



**5G NR Small Cell
SCU2140 Installation
User Guide
(Model:
NR x Cell 46116A1F)**

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Revision History

Version	Date	Description
A	April 2025	Initial release

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Security Information

For the safety of installation engineers and to protect the equipment from damage, please read all safety warnings carefully. If you have any questions about these warnings, please contact the Askey support team before installing or powering up the base station.

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Chapter 1 Introduction

1.1 Brief Introduction

Askey SCU2140 is an advanced, all-in-one 5G NR gNB solution designed to support multiple Sub-6 GHz frequency bands, making it highly versatile for both indoor and outdoor deployments. With its lower power consumption, compact size, and lightweight enclosure, the SCU2140 ensures easy and quick installation.



Outdoor



Indoor

Figure 1. Askey 5G NR Outdoor / Indoor Small Cell SCU2140

1.2 Specification

Table 1. SCU2140 General Specification

Item	Description
Model Name	NR xCell 46116A1F
Band	N48/N77
Bandwidth	N48: 20/30/40MHz N77: 40/50/60/70/80/90/100MHz
Max. TX Power (per port)	N48: EIRP <30dBm N77: 0 ~ 24dBm
Coverage	LOS 150~200m for common usage (Directional Antenna)
Antenna	Internal 2x2 MIMO
EIRP	N48: <30dBm N77: (27+antenna gain) dBm
LED	4 LED: Power/Service/Status/GPS
Backhaul	1G SFP+/1G WAN
Power Supply	DC 48V/POE++ (support 802.3at/bt)
Power Consumption	<35W
Active Users	Up to 32UE
Data Rates	750 Mbps/200 Mbps (DDDSU)
Installation	Wall/Pole mount
IP Grade	IP65
Dimensions	W200 x H200 x D85 mm
Weight	<3kG
Operating Temperature	-30°C ~ 55°C
Operating Humiditys	90% maximum, non-condensing

Note: The general specification might be slightly and regularly changed with enhancements in the future. You can contact Askey contact window for the latest specification.

1.3 What's in the Box

The Askey SCU2140 box contains:

- SCU2140 base station
- Indoor PSU
- 1m AC Power cord Plug Type (EU/US)
- GPS antenna with 7m length cable

Outdoor Installation Accessory Kit (Optional):

- Outdoor Wall/Pole mounting kit
- PSU bracket
- Outdoor PSU
- Cable gland
- 3m Grounding Cable
- 3m AC Power Cord Plug Type (EU/US)

Table 2. List of Items in the Box

Items	Qty	Description	Picture
1. Askey Small Cell SCU2140	1	The Askey 5G NR gNB small cell SCU2140 is a model that can be used outdoors with the optional accessory kit. Please check the label to ensure you have received the correct base station.	
2. Indoor PSU	1	When you receive your SCU2140, please note that the carton contains the PSU and power cord.	
3. GPS antenna with 7m length cable	1	When you receive your SCU2140, please note that the carton contains the 7m GPS antenna.	
4. Outdoor Installation Accessory Kit (Optional)	1	To enable outdoor installation, the Outdoor Kit includes the following components: - Outdoor Wall/Pole mounting kit / Qty:1 - PSU bracket / Qty:1 - Outdoor PSU / Qty:1 - Cable gland / Qty:2 - 3m Grounding Cable / Qty:1 - 3m AC Power Cord Plug Type ((EU/US)) / Qty:1	

1.4 IO interfaces and Connections

This section will guide you through the interfaces and functions of SCU2140.

1.4.1 IO Interface Outside

SCU2140 has 4 LED used to indicate the device connectivity status.

