

SAS Provider

SAS Vendor	Google
SAS Server URL	https://test.sas.goog/v1.2
CRL Server URL	
CA Path	certs/google.ca.crt.pem
Cert Path	certs/google.cbsd.crt.pem
Key Path	certs/google.cbsd.key.pem
Key Passphrase	
User ID	AskeyUserId-000001
FCC ID	AskeyFccId-000001

Close

Figure 35. The configurations of the default SAS provider

You can select the user-specific SAS provider and complete the relevant configurations.

SAS Provider

User-Specified -

Edit

Edit SAS Provider

SAS Vendor	Testing SAS	
SAS Server URL	https://test.sas.goog/v1.2	
CRL Server URL		
SAS CA Path	選擇檔案	certs/specific.ca.crt.pem
CBSD Cert Path	選擇檔案	certs/specific.cbsd.crt.pem
CBSD Key Path	選擇檔案	certs/specific.cbsd.key.pem
Key Passphrase		
User ID	AskeyUserId-000001	
FCC ID	AskeyFcclId-000001	
GPS Simulator	true	
☒ Simulated Coordinate	61.2 Latitude (-90 to 90)	-155.5 Longitude (-180 to 180)
Height Type	AGL ▼	
Height	5.0	
CPI Enable	☐ Enabled ☒ Disabled	

Reset
Cancel
Save

Figure 36. The Configurations for User-Specified SAS Provider

If the CBSD requires **Certified Professional Installer (CPI)** installation, selecting "**Enabled**" for the "**CPI Enable**" item indicates that CPI installation is enabled. Additionally, you should fill in the detailed CPI installation configurations.

CPI Enable	☒ Enabled ☐ Disabled
CPI ID	cp19001
CPI Name	BV Installer Certificate
CPI Key Path	選擇檔案 certs/specific.cpi.key.pem
Antenna Azimuth	10
Antenna Downtilt	20
Install Certification Time	2024-04-19T11:00:00Z

Figure 37. The detailed CPI Installation Configurations

If the CBSD is switched to remote provisioning, the user-specific SAS provider configuration will include the '**Domain Proxy Supported**' item. If this item is set to '**Enabled**', the CBSD will only provide the relevant data to the AMP, and the Domain Proxy will collect these CBSD packages, communicate with the SAS, and carry out the SAS-CBSD procedures. The domain proxy needs to inform the SAS response to AMP to control these CBSDs.

Height Type	AGL
Height	5.0
Domain Proxy Supported	☐ Enabled ☒ Disabled
CPI Enable	☐ Enabled ☒ Disabled

Figure 38. The Domain Proxy Supported Configuration in Remote Provisioning

Table 8. The Askey 5G NR Small Cell DU Configuration – User-Specific SAS Provider

Items	Descriptions
SAS Vendor	The name or identifier of the SAS (Spectrum Access System) vendor
SAS Server URL	The URL address where the SAS server is located, typically used for communication between the CBSD (Citizen Broadband Radio Service Device) and SAS
CRL Server URL	The URL address of the Certificate Revocation List (CRL) server, used for verifying the validity of certificates issued by the SAS
SAS CA Path	This field requires the file path or directory where the SAS Certificate Authority (CA) certificate(s) are located. These certificates are typically used for authentication purposes
CBSD Cert Path	This field specifies the file path or directory containing the CBSD certificate(s), which are used for authentication when connecting to the SAS.
CBSD Key Path	This field indicates the file path or directory containing the private key associated with the CBSD certificate(s), necessary for authentication when connecting to the SAS.
Key Passphrase	The passphrase or password required to access the CBSD private key, if applicable.
User ID	The unique identifier or username assigned to the user or entity interacting with the SAS.
FCC ID	The Federal Communications Commission (FCC) identifier associated with the CBSD, used for regulatory compliance and identification purposes
GPS Simulator	Indicates whether a GPS simulator is enabled or disabled for testing purposes.
Simulated Coordinate	The simulated geographical coordinates (latitude and longitude) used by the GPS simulator
Height Type	The type of height measurement used, typically Above Ground Level (AGL) or Mean Sea Level (MSL)
Height	The height of the CBSD antenna above the ground or sea level
CPI Enable	This option enables or disables the Certified Professional Installer (CPI) functionality. When enabled, the CBSD operates under CPI installation guidelines
CPI ID	The unique identifier assigned to the CPI
CPI Name	The name or designation of the
CPI Key Path	Specifies the file path or directory containing the private key associated with the CPI certificate, used for authentication and secure communication during CPI installations.
Antenna Azimuth	The azimuth angle of the antenna, representing the horizontal direction of the antenna orientation in degrees. The valid range for this angle is from -90 to 90 degrees
Antenna Downtilt	The downtilt angle of the antenna, indicating the angle at which the antenna is tilted downwards from the horizontal plane. The valid range for this angle is from 0 to 359 degrees
Install Certification Time	The date and time when the installation certification was issued, represented in ISO 8601 format (YYYY-MM-DDThh:mm:ssZ).

In the bandwidth and NR ARFCN configurations, the Admin Website provides the supported item for each NR band. After choosing the profile option, the recommended values will be filled in the related items. For the more configurations, you can read the Chapter “The Recommend NR ARFCN Configuration” in the bottom of this document.

NR ARFCN

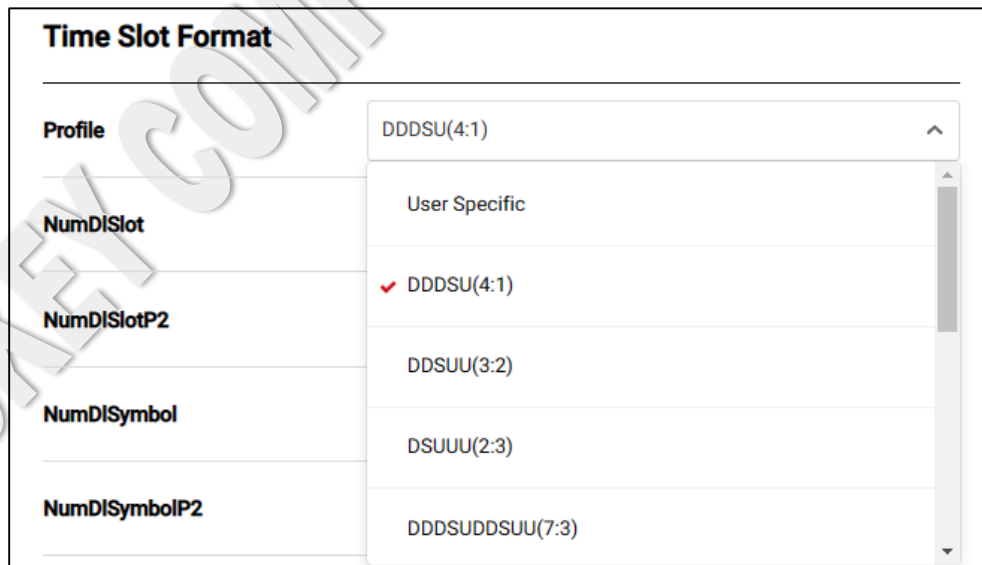
Profile	3.52G
DL NR ARFCN	635208
UL NR ARFCN	635208
DL CenterFreq	3528120
UL CenterFreq	3528120
DL AbsArfcnPointA	633936
UL AbsArfcnPointA	633936
DL AbsFreqPointA	3509040
UL AbsFreqPointA	3509040
AbsArfcnSsb	634464
AbsFreqSsb	3516960

