

User manual

SLC-120T42OGA
LTE Network Outdoor CPE



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Introduction to the Product

Thank you for choosing SLC-120T42OGA, Outdoor CPE.

SLC-120T42OGA is offers better performance over Outdoor CPE given that LTE reception is not impeded.

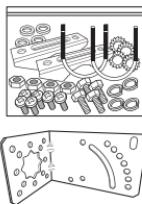
It offers easy installation, reliable network connection, advanced security & authentication features, and more.

Please read this User Manual carefully to learn about the SLC-120T42OGA. 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 Cord
(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-120T42OGA
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 <ul style="list-style-type: none"> - 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

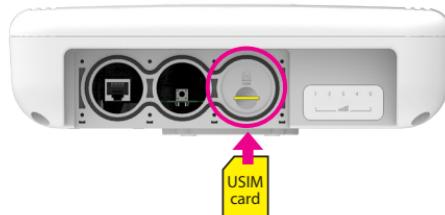
Remove the two Bolt M3 from the outdoor CPE.

* 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 :

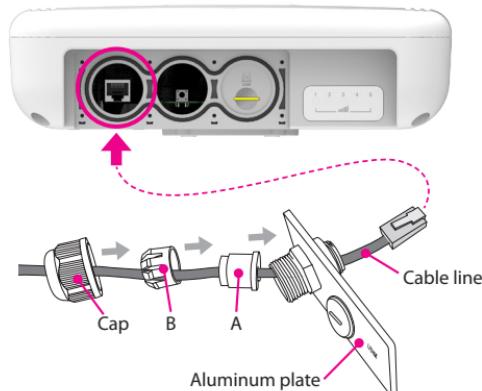
The surface of IC(metal) should be facing downward from the USIM card.



Step 3

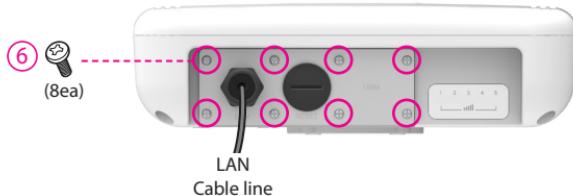
Remove the cap by turning. Then follow the next steps as shown below.

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.