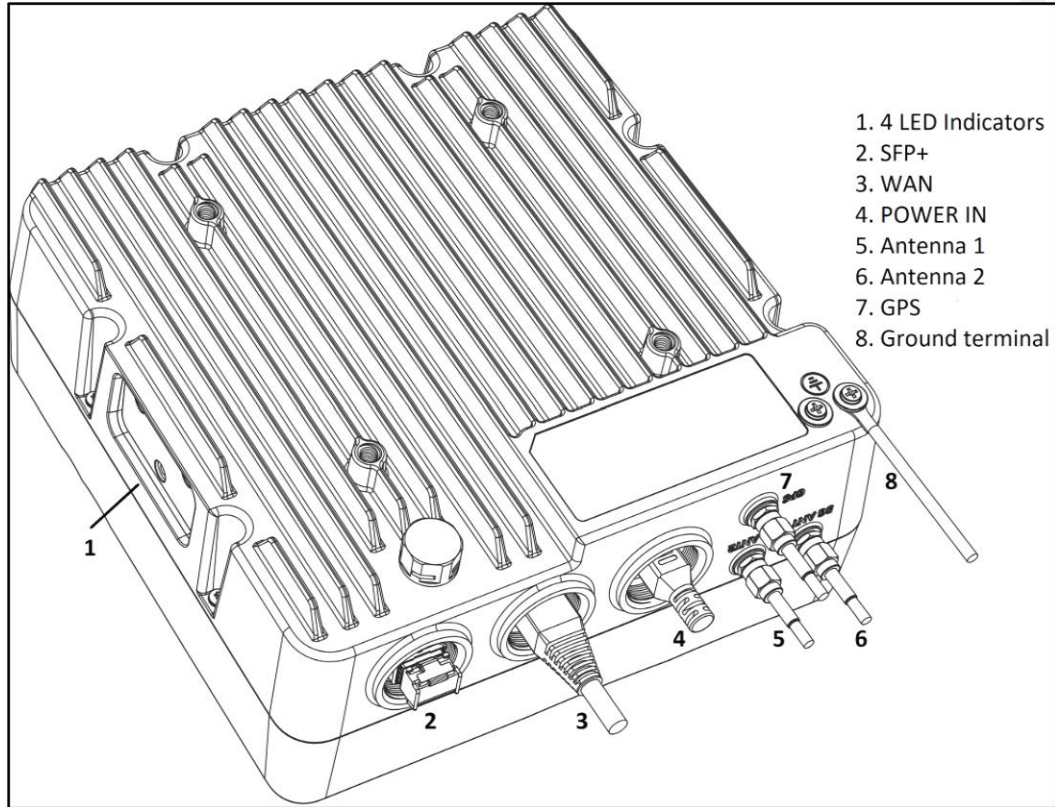


Figure 2. IO Interfaces Outside (Default mode)

Table 3. SCU2140 IO Interface

Item	Description
4 LED Indicators	4 LED is designed to show the status of SCU2140 (Power/GPS/Service/Status).
SFP+ / WAN	This port is used for fiber or Ethernet cable. It allows you to connect an fiber or Ethernet cable to establish communication between SCU2140 and switch/router etc.
POWER IN	The Power IN port is used to power SCU2140 when connected to POWER supply.
5G ANT1 / 5G ANT2	ANT1 / ANT2 for 5G external antenna connection Note: SCU2140 is equipped with two internal 5G antennas by default
GPS	The GPS antenna port provides access to an interface for the external GPS antenna cable. Note: SCU2140 is equipped with an internal GPS antenna by default
Ground terminal	Connection terminal of ground wire and SCU2140

Chapter 2 Setup

2.1 Setup Procedure

This part outlines the procedures needed to set up SCU2140.