Figure 39. The Askey 5G NR Small Cell DU Configuration – NR ARFCN

Table 9. The Askey 5G NR Small Cell DU Configuration – Bandwidth and NR ARFCN

Items	Descriptions
Bandwidth Profile	N48 supports 40MHz, 30MHz, and 20MHz N77 supports 100MHz, 90MHz, 80MHz, 60MHz, and 40MHz N78 supports 100MHz, 90MHz, 80MHz, 60MHz, 40MHz, 30MHz, and 20MHz
ARFCN Profile	It provides the recommended ARFCN configuration
DL NR ARFCN	The downlink NR ARFCN of the whole bandwidth
UL NR ARFCN	The uplink NR ARFCN of the whole bandwidth
DL CenterFreq	The downlink center frequency value in KHz
UL CenterFreq	The uplink center frequency value in KHz
DL AbsFreqPointA	The downlink absolute frequency point A configuration in KHz
UL AbsFreqPointA	The uplink absolute frequency point A configuration in KHz
DL AbsArfcnPointA	The downlink absolute ARFCN point A configuration
UL AbsArfcnPointA	The uplink absolute ARFCN point A configuration
AbsFreqSsb	The absolute frequency SSB configuration in KHz
AbsArfcnSsb	The absolute ARFCN SSB configuration

For the Time Slot Format, the Admin Website offers several predefined profiles along with recommended values for the associated items. You can select a profile option, and the corresponding values will automatically populate the detailed configuration items.



Time Slot Format

Profile DDSU(4:1) ^

NumDisSlot

NumDisSlotP2

NumDisSymbol

NumDisSymbolP2

User Specific

✓ DDSU(4:1)

DDSUU(3:2)

DSUUU(2:3)

DDSUDDSUU(7:3)

Figure 40. The Askey 5G NR Small Cell DU Configuration – Time Slot Profile

Time Slot Format

Profile	DDDSU(4:1) ✓
NumDISlot	3
NumDISlotP2	0
NumDISymbol	10
NumDISymbolP2	0
NumUISlot	1
NumUISlotP2	0
NumUISymbol	2
NumUISymbolP2	0
P2 Pres	0
PrachCfgIdx	159
PreambleFormat	RACH_FORMAT_B4 ✓

Figure 41. The Askey 5G NR Small Cell DU Configuration – Time Slot Parameters

Table 10. The Askey 5G NR Small Cell DU Configuration – Time Slot Format

Items	Descriptions
Profile	Lists common time slot patterns and provides default values for detailed settings.
numDISlot	The number of downlink slots.
numDISlot2	The number of P2 downlink slots.
numDISymbol	The number of downlink symbols for the slot format.
numDISymbolP2	The number of P2 downlink symbols for the slot format.
numUISlot	The number of uplink slots.
numUISlotP2	The number of P2 uplink slots.
numUISymbol	The number of uplink symbols for the slot format.
numUISymbolP2	The number of P2 uplink symbols for the slot format.
p2Pres	Represents the presence value of Pattern 2 (P2).
PrachCfgIdx	The PRACH configuration index value
PreambleFormat	Long preamble: Format 0, 1, 2, and 3 Short preamble: Format A1, A2, A3, B1, B2, B3, B4, C0, and C2

In the NR ARFCN and Time Slot Format configurations, the detailed items are read-only for the pre-defined profile. If users want to modify the detailed items, they should select the profile as 'User Specific'.

NR ARFCN

Profile
User Specific

DL NR ARFCN
635208

UL NR ARFCN
635208

Time Slot Format

Profile
User Specific

NumDISlot
3

NumDISlotP2
0

CBSD

If the Askey 5G NR Small Cell Neighbor Cells support NR Band 48 and the SAS Provider is not disabled, the CBSD page will display the CBSD status and configurations as shown in the following illustration:

SAS/CBSD feature (Advanced Feature) is only applicable to models SCE2120/SCU2050/SCU2140/SCU2080 N48.

Home

Connected Devices

Settings

Configuration

gNB

CBSD

Neighbor Cell

RF Antenna

VLAN

Static Routing

Version

About

Configuration: CBSD

Status

SAS Provider	Specific - Test Google SAS
Current UTC Time	2024-04-22T08:37:01Z
GPS Status	Location Acquired
GPS Last Coordinate	(61.2,-155.5)
GPS Locked Coordinate	(61.2,-155.5)
Registration State	Registered
Grant State	Authorized
CBSD ID	AskeyFcclId-000001/dbdf137c7ed2d68bb6f8ca7c162187dfde3cdec1
Bandwidth	40 MHz
Frequency Range	3610 MHz ~ 3650 MHz
Grant ID	AskeyFcclId-000001/dbdf137c7ed2d68bb6f8ca7c162187dfde3cdec1/138685934774992294
Rule Applied	FCC_PART_96
Channel Type	GAA

Figure 42. The Askey 5G NR Small Cell DU Configuration – CBSD Status

Grant Expire Time	2025-04-22T08:34:21Z
Heartbeat Interval	1800 seconds
Max TX Power	20.0 dBm
Max EIRP	19.0 dBm/MHz
Transmit Expire Time	2024-04-22T14:34:28Z
Response Code	0 - SUCCESS
Response Message	The CBSD request is approved by SAS

Home
Connected Devices
Settings
Configuration
gNB
CBSD
Neighbor Cell
RF Antenna
VLAN
Static Routing

Configuration: CBSD

Configs

SAS Provider	Specific - Test Google SAS
SAS Server URL	https://test.sas.goog/v1.2
CRL Server URL	
CA Path	/mnt/.app/cbsd/certs/specific.ca.crt.pem
Cert Path	/mnt/.app/cbsd/certs/specific.cbsd.crt.pem
Key Path	/mnt/.app/cbsd/certs/specific.cbsd.key.pem
FCC ID	AskeyFcclId-000001
CBSD Category	A