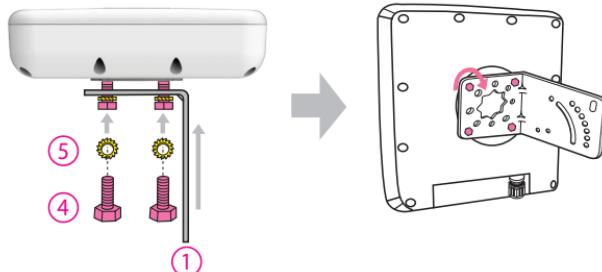
Step 4

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



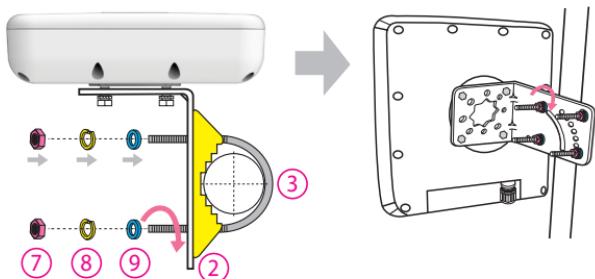
Step 5

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



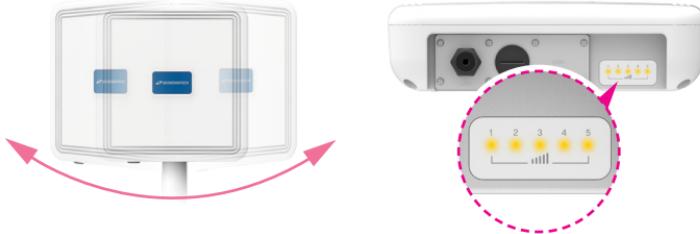
Step 6

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

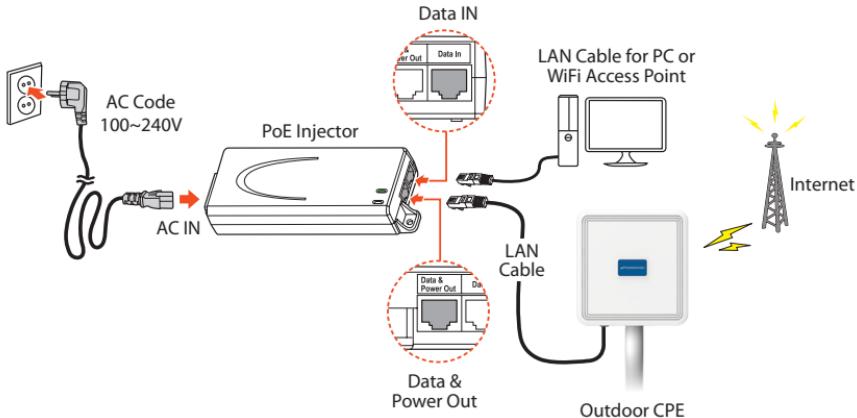


Note : If you forget the Login password for the Outdoor CPE or IP address after making changes, use the reset button to restore the Outdoor CPE to its original factory default settings.

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.

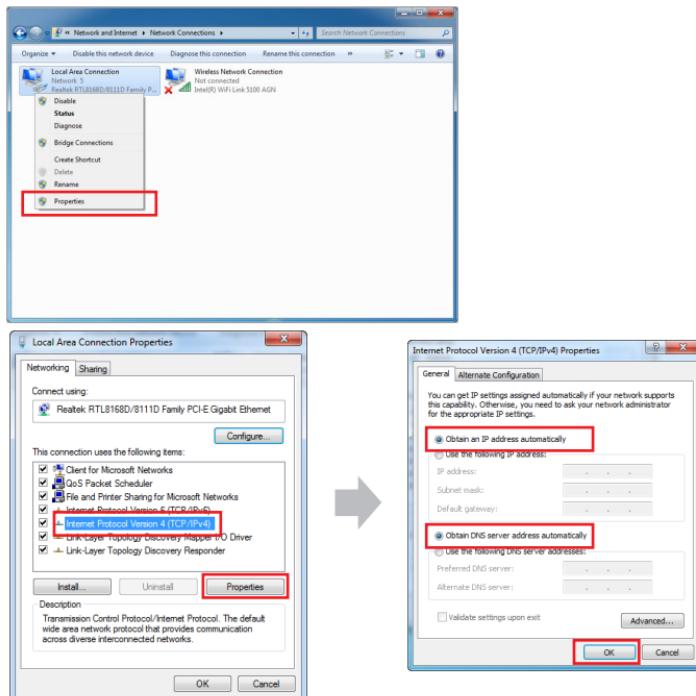
If normal connection between Outdoor CPE and PC is checked, you have to set up the PC and Outdoor CPE. The purpose of PC setup is to control network configuration for Windows Windows 7/8/10 or Mac OS X to use the Internet while the PC is connected to a Outdoor CPE.

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)

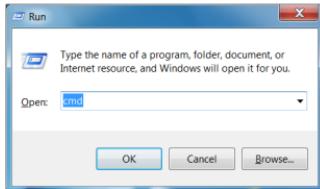
Most computers already have TCP/IP configuration enabled. For your computer to support CPE, please verify that the IP address and DNS settings are automatically generated in the Local Area connection of your Internet Protocol (TCP/IP) properties.

- 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\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.

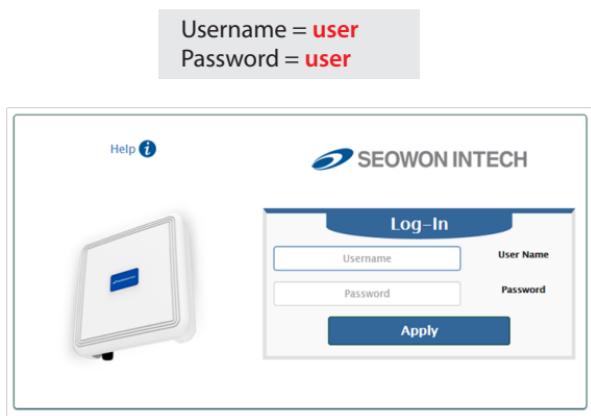
- LAN cable connection between PC and CPE
- Check TCP/IP setup details

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).