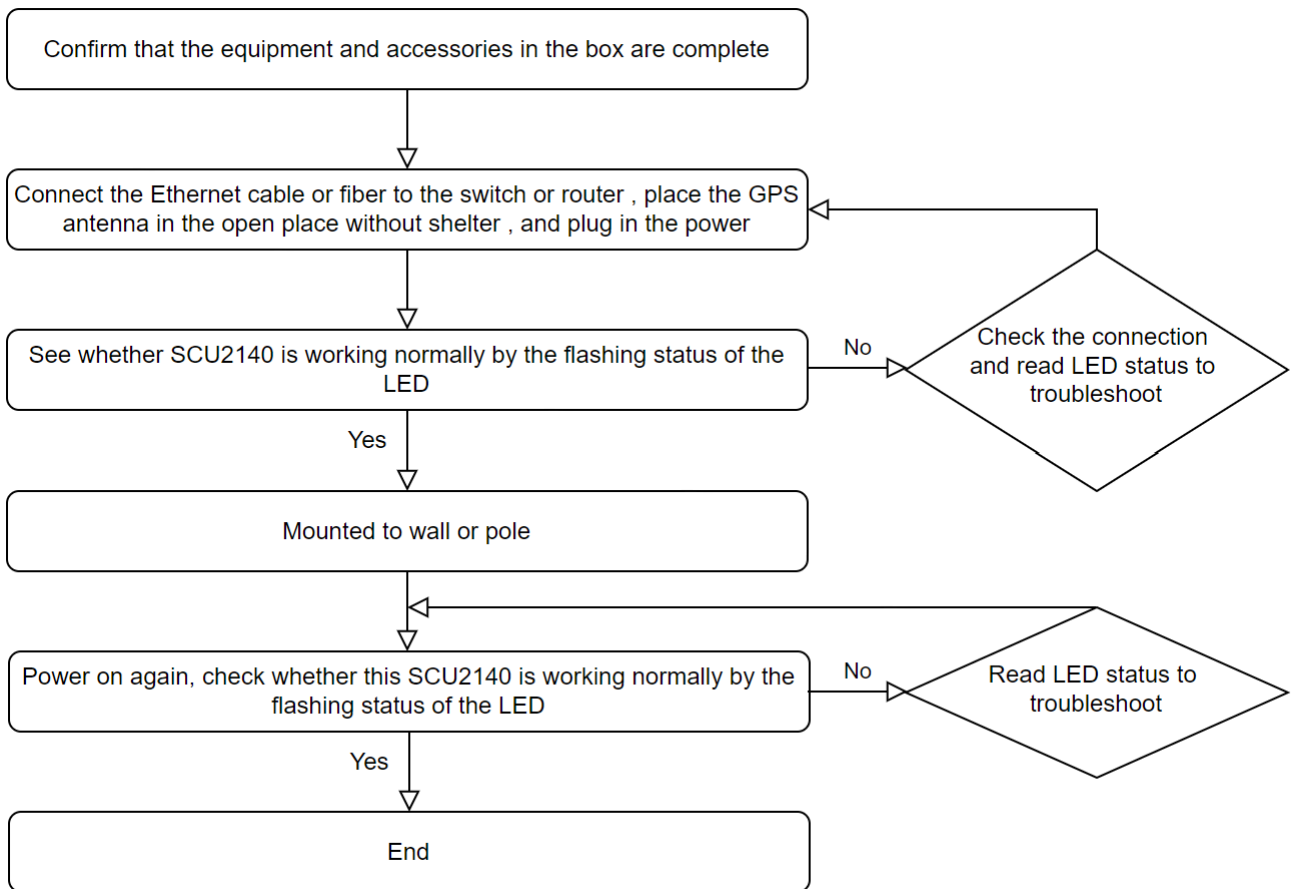


Figure 3. Setup Procedure

2.2 Cable Connection

Connect the Ethernet cable or fiber, power cable.

Noted:

- If using fiber transmission. SFP+ module and fiber are needed. The highest operating temperature specification of 1G SFP+ module must be workable at minimum 85°C.