Figure 43. The Askey 5G NR Small Cell DU Configuration – CBSD Configurations

ASKEY COMPUTER CORPORATION

Version

About

Call Sign

ASK1046

User ID

AskeyUserId-000001

CBSD Serial Number

E1DBE016815

Radio Technology

NR

Supported Spec

NR-Rel15

Antenna Gain

6 dBi

EIRP Capability

30 dBm/10MHz

Indoor Deployment

True

Vendor

Askey Corporation

Model

SCE2120

SW Version

v2.2.013.1.7.1919

FW Version

0.47.10.150

HW Version

REV3

GPS Simulator

True

Simulated Coordinate

(62.5, -155.5)

Height Type

AGL

Height

5.0

Domain Proxy Supported

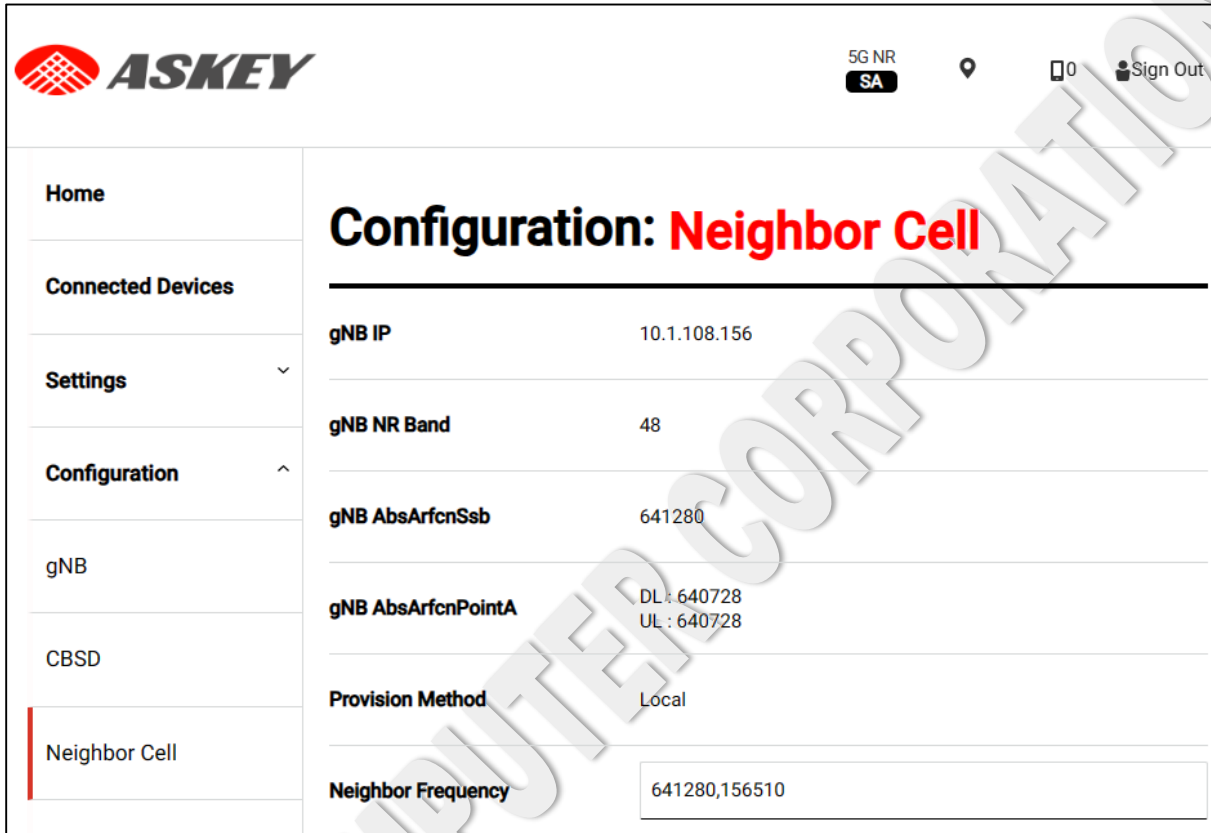
False

Cpi Enable

False

Neighbor Cell

The Askey 5G NR Small Cell Neighbor Cell page displays the related gNB information, and you can modify some items locally. You can also manually add the neighbor cell at the bottom of the page. These items will be read-only if the device is under remote provisioning.



Configuration: Neighbor Cell	
gNB IP	10.1.108.156
gNB NR Band	48
gNB AbsArfcnSsb	641280
gNB AbsArfcnPointA	DL : 640728 UL : 640728
Provision Method	Local
Neighbor Frequency	641280,156510

Figure 44. The Askey 5G NR Small Cell Neighbor Cell Page

The system automatically designates the first neighbor frequency as the intra-frequency for handovers, in line with the gNB's local provisioning settings. For remote provisioning, complete neighbor configurations are managed via the AMP. To add an additional neighbor frequency, click the '**Neighbor Frequency**' field and input the details in the popup window. A maximum of four neighbor frequencies can be configured; any attempts to add more will be rejected.

SSB Subcarrier Spacing defines the frequency gap between adjacent subcarriers within the Synchronization Signal Block of a 5G network, influencing bandwidth and essential for network frequency planning and signal clarity. The SSB Subcarrier Spacing value can be set to **15**, **30**, **60**, or **120** kHz on the page.

NR Band List is presented in comma-separated format and can include up to two bands.

Edit Neighbor Frequency

Handover Type	AbsArfcnSsb	Ssb Subcarrier Spacing	NR Band List	Action
Intra Handover	641280	30	48	
Inter Handover	156510	15 ^	28	Delete
				Add

You can also configure parameters related to handover events A1, A2, and A5.

A1 Threshold	3
A1 Hysteresis	0
A1 Timer To Trigger	MS40
A2 Threshold	3
A2 Hysteresis	0
A2 Timer To Trigger	MS40
A3 RSRP Offset	3
A3 Hysteresis	0
A3 Timer To Trigger	MS40
A5 Threshold1	3
A5 Threshold2	2
A5 Hysteresis	0
A5 Timer To Trigger	MS40

Figure 45. The configurations of A1, A2, and A5 events regarding the Neighbor Cell

If you wish to enable XN handover between gNBs, please check the '**XN Enable**' option.