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 shows the SEOWON INTECH web interface with the following layout:

- Left Sidebar (Menu):**
 - Dashboard (selected)
 - Connection Mode
 - Status
 - Settings
- Top Bar:** Tx, user, English, Logout
- Dashboard Content:**
 - Mobile Network:** Mode: LTE Only, Operator: SEOWON
 - Monitoring:** UL Data Rate: 0 Kbps, UL Max Data Rate: 0 Kbps, DL Data Rate: 0 kbps, DL Max Data Rate: 0 kbps, Device Up Time: 12:12:01 up 2 min
 - About:** Firmware Version: 1.0.4, Firmware Creation Date: 2017.12.06-19:07
 - LTE:** UICC State: UICC Ready, Connection State: Not connected, PDN Type
 - Network:** LAN IP Address: 192.168.1.1, LAN IP Subnet Mask: 255.255.255.0, WAN IP Address, WAN IP Subnet Mask, Operation Mode: NAT
 - 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 shows the SEOWON INTECH web interface. At the top, there is a header with the logo, user information ('user'), language selection ('English'), and a 'Logout' button. Below the header is a left sidebar titled 'Menu' containing links for 'Dashboard', 'Connection Mode' (which is currently selected), 'Status', and 'Settings'. The main content area is titled 'Connection Mode'. It contains two sections: 'Operation' and 'Connect Manager'. In the 'Operation' section, there is a dropdown menu set to 'Auto'. In the 'Connect Manager' section, the status is shown as 'Connecting', and there are 'Connect' and 'Disconnect' buttons.

- 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

Menu		LTE Status			
		LTE Information	LTE Status	LTE Statistics	
LTE Status		LTE Status			
LTE	UICC State	UICC Ready	Connection	Connected	
Network	Band	48			
Device Details	APN Name		PDN Type	IPv4 & IPv6	
Device Performance	IP v4 Address	192.168.3.18	IP v6 Address	2600:0:0:0:0:0:0:5346	
Settings	PLMN Search	Success	MCC	001	
LTE	PLMN Selected	00101	MNC	01	
Network	Cell Global ID	0xdcd8602 (231572994)	EMM State	Registered [EMM-REGIS	
Firewall	eNodeB ID	0xdcd86 (904582)	Cell ID	TERED]	
User Management	Current UL T/P	18 Kbps	Current DL T/P	15 Kbps	
Firmware Management	Service Cell State	RRC CONNECTED			
Monitoring	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

The screenshot shows the SEOWON INTECH network management interface. On the left, a sidebar menu includes "Menu", "Dashboard", "Connection Mode", "Status" (which is selected), "LTE", "Network" (highlighted in blue), "Device Details", "Device Performance", and "Settings". The main content area is titled "Network Information". It features two tabs: "WAN" (disabled) and "LAN" (selected). Under "LAN", there is a table with the following data:

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

Below this is a "Lease Status Table" with the following data:

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.

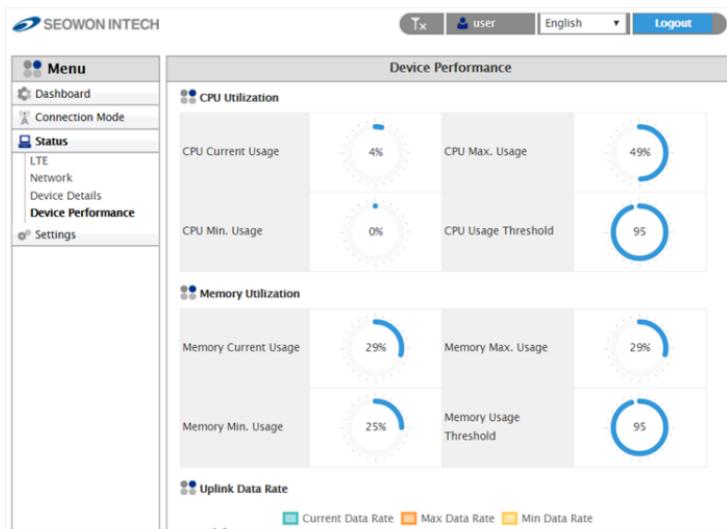
3.3 Device Details

The screenshot shows a web-based interface for managing a device. The top navigation bar includes a logo, the text "SEOWON INTECH", and user-related links like "Tx", "user", "English", and "Logout". On the left, a vertical menu titled "Menu" lists "Dashboard", "Connection Mode", "Status" (which is selected), "LTE Network", "Device Details" (selected), "Device Performance", and "Settings". The main content area is titled "Device Details" and contains two sections: "Device Time" and "Device Information".