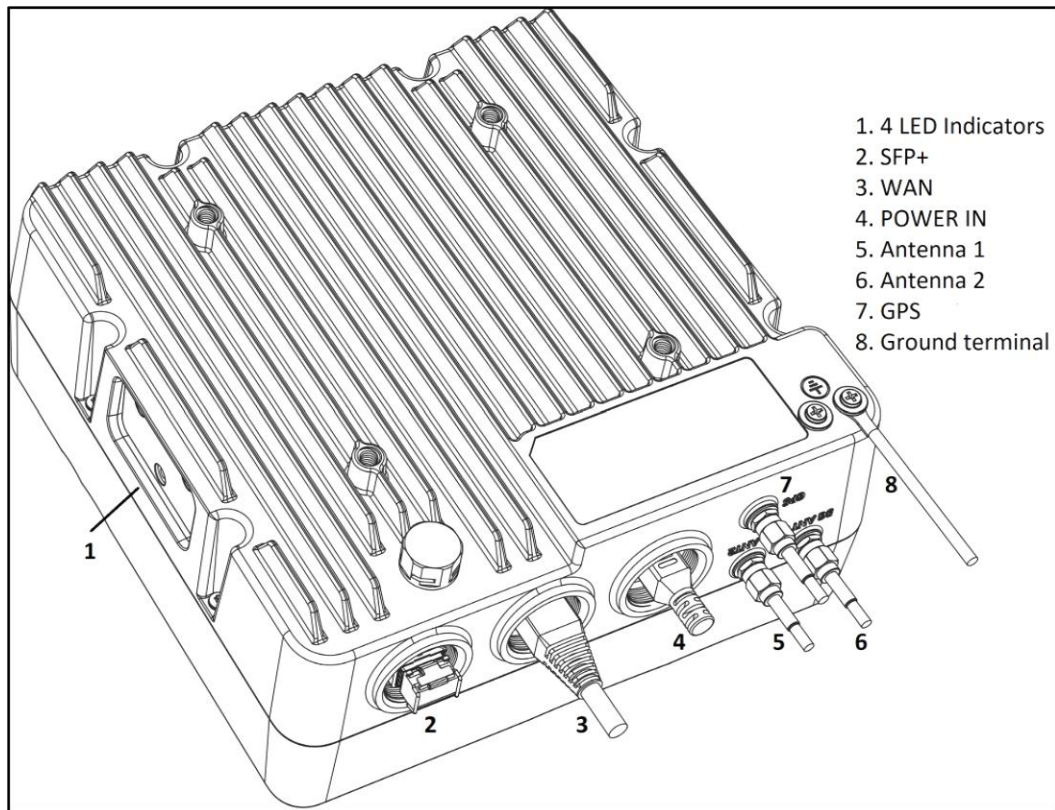


Figure 4. Cable Connection (Default mode)

2.3 LED

After all the connections are connected and the SCU2140 is powered on, please check the status of LED on the device. The LED will flash according to the LED description provided in a separate document released together with each software version.

If the SCU2140 is operating as expected, continue to Section 2.4. If the SCU2140 is not functioning properly and you have to carefully check all steps.

For the details of each LED status, please refer to the LED status table in a separate document released together with each software version.

2.3.1 GPS Alarm Trigger Scenario

If SCU2140 loses GPS signal, SCU2140 will trigger an alarm, if being connected to the OAM system (ex. Askey AMP), and enters holdover state. Please find the details in the below procedure flow.

For the details of each alarm, please refer to the alarm table in a separate document released together with each software version.