☒ **Xn Enable**

Table 11. The Askey 5G NR Small Cell Neighbor Cell Configuration

Items	Descriptions
Neighbor Frequency	The Neighbor Frequency refers to the absolute ARFCN point A configuration of the neighboring frequency.
A1 Event	An A1 event is triggered when the serving cell's signal quality becomes better than a predefined threshold. This event is typically used to optimize the user's connection without initiating a handover, by adjusting the modulation and coding scheme to improve the data rate as signal conditions allow.
A2 Event	An A2 event occurs when the signal quality of the serving cell drops below a certain threshold, indicating deteriorating conditions. It signals the need for the network to prepare for a potential handover or to apply measures to maintain the connection, such as reducing the data rate to maintain link stability.
A5 Event	The A5 event is a dual-threshold event that triggers a handover when the serving cell's signal quality gets worse than a certain threshold while a neighboring cell's signal quality is better than another threshold. This event is designed to ensure seamless handover to a cell with a stronger signal to maintain service continuity and quality.
XN Enable	If checked, the device will enable the XN handover.

RF Antenna

The Askey 5G NR Small Cell RF Antenna page enables users to adjust the maximum transmission (TX) power and the RF antenna path.

Max TX Power : 24 dBm (SCE2120/SCE2200/SCU2140/SCU2000/SCU2050)

Max TX Power : 37 dBm (SCU2060/SCU2070/SCU2080 N48)

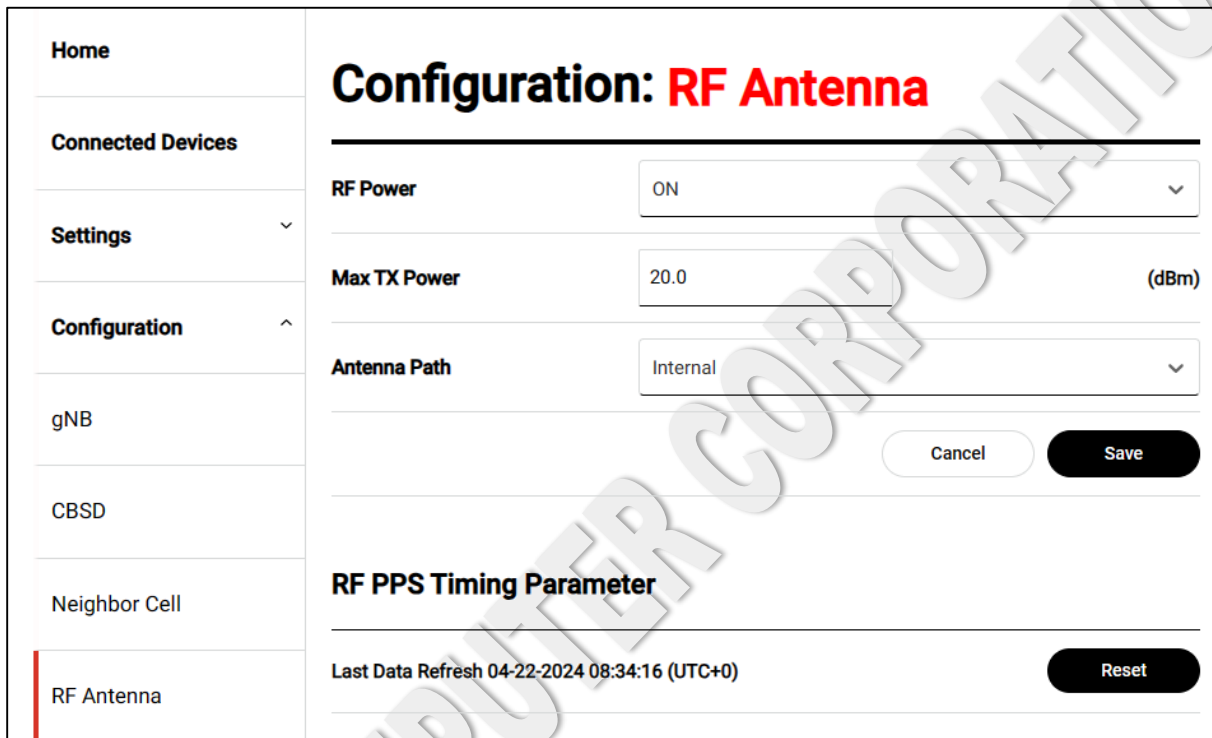


Figure 46. The Askey 5G NR Small Cell RF Antenna Page

The RF Power field will display 'N/A' if the Askey 5G NR Small Cell is not in service.



Once the cell state transitions to 'in service', you can deactivate the RF power. At the same time, the MAX TX power field will become read-only.

Configuration: RF Antenna

RF Power

OFF

Max TX Power

24.0

(dBm)

The MAX TX power is a decimal number, allowing one decimal place precision. The range for this value is from 5.0 to 24.0. If CBSD is supported, the range becomes 0.0 to 20.0

Max TX Power

0.0

(dBm)

The number range is 0 to 24

This “Antenna Path” switching option is ONLY available for models SCE2120/SCE2200/SCU2140, and not available for models SCU2050/SCU2000/SCU2060/SCU2070/SCU2080 N48.

The antenna path setting can be either **Internal** or **External**. When switched to External, the RF signal will be transmitted through the external antenna connector, as depicted in the illustration:



Models: SCE2120/SCE2200

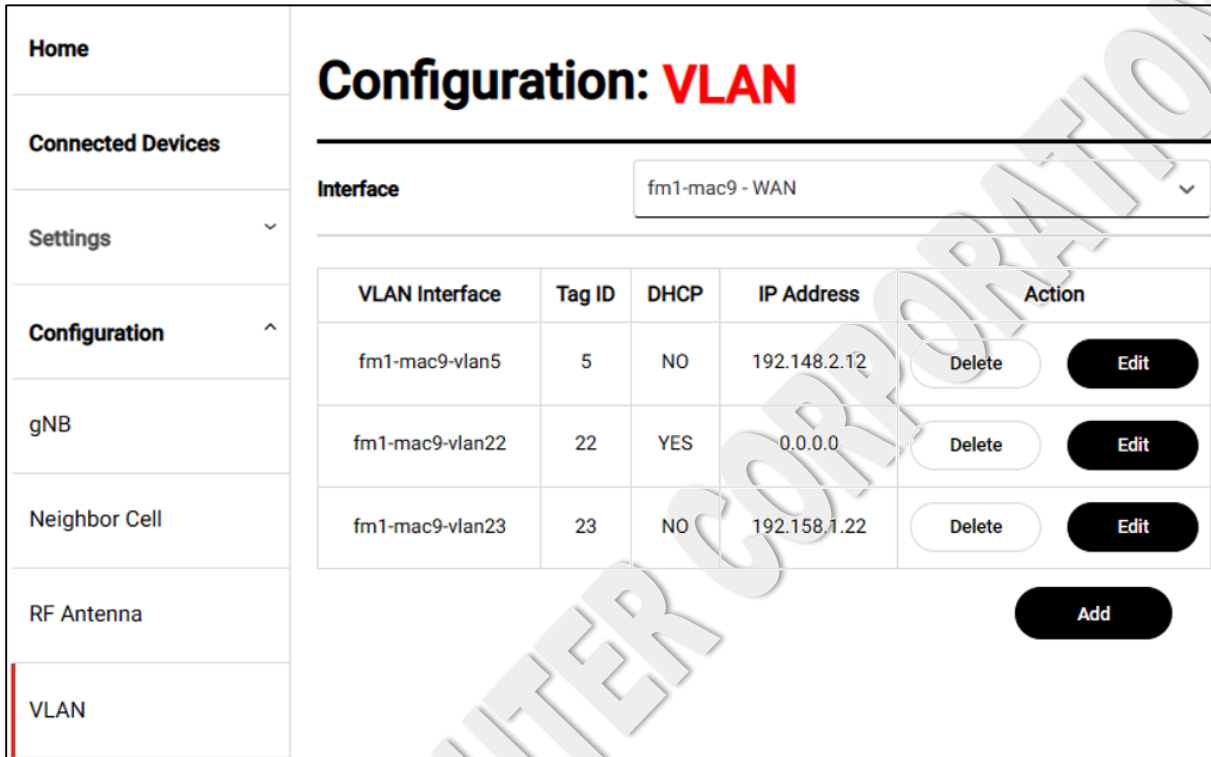


Model: SCU2140

At the bottom of the page, you'll find the date and time indicating when the '**RF PPS Timing Parameter**' was generated. If you encounter network timing discrepancies or synchronization issues, such as unexpected delays, data transmission errors, or loss of network coordination, you can click the '**Reset**' button. This action reinitializes the RF PPS Timing Parameter, restoring the system's timing synchronization to the pulse per second signal. This ensures that RF operations maintain the precision necessary for optimal network performance.

VLAN

This Askey 5G NR Small Cell VLAN page allows users to create, read, update and delete the VLAN (Virtual Local Area Network) configurations.

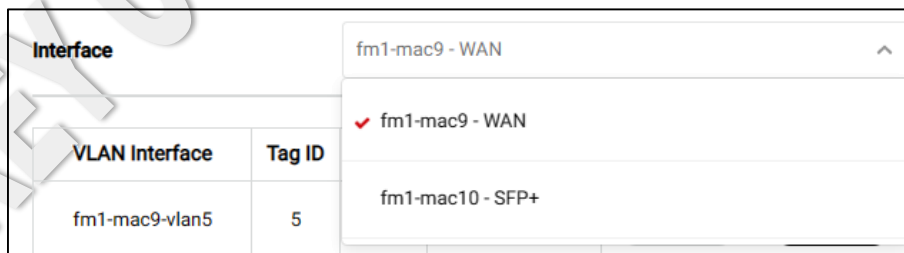


VLAN Interface	Tag ID	DHCP	IP Address	Action
fm1-mac9-vlan5	5	NO	192.148.2.12	Delete Edit
fm1-mac9-vlan22	22	YES	0.0.0.0	Delete Edit
fm1-mac9-vlan23	23	NO	192.158.1.22	Delete Edit

Add

Figure 47. The Askey 5G NR Small Cell VLAN Page

Initially, you need to select the physical network interface to which the VLAN will attach. Upon changing the interface, the corresponding VLAN configurations associated with the selected physical network interface will be displayed on the page.



VLAN Interface	Tag ID
fm1-mac9-vlan5	5

Interface: fm1-mac9 - WAN

- fm1-mac9 - WAN
- fm1-mac10 - SFP+

Configuration: VLAN

Interface
fm1-mac10 - SFP+

VLAN Interface	Tag ID	DHCP	IP Address	Action
fm1-mac10-vlan12	12	YES	0.0.0.0	Delete Edit

Add

Figure 48. The Askey 5G NR Small Cell VLAN Page – Read Operation

When you click the 'Add' button, a window will appear, allowing you to create a new VLAN attached to the selected physical network interface. DNS configurations are optional for VLANs with static IP addresses. If DHCP is enabled, you can add the option 'Ignore Routes' to instruct the device to disregard any default routes provided by the DHCP server for the VLAN configuration.

Add VLAN

Interface
fm1-mac10 - SFP+

Tag ID

☒ DHCP
☐ Ignore Routes

VLAN IP (CIDR Format)
0.0.0.0/0

Default Gateway

Primary DNS

Secondary DNS

Cancel
Save

Figure 49. The Askey 5G NR Small Cell VLAN Page – Create Operation

Click the **Edit** button in the VLAN list will prompt a window to update the specified VLAN configuration.

Configuration: VLAN

Interface

fm1-mac10 - SFP+

VLAN Interface	Tag ID	DHCP	VLAN IP (CIDR Format)	Action
fm1-mac10-v12	12	YES	0.0.0.0/0	Delete Edit
fm1-mac10-v5	5	NO	192.168.100.60/24	Delete Edit

Add

Edit VLAN

Interface

fm1-mac10 - SFP+

VLAN Interface

fm1-mac10-v5

Tag ID

5

☐ DHCP

VLAN IP (CIDR Format)

192.168.100.60/24

Default Gateway

Primary DNS

Secondary DNS

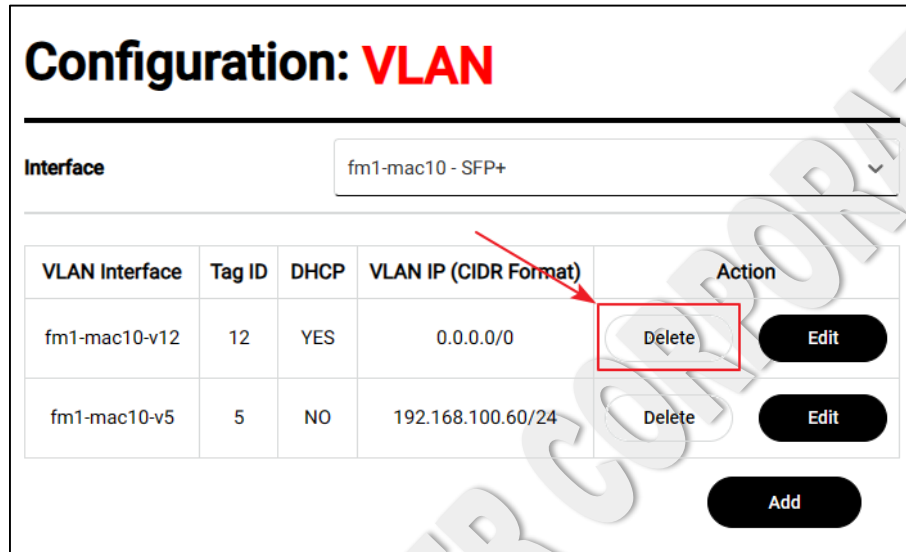
Cancel

Save

Figure 50. The Askey 5G NR Small Cell VLAN Page – Update Operation

In addition, if the VLAN tag ID has existed in the create operation (ref [Figure 34.](#)), it will become an update operation that will update the previous VLAN configuration with the tag ID.