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	SEOWONXX130T03-0000 001
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 a logo, the text "SEOWON INTECH", and user information ("user", "English", "Logout"). Below the header is a navigation menu on the left side with the following items:

- Dashboard
- Connection Mode
- Status
- Settings** (selected)
- 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

The main content area is titled "Cell Selection". It contains two sections: "Band Selection" and "Cell Selection Option".

Band Selection:

Mode	Full Band
Status	43.48
Band Selection	<input checked="" type="checkbox"/> Band-43 <input checked="" type="checkbox"/> Band-48

Cell Selection Option:

Power Scan Option	<input checked="" type="radio"/> First Detected Cell <input type="radio"/> Strongest Cell(Power On) <input type="radio"/> Strongest Cell(Always)
-------------------	--

At the bottom of each section is a blue "Apply" button.

- 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. On the left, there is a vertical navigation menu with the following items:

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

The main content area is titled "Cell Lock". It contains two sections:

- Search Cell**: A table with the following data:

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

Buttons: Add, Search
- Cell Lock List**: A table with the following columns:

Check	DL-EARFCN	PCI

Buttons: Add +, Delete, Delete All, Apply

- 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 displays the SIM Management page of the SEO WON INTECH web interface. The left sidebar contains a navigation menu with various options like Dashboard, Connection Mode, Status, and Settings. Under Settings, the 'LTE' and 'SIM Management' sections are expanded, showing sub-options such as Cell Selection, Cell Lock, 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 includes four sub-sections:

- PIN Information:** Shows current status as 'PIN DISABLED', with 'RETRIES PIN' set to 3 and 'RETRIES PUK' set to 10. A 'Refresh' button is available.
- PIN Management:** A form for entering a PIN code, with 'Verify', 'Enable', and 'Disable' buttons.
- PIN Change:** A form for changing the PIN code, including fields for 'PIN Code', 'New PIN Code', and 'Confirm New PIN Code', along with a 'Change' button.
- PIN Unblock:** A form for unblocking the SIM card using a PUK code, including fields for 'PUK Code' and 'New PIN Code', along with 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.

4.1.4 Default PDN

The screenshot shows the SEO WON INTECH web interface. The top navigation bar includes a logo, user information (Tx, user), language selection (English), and a logout button. The left sidebar menu is titled "Menu" and contains the following items: Dashboard, Connection Mode, Status, Settings (selected), LTE, Default PDN, Multiple PDN, Internet MTU, IPv6 Settings, Network, Firewall, User Management, Firmware Management, and Monitoring. The main content area is titled "Default PDN" and "Default PDN Connection". It features three input fields: "APN Name" (empty), "Authentication Type" (set to "NONE"), and "PDN Type" (set to "IPv4v6"). A blue "Apply" button is located to the right of these fields.

- 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

The screenshot shows the SEOWON INTECH web interface. The left sidebar menu includes: Menu, Dashboard, Connection Mode, Status, Settings (selected), LTE (Cell Selection, Cell Lock, SIM Management, Default PDN), Multiple PDN (selected), Internet MTU, IPv6 Settings, Network, Firewall, User Management, Firmware Management, and Monitoring.

The main content area is titled "Multiple PDN". It contains a "PDN Configure" section with the following fields:

PDN cid	2
PDN Label	ims
APN Name	
Authentication Type	NONE
PDN Type	IPv4v6
Enable	<input type="checkbox"/>

Below this is a "PDN list" table:

Cid	PDN Label	PDN Type	APN Name	Auth Type	Username	Enable
2	ims	IPv4v6		NONE		Off
3	admin	IPv4		NONE		Off
4	app	IPv4		NONE		Off

Buttons at the bottom right of the "PDN Configure" section are "Apply" (blue) and "Cancel" (green).

- 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 a web-based management interface for a mobile device. At the top, there is a header with the logo "SEOWON INTECH", user status ("Tx", "user"), language ("English", dropdown), and a "Logout" button. Below the header is a left sidebar menu with the following structure:

- Menu (selected)
- Dashboard
- Connection Mode
- Status
- Settings** (selected)
- LTE
 - Cell Selection
 - Cell Lock
 - SIM Management
 - Default PDN
 - Multiple PDN
- Internet MTU** (selected)
- IPv6 Settings
- Network
- Firewall
- User Management
- Firmware Management
- 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 form field labeled "Internet MTU" containing the value "1500". A note next to the field says "(The default is 1500, do not change unless necessary.)". To the right of the input field is a blue "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.