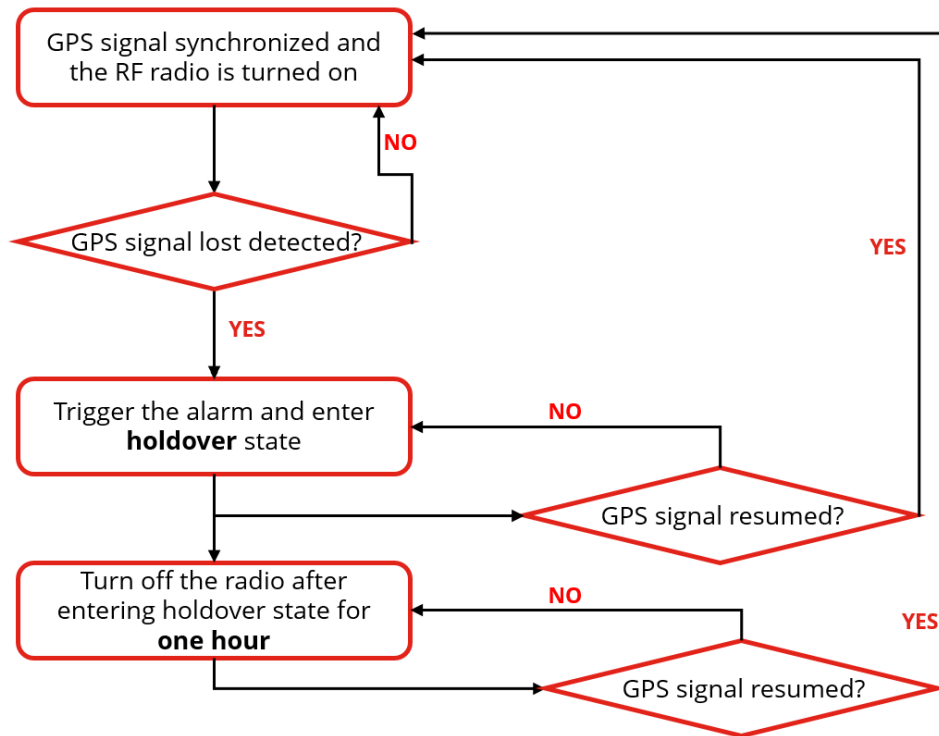


Figure 5. GPS Alarm Trigger Scenario

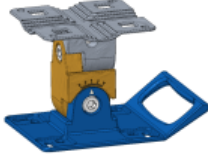
2.4 Installation

Avoid installing the base station in areas where extreme temperatures, harmful gases, voltage instability, loud noise, flames, explosives or electromagnetic interference may exist (for example: near large radar stations, substations).

The SCU2140 base station, GPS antenna, external antenna and RJ45 connection port must be protected from lightning strikes. The base station has 1 grounding screws located on the bottom of the unit. The grounding screw must be connected to a reliable outdoor grounding point using a yellow-green grounding wire, and the terminals must be treated against rust using anti-rust paint, anti-oxidation coating, grease or similar solutions.

There are mainly 2 ways for SCU2140 installation - wall mount and pole mount. This section will guide you through all the installation ways for SCU2140.

Table 4. Wall/Pole Mount Bracket Kit Package

ID	Item	Pic	Qty.
1	Mounting Kit (Wall/Pole mount kit with mounting accessories)		1
2	M6 Screws (for mounting kit installation)		4
3	Plastic Washers (for mounting kit installation)		4

4	WALL_CLAMP_KOISK (for Pole Mount installation)		2
5	M6-EXPANSION-SCREW		4

2.4.1 Install Mount Base to Device

Installation steps,

- Use M6 screws and washers to fix the Mount Base to the Device.

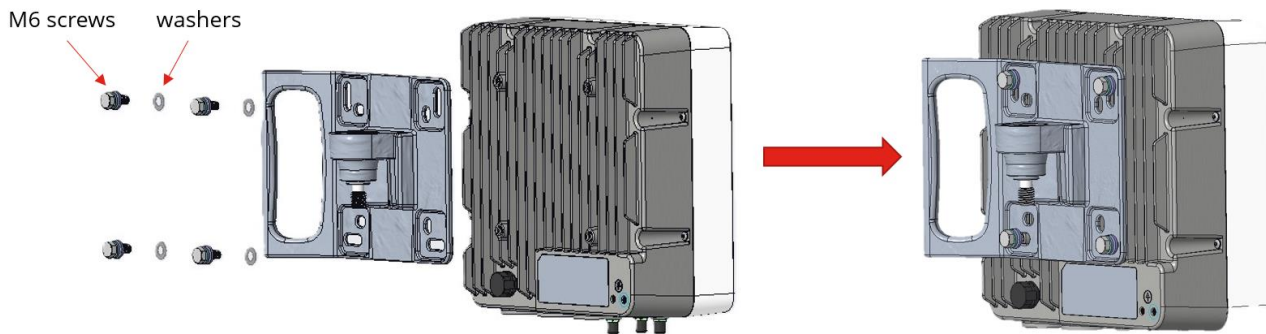


Figure 6. Mount Base installation diagram

2.4.2 Pole Mount

Before installing the base station on the pole, please check and ensure that the pole's diameter is of the appropriate width.

Installation steps,

Step 1,

- Check whether the pole bracket installation accessories are complete.

Step 2,

- Secure the Wall/Pole Mount Kit to the pole using metal straps.

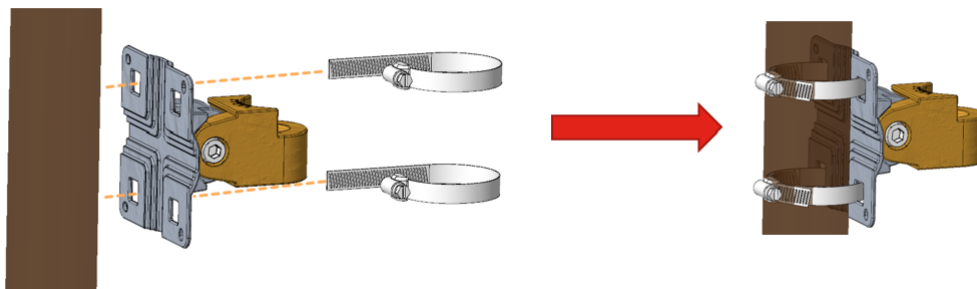


Figure 7. Pole mounting bracket installation diagram

Step 3,

- Vertically assemble the Device and Mount Base on the shaft hole of the Wall/Pole Mount Kit.