Click the **Delete** button in the VLAN list will delete the specified VLAN configuration. It doesn't need to restart the device for the delete operation.



Configuration: VLAN

Interface: fm1-mac10 - SFP+

VLAN Interface	Tag ID	DHCP	VLAN IP (CIDR Format)	Action
fm1-mac10-v12	12	YES	0.0.0.0/0	Delete Edit
fm1-mac10-v5	5	NO	192.168.100.60/24	Delete Edit

Add

Figure 51. The Askey 5G NR Small Cell VLAN Page – Delete Operation

Static Routing

The Askey 5G NR Small Cell Static Routing page displays the current routing table and enables users to define static routing rules. Commands in the static routing rules must begin with "**ip route**"; otherwise, they will be ignored.

Home

Connected Devices

Settings

Configuration

gNB

Neighbor Cell

RF Antenna

VLAN

Static Routing

Configuration: Static Routing

Routing Table :

```

default via 10.1.106.1 dev fm1-mac9 proto dhcp src 10.1.108.156 metric 100
10.1.104.0/21 dev fm1-mac9 proto kernel scope link src 10.1.108.156
10.1.106.1 dev fm1-mac9 proto dhcp scope link src 10.1.108.156 metric 100
192.148.0.0/24 via 192.158.0.0 dev fm1-mac9-vlan23
192.158.0.0/24 dev fm1-mac9-vlan23 scope link
192.168.66.9 dev fm1-mac9-vlan5 scope link

```

Static Routing :

```

ip route add 192.168.66.9 dev fm1-mac9-vlan5
ip route add 192.158.0.0/24 dev fm1-mac9-vlan23
ip route add 192.148.0.0/24 via 192.158.0.0 dev fm1-mac9-vlan23

```

Cancel

Save

Figure 52. The Askey 5G NR Small Cell Static Routing Page

Version

This Askey 5G NR Small Cell Version page shows the current software, hardware, and web version. In Addition, you can upload an encoded installer with matched access code to perform a local upgrade of the Askey 5G NR Small Cell.



Configuration: Version	
Software Version	SCE2120 (NSC-Dual-Sub6-RC) v2.2.013.1.7.1919
BSP Version	0.47.10.150
Web Version	v6.3.8536
Hardware Version	REV3
Choose Software Installer	選擇檔案 沒有選擇檔案
Input The Access Code	
Upload	

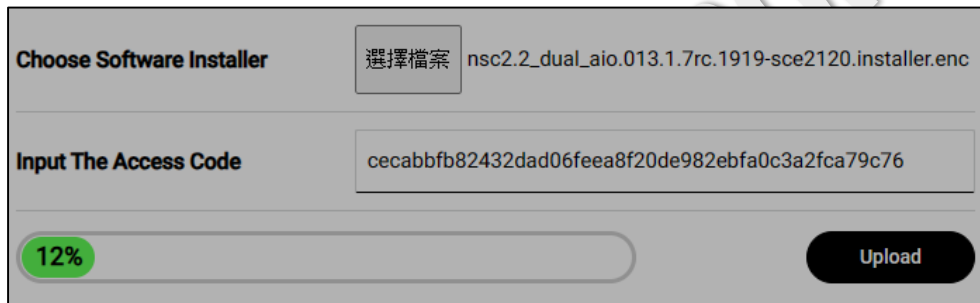
Figure 53. The Askey 5G NR Small Cell Version Page

Firstly, you need to select the encrypted software installer and enter the access code provided by Askey. After clicking the 'Upload' button, the installer will be uploaded to the DUT.



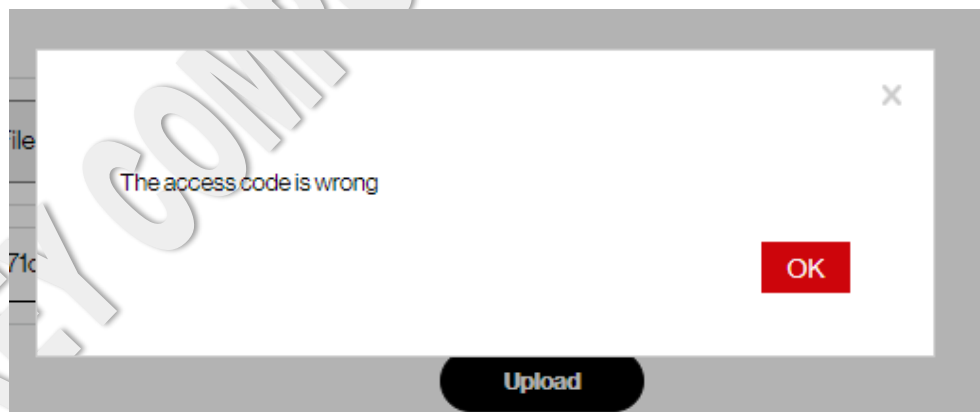
The screenshot shows the 'Choose Software Installer' section with a file selection button labeled '選擇檔案' and the filename 'nsc2.2_dual_aio.013.1.7rc.1919-sce2120.installer.enc'. Below this is the 'Input The Access Code' section with a text box containing the code 'cecabbfb82432dad06f6ea8f20de982ebfa0c3a2fca79c76'. At the bottom, there is a progress bar showing '0%' and an 'Upload' button.

A progress bar indicates the upload progress. When it reaches 100%, the API server concatenates the chunked upload files and verifies the access code.



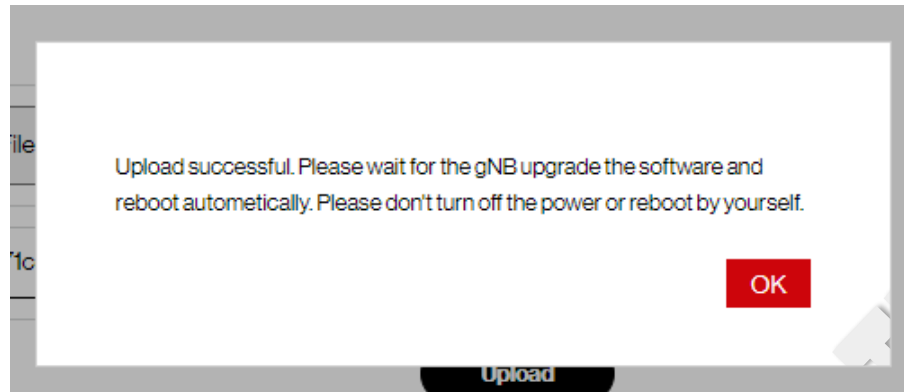
This screenshot is similar to the previous one, but the progress bar now shows '12%' in green, indicating that the upload process has begun.