4.1.7 IPv6 Settings

The screenshot shows the SEOWON INTECH web interface. At the top, there is a logo, the text "SEOWON INTECH", and a user session indicator ("user"). To the right of the user session are language and logout buttons. Below the header is a left sidebar menu with the following structure:

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

The main content area is titled "IPv6 Settings". It contains two sections: "IPv6 Setup" and "DHCPv6 Address Settings". In the "IPv6 Setup" section, the "IPv6 Enable" dropdown is set to "Enable". In the "DHCPv6 Address Settings" section, the "DHCPv6 Autoconfiguration Mode" dropdown is set to "Stateless" and the "DNS Server Address Mode" dropdown is set to "Auto". A blue "Apply" button is located at the bottom right of the settings panel.

- 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

The screenshot shows a web-based management interface for a SEO WON INTECH device. The top navigation bar includes a logo, the brand name "SEO WON INTECH", user status ("user"), language selection ("English"), and a "Logout" button. The left sidebar, titled "Menu", contains several sections: "Dashboard", "Connection Mode", "Status", "Settings" (which is currently selected), "LTE", "Network" (which is also visible in the sidebar), "Switch", "DHCP Server", "DMZ", "Port Forwarding", "Port Triggering", "VPN Configuration", "VPN Passthrough", "UPnP", "QoS", "DDNS", "Firewall", "User Management", "Firmware Management", and "Monitoring". The main content area is titled "Switch Setup" and contains a sub-section "Switch Setup". It features a dropdown menu labeled "Switch Mode" with "NAT" selected. At the bottom right of this section is a blue "Apply" button.

- 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

The screenshot shows the SEO WON INTECH web interface. The left sidebar menu is expanded, showing the following sections:

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

The main content area is titled "DHCP Server". It 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: checked
- Primary DNS: (empty)
- Secondary DNS: (empty)
- Tertiary DNS: (empty)
- DHCP Lease Time: 3600 seconds

Below these settings is a "Lease Reservation Table" section:

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

At the bottom of the page, there is a note: "Up to 10 rules can be set" and a blue "Apply" button.

- 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-based management interface. On the left, there is a vertical navigation menu with the following items:

- Menu
- Dashboard
- Connection Mode
- Status
- Settings** (selected)
- LTE
- Network** (selected)

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

- Firewall
- User Management
- Firmware Management
- Monitoring

The main content area is titled "DMZ". It contains the following configuration options:

- Enable DMZ**: A group of three radio buttons labeled "Enable" and "Disable". The first "Enable" button is selected.
- Redirect ICMP To The Host**: A group of three radio buttons labeled "Enable" and "Disable". The first "Enable" button is selected.
- Exclude Web Server Port**: A group of three radio buttons labeled "Enable" and "Disable". The first "Enable" button is selected.
- Private LAN IP Address**: An input field containing "192.168.1.2".
- Apply**: A blue button at the bottom right of the configuration section.

- 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.

The screenshot shows the SEOWON INTECH router's web-based management interface. The left sidebar menu is visible, showing various settings like Dashboard, Connection Mode, Status, Settings, LTE, Network (which is selected), Port Forwarding, Firewall, User Management, Firmware Management, and Monitoring. The main content area is titled "Port Forwarding". It contains a form for adding a new rule with fields for Name, Protocol (set to BOTH), Start Port, End Port, Destination IP, and Destination Port. Below this is a table titled "Port Forwarding List" with columns for No., Name, Start Port, End Port, Protocol, IP Address, and Destination Port. A note at the bottom says "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.

- 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 SEO WON INTECH web-based management interface. On the left is a vertical navigation menu with the following items:

- Menu
- Dashboard
- Connection Mode
- Status
- Settings** (selected)
- LTE
- Network** (selected)

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

- Firewall
- User Management
- Firmware Management
- Monitoring

The main content area is titled "VPN Configuration". It contains two sections: "VPN Configuration Settings" and "L2TP Mode".