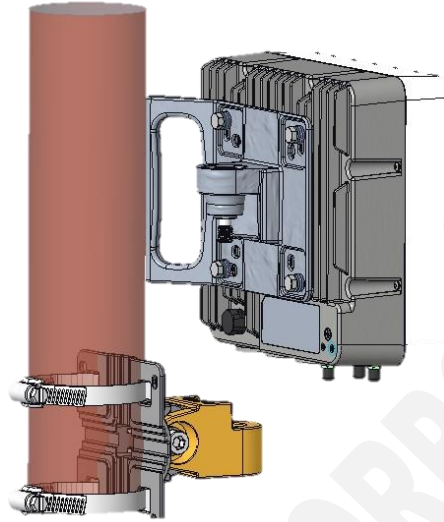


Figure 8. Device and wall mount bracket assembly diagram

Step 4,

- After adjusting the direction and angle of the Device, tighten the M10 and M6 screws.

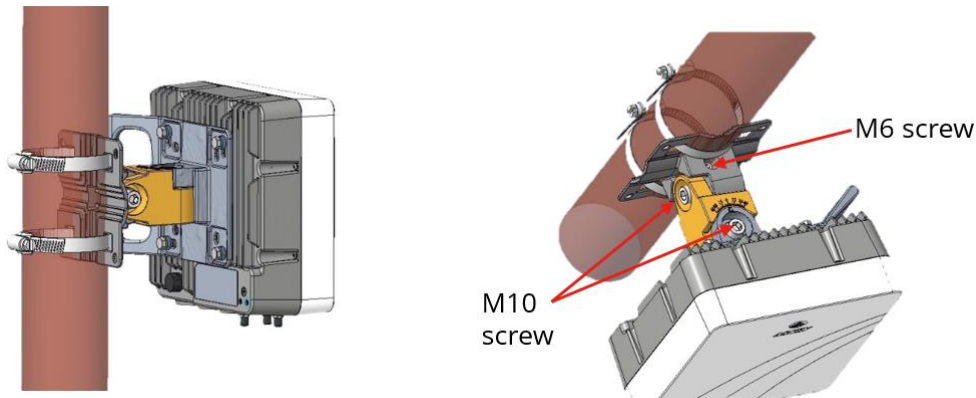


Figure 9. Adjust the direction and angle of the device

2.4.3 Wall Mount

Before installing the base station on an exterior wall, make sure the wall can support at least 4 times the weight of the base station. (Weight of SCU2140 is about 3kg)

Installation steps,

Step 1,

- Check whether the wall mounting accessories are complete.

Step 2,

- Secure the Wall/Pole Mount Kit to the wall using M6 expansion screws.

