SEOWON INTECH web interface. At the top, there is a header with the company logo, a signal strength indicator, a user profile 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 (with a sub-menu including LTE, Network, Firewall, User Management, and Firmware Management), and Monitoring (with sub-menus for Iperf, Diagnostic, and Log). The main content area is titled 'Diagnostic' and features two tabs: 'Ping' (which is active) and 'Trace router'. The 'Ping' configuration form includes the following fields: 'IP Address (URL)' (a text input field), 'Ping Packet Size (Bytes)' (a numeric input field set to 56), 'Ping Timeout (sec)' (a numeric input field set to 30), and 'Ping Count' (a dropdown menu set to 4). Below these fields is a large, empty rectangular area intended for displaying test results. An 'Apply' button is located at the bottom right of the configuration form.

- 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.

9.2.1 Trace router

The screenshot shows the SEOWON INTECH web interface. At the top, there is a header with the logo, a signal strength indicator, a user profile labeled 'user', a language dropdown set to 'English', and a 'Logout' button. On the left, a 'Menu' sidebar lists various system functions: Dashboard, Connection Mode, Status, Settings (with sub-items for LTE, Network, Firewall, User Management, and Firmware Management), and Monitoring (with sub-items for Iperf, Diagnostic, and Log). The main content area is titled 'Diagnostic' and contains two tabs: 'Ping' and 'Trace router'. The 'Trace router' tab is active, displaying a configuration form with the following fields: 'IP Address (URL)' (text input), 'Set Maximum TTL(Max Hops) (Max Hops)' (text input with value '30'), 'Set the number of queries at each TTL' (dropdown menu with value '3'), and 'Report IP Address Only' (checkbox). Below the form is a large grey rectangular area for results, and an 'Apply' button is located at the bottom right of the form.

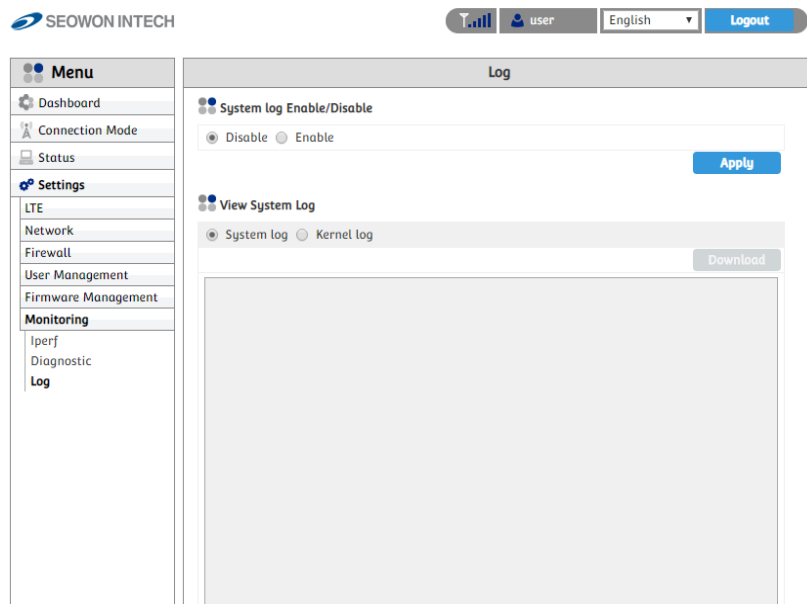
- Configure the Trace route.
 - If you want to test trace route, enter IP Address to “IP Address (URL)”.
 - Select the “Set Maximum TTL” and “Set the number of queries at each TTL”.
 - If you want to see report consisting of IP Address, check the “Report IP Address Only”.
 - Click the “Apply” button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

9.3 Log

The screenshot displays the SEOWON INTECH web interface. At the top left is the logo and name 'SEOWON INTECH'. The top right shows a signal strength indicator, a user profile labeled 'user', a language dropdown set to 'English', and a 'Logout' button. On the left side, there is a 'Menu' sidebar with categories: 'Menu' (containing Dashboard, Connection Mode, Status), 'Settings' (containing LTE, Network, Firewall, User Management, Firmware Management), and 'Monitoring' (containing Iperf, Diagnostic, and Log). The main content area is titled 'Log' and contains two sections: 'System log Enable/Disable' with radio buttons for 'Disable' (selected) and 'Enable', and an 'Apply' button; and 'View System Log' with radio buttons for 'System log' and 'Kernel log' (selected), a 'Download' button, and radio buttons for 'Detailed' and 'Simple' (selected). A note below the log view states: 'Note: It could take a longer time to display detailed log'. The log content area is currently empty.

- Select “Settings” “Monitoring” “Log” from the left menu.
- The device support 2 types of log : System log and Kernel log.

9.3.1 System 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.

9.3.1 Kernel log.

The screenshot shows the SEOWON INTECH web interface. At the top, there is a logo for SEOWON INTECH, a signal strength indicator, a user profile labeled 'user', a language dropdown set to 'English', and a 'Logout' button. On the left is a sidebar menu with categories: Menu, Settings, and Monitoring. Under 'Monitoring', 'Log' is selected. The main content area is titled 'Log' and contains the following sections:

- System log Enable/Disable:** Radio buttons for 'Disable' and 'Enable'. An 'Apply' button is to the right.
- View System Log:** Radio buttons for 'System log' and 'Kernel log'. A 'Download' button is to the right.
- View Options:** Radio buttons for 'Detailed' and 'Simple'.
- Note:** It could take a longer time to display detailed log.

- 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 manufacture(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 26.5cm between the device and persons to



FCC ID : V7MBHSLCTOGA

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, lightning, earthquake, theft, blown fuse, internet viruses, worms, Trojan Horses, etc.
- Treated with its Product Serial # removed or defaced.



SEOWON INTECH.CO.,LTD.

R&D Center 32-15, Gongdan-ro 140beon-gil, Gunpo-si, Gyeonggi-do, Korea 15847

TEL +82-31-428-9539/ FAX +82-31-428-9598 / E-mail sales@seowonintech.co.kr / www.seowonintech.co.kr/en

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