VPN Configuration Settings

VPN	L2TP	
Server Address		
Server Address/Private	Disable	
Username		
Password		
Pre Shared Key		
Connect Mode	Keep Alive	
Redial Period	Seconds	Seconds

L2TP Mode

Server Address		
Server Address/Private	Disable	
Username		
Password		
Pre Shared Key		
Connect Mode	Keep Alive	
Redial Period	Seconds	Seconds

At the bottom right of the configuration 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

The screenshot shows the SEO WON INTECH web-based management interface. At the top, there is a header with the brand logo, user status (Tx, user), language selection (English), and a logout link. On the left, a vertical navigation menu is displayed under the 'Menu' heading. The 'Network' section is currently selected, showing options like Switch, DHCP Server, DMZ, Port Forwarding, Port Triggering, VPN Configuration, and VPN Passthrough. The 'VPN Passthrough' option is highlighted. Other sections include LTE, Firewall, User Management, Firmware Management, and Monitoring. The main content area is titled 'VPN Passthrough' and contains a sub-section titled 'VPN Pass Through Settings'. It shows two checkboxes: 'VPN Service' (unchecked) and 'PPTP Service' (checked). There is also a third checkbox for 'L2TP/IPSEC Service' which is also checked. A blue 'Apply' button is located at the bottom right of this section.

- 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

The screenshot shows the SEO WON INTECH web-based management interface. The left sidebar contains a navigation menu with the following items:

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

The main content area is titled "Universal Plug & Play". It has two sections:

- Universal Plug & Play**: A configuration section with a radio button for "UPnP Enable/Disable" set to "Enable". There is an "Apply" button.
- Client List**: A table with columns: No., Client Program, Protocol, External Port, IP Address, and Internal Port. A "Refresh" button is located at the top right of the table.

- 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

The screenshot shows the SEO WON INTECH web interface. On the left, there is a vertical navigation menu with the following items:

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

The main content area is titled "QoS". It contains two sections: "QoS Setup" and "QoS Rule Setup".

QoS Setup: This section has a "QoS Enable/Disable" field with "Enable" selected, a "Download(kbps)" field set to 10000, and a note: "Setting QoS on device might be mandatory for access control and usage tracking, but suffering a performance hit is strictly optional."

QoS Rule Setup: This section includes fields for "QoS Mode" (set to "Down"), "IP Address/Mask" (with a placeholder of "192.168.1.0 - 192.168.1.255 / 24"), "Protocol" (set to "ALL"), "Start Port" (empty), "End Port" (empty), "Rate(kbps)" (empty), and "Priority" (set to "HIGH").

QoS List: This section shows a table header for "Download(WAN -> LAN)" with columns: No., IP Address/Mask, Protocol, Port, Rate(kbps), and Priority. Below the table, it says "Up to 10 rules can be set".

At the bottom right of the main content area are "Save" and "Cancel" buttons.

- 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

The screenshot shows the SEO WON INTECH web interface. The left sidebar menu is open, showing various settings sections: Menu, Dashboard, Connection Mode, Status, Settings (with Network selected), LTE, Port Forwarding, Port Triggering, VPN Configuration, VPN Passthrough, UPnP, QoS, DDNS (selected), Firewall, User Management, Firmware Management, and Monitoring.

The main content area is titled "DDNS". It contains two sections: "Dynamic DNS" and "DDNS Setting". Under "Dynamic DNS", there is a checkbox labeled "DDNS Enable" with options "Enable" (checked) and "Disable". Under "DDNS Setting", there are several input fields:

Setting	Value
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

A blue "Apply" button is located at the bottom right of the "DDNS Setting" section.

- 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 SEO WON INTECH router's configuration interface. The left sidebar menu includes '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: 'Firewall Setup' and 'SIP ALG Settings'. Under 'Firewall Setup', there are five configuration items with 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' (Enable selected), and 'Multicast Filter' (Enable selected). A blue 'Apply' button is located at the bottom right of this section. Under 'SIP ALG Settings', it states 'The modem supports the SIP ALG function. The SIP application can run and communicate with other internet application.' It has two input fields: 'Enable SIP ALG' (checkbox checked) and 'SIP port' (text box containing '5060'). A second blue 'Apply' button is located 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.

4.4 User Management

4.4.1 Account

The screenshot shows the device management interface for SEOWON INTECH. On the left, there is a vertical navigation menu with the following items:

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

The main content area is titled "Account" and contains a sub-section titled "Account Management". It includes the following fields:

Privilege	<input type="text" value="user"/>
Username	<input type="text" value="user"/>
Current Password	<input type="password"/>
New Password	<input type="password"/>
Confirm Password	<input type="password"/>

A blue "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

The screenshot shows the SEOWON INTECH web interface. At the top, there is a header with the logo, user information ('user'), language selection ('English'), and a 'Logout' button. On the left, a vertical navigation menu is displayed under the 'Menu' heading. The 'User Management' section is currently selected. Under 'User Management', the 'Language' option is highlighted. To the right, a 'Language' configuration page is shown with a title 'Language Settings'. It features a dropdown menu set to 'English' and a blue 'Apply' button.