If the access code is incorrect, the Admin Website will display a warning message, as shown below. Please double-check the access code and upload the installer again with the correct code.



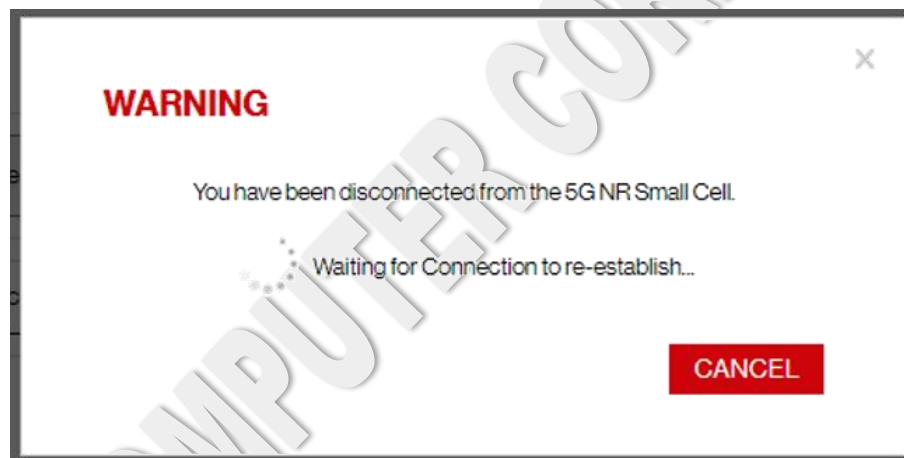
The screenshot shows a modal dialog box with the message 'The access code is wrong'. There is a red 'OK' button in the bottom right corner of the dialog. Below the dialog, the 'Upload' button from the previous interface is visible.

If the access code is correct, the Admin Website will display a message confirming the successful upload, as illustrated below. The Askey 5G NR Small Cell will then commence the software upgrade process.

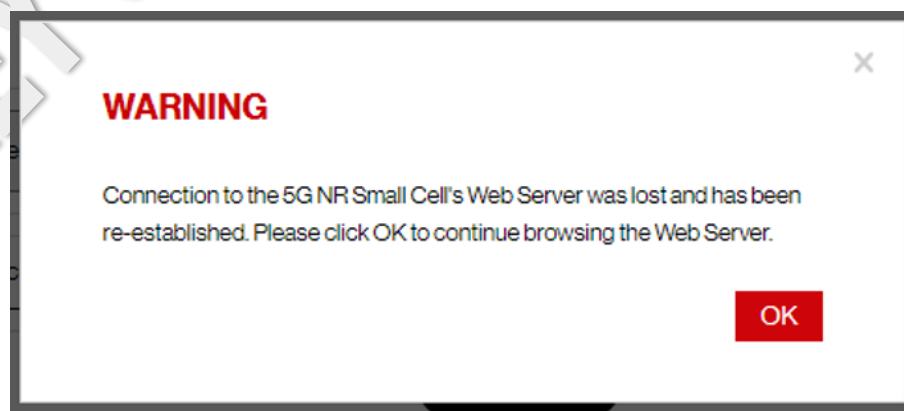


During this process, the API server decodes the installer and initiates the local upgrade. As a result, clicking the 'OK' button will temporarily disable other operations on the Web GUI, as depicted below.

Once the upgrade is complete, the Admin Website will display another message, as illustrated below.



When the Admin Website displays the following message, it indicates that the startup procedure for the Askey 5G NR Small Cell is complete. Clicking the "OK" button will redirect you to the login form to access the Admin Website.



About

GPS

This Askey 5G NR Small Cell GPS Page shows the GPS status, including GPS Satellite ID, signal quantities, description, etc.

Home

Connected Devices

Settings

Configuration

About

GPS

Dashboard

About: GPS

Last Data Refresh 04-22-2024 10:06:08 (UTC+0)
This page will refresh every 15 seconds.

GPS

A minimum of four satellites are required to provide a GPS location fix. Please place the 5G NR Small Cell's GPS antenna in a location where there are at least four strong satellite signals in the table below.

GPS Status : Location Acquired [Map](#)

MSL Altitude : 66.75 m

GPS Satellite ID	GPS Signal Quality (dB)	Description
88	47	Excellent
81	46	Excellent
67	44	Excellent
65	39	Good
333	34	Good
195	33	Good
326	33	Good
11	32	Good
5	32	Good
13	32	Good
196	31	Good
20	31	Good

40-99 dB / Excellent (QTY:3)
30-39 dB / Good (QTY:9)
20-29 dB / Fair (QTY:0)
0-19 dB / Weak (QTY:0)

Figure 54. The Askey 5G NR Small Cell GPS Page

Table 12. The Askey 5G NR Small Cell GPS

Items	Descriptions
Last Data Refresh	Indicates the local time at which this page was last updated.
GPS Status	Indicates whether The Askey 5G NR Small Cell has acquired GPS signals or not. The cell will not come into service if the status does not say " Location Acquired ".
GPS Satellite ID	Lists the GPS satellites currently being detected, along with each satellite's unique identifier.
GPS Satellite Quality (dB)	Describes the signal-to-noise ratio for the GPS signal. A higher value indicates better quality. If the signal quality does not improve, an external GPS antenna may be required.
Description	Describes the quality level of the satellite signal as Excellent, Good, Fair, or Weak. Refer to the legend for the mapping

Dashboard

The Askey 5G NR Small Cell Dashboard page provides an overview of integrated small cell information, encompassing cell service status, synchronization state, and location data. Additionally, the page displays the connectivity status to the AMF, EMS, or SAS.