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

4.4.3 Restore Default

The screenshot shows the SEOWON INTECH web interface. At the top, there is a header with the logo, user information ('user'), language selection ('English'), and a 'Logout' button. On the left, a vertical navigation menu is displayed under the 'Menu' heading. The 'Settings' section is expanded, showing options like LTE, Network, Firewall, User Management, and others. Under 'User Management', 'Restore Default' is selected and highlighted with a blue border. The main content area is titled 'Restore Default'. It contains two sections: 'Factory Reset' and 'Last Good Configuration'. The 'Factory Reset' section has a note that it will reset all settings to factory default values and features an 'Apply' button. The 'Last Good Configuration' section indicates that 'Last Good Configuration Not Exist' and includes three buttons: 'Save Last Good' (blue), 'Remove Last Good' (gray), and 'Reset to Last Good' (gray).

- 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

The screenshot shows the SEOWON INTECH web-based management interface. At the top, there is a header with the logo, user information ('user'), language selection ('English'), and a 'Logout' button. On the left, a vertical navigation menu is displayed under the 'Menu' heading. The 'User Management' option is currently selected. The main content area is titled 'System Reboot' and contains a sub-section titled 'Reboot the system'. It includes a message stating 'It takes about 40 seconds to reboot the system' and a blue 'Apply' button.

- 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

The screenshot shows the SEOWON INTECH web interface. The left sidebar menu includes: Menu, Dashboard, Connection Mode, Status, Settings (selected), LTE, Network, Firewall, User Management, Account, Language, Restore Default, Reboot, Date and Time (selected), Remote Management, Firmware Management, and Monitoring.

The main content area is titled "Date and Time". Under "Time Zone Setup", there is a section for "NTP Client" with "Enable" selected. Below it, "Local Time" shows the date and time as "2017-12-22 12:30:41". A "Time Server" input field contains "my.pool.ntp.org". The "Time Zone Select" dropdown is set to "Seoul". Under "Enable Daylight Saving", the "Start Date" is set to "First Sunday of April at 2 o'clock" and the "End Date" is set to "Last Sunday of October at 2 o'clock". A blue "Apply" button is located at the bottom right of the form.

- 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 brand logo, user information ('user'), language selection ('English'), and a 'Logout' button. On the left, a vertical navigation menu is displayed under the 'Menu' section. The 'User Management' section is currently selected and highlighted in blue. Under 'User Management', the 'Remote Management' option is also highlighted. The main content area is titled 'Remote Management'. It contains two sections: 'HTTP Server' and 'HTTPS Server'. The 'HTTP Server' section has fields for 'Remote IP Address' (empty) and 'Port Number' (set to 80, with a note '(The default is 80)'). The 'HTTPS Server' section has a checked 'Enable' checkbox and a 'Port Number' field set to 443, with the same note '(The default is 443)'. A blue 'Apply' button is located at the bottom right of the configuration 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 shows a web-based management interface for a device. At the top, there is a header bar with the SEOWON INTECH logo, user information ('user'), language selection ('English'), and a 'Logout' button. Below the header is a left sidebar menu titled 'Menu' under 'Settings'. The sidebar includes links for Dashboard, Connection Mode, Status, LTE, Network, Firewall, User Management, Firmware Management (which is currently selected), Software, and Monitoring. The main content area is titled 'Software' and specifically 'Software Upgrade'. It contains four input fields labeled 'Filename 1', 'Filename 2', 'Filename 3', and 'Filename 4', each with a 'Choose File' button and the message 'No file chosen'. Below these fields is a note: 'Please select the update package file'. Underneath the note, there are two more fields: 'Status' (set to 'Device Software') and 'Version' (set to '1.0.4'). At the bottom right of the form is a blue 'Update' button.

- 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 shows the SEOWON INTECH Performance Measurement Tool. At the top, there is a header with the logo, user information ('Tx', 'user'), language ('English'), and a 'Logout' button. On the left, a vertical menu bar titled 'Menu' lists 'Dashboard', 'Connection Mode', 'Status', 'Settings' (which is expanded to show 'LTE', 'Network', 'Firewall', 'User Management', 'Firmware Management', 'Monitoring', 'Iperf', 'Diagnostic', and 'Log'), and 'Monitoring'. The main content area is titled 'Performance Measurement Tool' and 'Iperf Settings'. It contains several configuration fields: 'Status' with 'Enable' and 'Disable' radio buttons; 'Last Measurement Date/Time' (empty input field); 'Server Address' (empty input field); 'Server Port' set to '5001'; 'Management Port' set to '5001'; 'Measurement Time' set to '60'; 'Protocol Type' set to 'TCP' (with a dropdown arrow); and 'TCP Client Number' set to '1'. Below these fields is a large empty text area for logs. At the bottom right are 'Refresh' and 'Apply' 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.

4.6.2 Diagnostic

The screenshot shows the SEOWON INTECH web-based management interface. On the left, there's a vertical sidebar with a logo and several menu items under 'Menu' and 'Settings'. Under 'Settings', 'Monitoring' is selected, which further branches into 'Ping', 'iperf', 'Diagnostic', and 'Log'. The main content area is titled 'Diagnostic' and has a sub-tab 'Ping' selected. It contains input fields for 'IP Address (URL)', 'Ping Packet Size (Bytes)' set to 56, 'Ping Timeout (sec)' set to 30, and 'Ping Count' set to 4. At the bottom right of this form 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.

The screenshot shows a web-based management interface for a device. At the top left is the logo "SEOWON INTECH". To the right are navigation links for "Tx", "user", "English" (with a dropdown arrow), and "Logout". On the far left is a vertical sidebar titled "Menu" with the following options: Dashboard, Connection Mode, Status, Settings (which is currently selected and highlighted in blue), Monitoring, Iperf, Diagnostic (which is also highlighted in blue), and Log. The main content area is titled "Diagnostic" and contains two tabs: "Ping" and "Trace router" (which is currently active). Under the "Trace router" tab, there are three configuration fields: "IP Address (URL)" with a text input field, "Set Maximum TTL(Max Hops)" with a dropdown menu set to "30", and "Set the number of queries at each TTL" with a dropdown menu set to "3". Below these is a checkbox labeled "Report IP Address Only". At the bottom right of the form is a blue "Apply" button.

- 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

The screenshot shows the SEOWON INTECH web interface. At the top, there is a logo, the text "SEOWON INTECH", and a navigation bar with "Tx", "user", "English", and "Logout". On the left, a vertical menu is displayed under "Settings": "LTE", "Network", "Firewall", "User Management", "Firmware Management", "Monitoring", "iperf", "Diagnostic", and "Log". The "Log" option is currently selected. The main content area is titled "System log" and contains two sections: "System log Enable/Disable" and "View System Log". In the "Enable/Disable" section, there is a radio button for "Enable" which is checked. Below it is a blue "Apply" button. In the "View System Log" section, there are two radio buttons: "System log" (checked) and "Kernel log". To the right of these buttons is a "Download" button. A large, empty rectangular area below these buttons is likely a placeholder for log data.

- 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.

The screenshot shows the SEOWON INTECH web interface. On the left, there's a sidebar with a 'Menu' icon, followed by 'Dashboard', 'Connection Mode', 'Status', and 'Settings'. Under 'Settings', there are sections for 'LTE', 'Network', 'Firewall', 'User Management', 'Firmware Management', and 'Monitoring'. The 'Monitoring' section is expanded, showing 'iperf' and 'Diagnostic'. Below that is a 'Log' section with options for 'Detailed' or 'Simple' log display.

The main content area has a header 'System log' with a 'Logout' button. It contains two tabs: 'System log Enable/Disable' (selected) and 'View System Log'. In the 'Enable/Disable' tab, there's a radio button for 'Disable' and another for 'Enable', with an 'Apply' button. In the 'View System Log' tab, there's a radio button for 'System log' and another for 'Kernel log', with a 'Download' button. The 'View System Log' tab also includes a note: 'Note: It could take a longer time to display detailed log'.

The log content area displays log lines from a Linux system. The log starts with '0001' and continues with several entries, including:

```

0001 -----
0002 KERNEL LOGGING
0003 -----
0007 [Thu Jan 1 09:00:15 LST 1970] <5>Linux version 3.10.0-uc0 (release) #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: PPIP / VIPT nonaliasing data cache, VIPT aliasing li
0010 [Thu Jan 1 09:00:15 LST 1970] <4>Machine: GCT GDMT243
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 roots: 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.



- 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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