Home

Connected Devices

Settings

Configuration

About

GPS

Dashboard

About: Dashboard

gNB IP Address

N2/N3: 10.1.108.156

gNB Profile Name

gNB_Profile_SA_SCE2120_N48_CBSD.json

Cell State

In Service

Active UEs

0

GNSS Fixed Status

Location Acquired

Sync Capability

GPS

Sync State

DISP

Connectivity Status

AMF (10.1.106.51)

EMS (<https://amp.askeydms.com:443>)

SAS (<https://test.sas.goog/v1.2>)

Figure 55. The Askey 5G NR Small Cell Dashboard Page

Table 13. The Askey 5G NR Small Cell Dashboard

Items	Descriptions
gNB IP Address	The IP address of the gNodeB. It supports separate specifications for the gNB local interface with the AMF (N2 interface) and the UPF (N3 interface) on the gNB configuration page. The default IP address is the same value for the N2 and N3 interfaces.
gNB Profile Name	The "gNB Profile Name" refers to the default configurations for the Askey 5G NR Small Cell. Clicking the field reveals detailed information about the profile content.
Cell State	The current operational state of the small cell, either ' Not In-Service ' or ' In-Service '.
Active UEs	The number of wireless devices (phones, tablets, or other data devices) currently connected to the Askey 5G NR Small Cell
GNSS Fixed Status	The status of GNSS (Global Navigation Satellite System) fix, indicating whether the device is searching for a signal or has acquired location information.

Sync Capability	The synchronization capability of the device.
Sync State	Indicates the current synchronization state, which could be INIT , HARD_SYNC , DISP , RESYNC , or HOLDOVER . The cell processes will continue until the sync state is DISP .
Connectivity Status	Check the network connection status of the following servers using ping commands (ICMP) or HTTP(s) requests: AMF , EMS , or SAS .

License

The Askey 5G NR Small Cell License Page shows the license content of this device's functions. Askey provides basic functions. After purchasing additional functions, you can upload the license key to the device through this page to activate the additional functions.



5G NR
SA



0

Sign Out

Home
Connected Devices
Settings
Configuration
About
GPS
Dashboard
License

About: License

License Content

License Title: Askey gNB Basic License
License Start: 2024-09-13T14:00:00Z
License ID: fc473ab8-ae1-4000-9991-98b3e471a01c
License Items:
[> Basic functionalities \(Activated\)](#)

License Upload

選擇檔案
未選擇任何檔案

Upload

Chapter 2 The Askey Small Cell Support Utilities

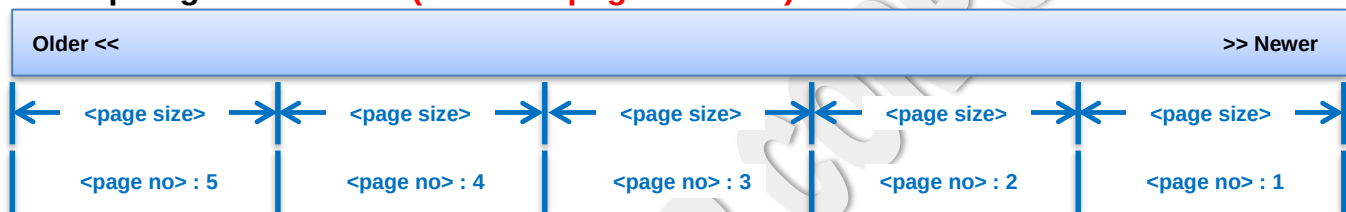
Small Cell Log Download Mechanism

You can download the runtime or backup log files by the following HTTPS linking URL and send them back to the Askey Small Cell team to analyze.

PS:

1. Please don't modify the downloaded file name
2. Please don't download two log files at the same time

Backup Log Illustration: (The max page size is 3)



Runtime Log:

<https://<ip address>/api/logs/TwpEceURn15qxDYSW88IJddb7LAsiOr64HNg>

Backup Log:

<https://<ip address>/api/logs/TwpEceURn15qxDYSW88IJddb7LAsiOr64HNg/<page size>>

<https://<ip address>/api/logs/TwpEceURn15qxDYSW88IJddb7LAsiOr64HNg/<page size>/<page no>>

Examples:

<https://10.1.108.15/api/logs/TwpEceURn15qxDYSW88IJddb7LAsiOr64HNg>

→ **Runtime log:**

[askeylog_280375459184643_20221025-092816_nsc.tgz.enc](#)

<https://10.1.108.15/api/logs/TwpEceURn15qxDYSW88IJddb7LAsiOr64HNg/3>

→ **Backup log (page size 3, page no 1):**

[askeylog_280375459184643_20221025-092825_nsc_last_01-03.tgz.enc](#)

<https://10.1.108.15/api/logs/TwpEceURn15qxDYSW88IJddb7LAsiOr64HNg/3/3>

→ **Backup log (page size 3, page no 3):**

[askeylog_280375459184643_20221025-092902_nsc_last_07-09.tgz.enc](#)

Access the Admin Website by IPv6 Link-Local Address

If the network settings of the Askey 5G NR Small Cell are incorrect, or if you are unable to obtain the current IP address, accessing the Admin Website via IPv4 may not be possible. In such cases, you can use the MAC to IPv6 Converter available at <https://nettools.club/mac2ipv6> to retrieve the link-local address of the Askey 5G NR Small Cell. Subsequently, you can access the Admin Website using the URL (`http://[IPv6 Link-Local Address]/`) within the same LAN.

For example, if the MAC address is '**FE:FF:FF:A6:00:03**', the converter will yield the following result:

Just fill in one of the fields and the second will update automatically.

MAC Address:

FE:FF:FF:A6:00:03

IPv6 Link-local:

fe80::fcff:ffff:fea6:3

You can then access the Admin Website using the URL `http://[fe80::fcff:ffff:fea6:3]/` within the same LAN. If you are accessing the Admin Website using this method for the first time, it may require more than one refresh to complete the IPv6 Neighbor Discovery process.

Note:

Comparison of Different Models

Model	Outdoor	Max TX Power (24dBm)	Max TX Power (37dBm)	Antenna Path Option (WebUI)	SAS/CBSD
SCE2120		V		V	V
SCE2200		V		V	
SCU2140	V	V		V	V
SCU2000	V	V			
SCU2050	V	V			V
SCU2060	V		V		
SCU2070	V		V		
SCU2080 N48	V		V		V

Safety Warning

To lower the radio influence to the human body, please keep a safe distance (Minimum 55cm) between SCU2080 N48 and the people around

FCC Statement 1:

Any changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

FCC Statement 2:

Part 15.19 (a)(3) Statement

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 Statement 3:

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 in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: —Reorient or relocate the receiving antenna. —Increase the separation between the equipment and receiver. —Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. —Consult the dealer or an experienced radio/TV technician for help.

FCC Statement 4:

RF exposure statements

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 55 centimeters between the radiator and your body or nearby persons.

FCC Statement 5: Responsible Party in the United States

Contact us

Askey International Corp.

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TEL: (510) 415-2767