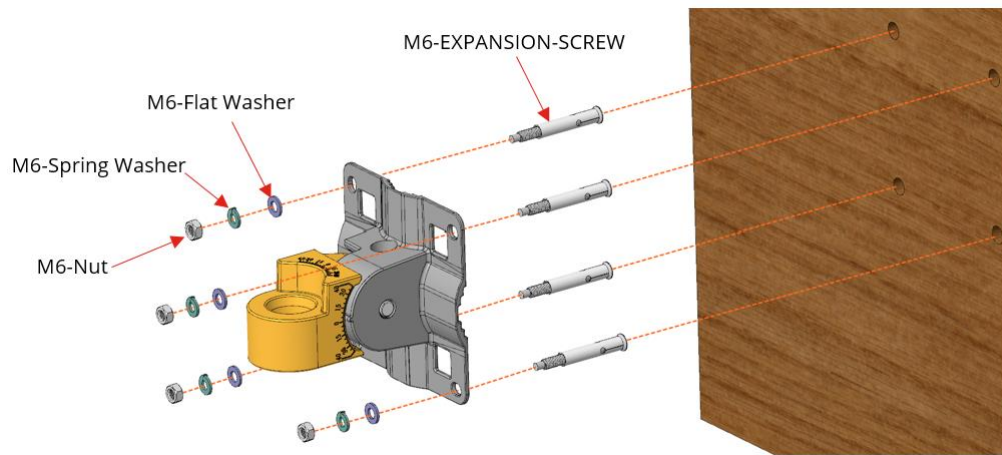


Figure 10. Wall mounting bracket installation diagram

Step 3,

- Vertically assemble the Device and Mount Base on the shaft hole of the Wall/Pole Mount Kit.

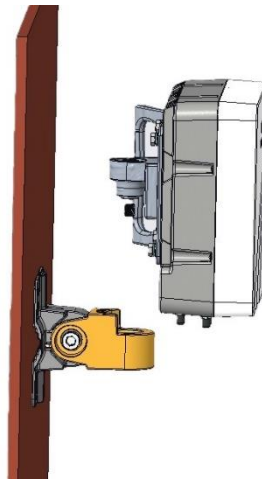


Figure 11. Device and wall mount bracket assembly diagram

Step 4,

- After adjusting the direction and angle of the Device, tighten the M10 and M6 screws.

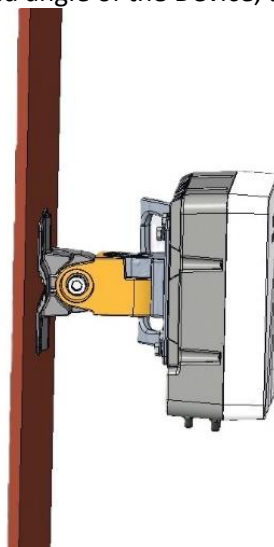


Figure 12. Adjust the direction and angle of the device

2.4.4 Grounding and Lightning Protection

- Unscrew the ground screw and connect one end of the ground wire to the ground screw on the base station.
- Connect the other end of the ground wire to a reliable outdoor ground point.

2.5 Route the Cables

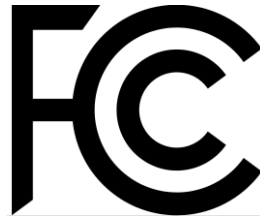
After the installation is complete, connect the cables to the SCU2140 and route them properly following standard cable management practices to maintain a neat appearance. Then, power on the SCU2140 and check the LED indicators to verify that the device is operating normally.

2.6 Safety Warning

To ensure compliance with CE MPE (Maximum Permissible Exposure) requirements, please maintain a minimum distance of 0.3 meters (30 cm) or more between the antenna and the human body when using this device. Failure to observe this distance may result in non-compliance with radio frequency (RF) safety standards.

CE

ASKEY COMPUTER CORPORATION



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Appendix A – EU Declaration of Conformity (DoC)

EU Declaration of Conformity (DoC)

Hereby we,

Name of manufacturer: Askey Computer Corporation
Address: 10F, No. 119, Jiankang Rd., Zhonghe Dist.,
Zip code & City: New Taipei City,
Postal Code: 23585
Country: Taiwan

declare that this DoC is issued under our sole responsibility and that this product:

Product description: 5G Small Cell
Trademark: ASKEY
Type designation(s): NR xCell 46116A1F

Object of the declaration (further identification of the radio equipment allowing traceability; it may include a color image for the identification of the radio equipment):



is in conformity with the relevant Union harmonization legislation:

Radio Equipment directive: 2014 / 53 / EU

and other Union harmonization legislation where applicable:

with reference to the following standards applied:

Article 3(1)(a) Safety & Health

EN 62368-1: 2020+A11 :2020

EN 50385: 2017

EN IEC 62232: 2022

Article 3(1)(b) EMC

EN 301 489-1 V2.2.3

EN 301 489-19 V2.2.1

EN 301 489-50 V2.3.1

EN 55032: 2015 + A11: 2020, EN 55035: 2017+A11: 2020

Article 3(2) Radio

EN 303 413 V1.2.1

EN 301 908-1 V15.2.1

EN 301 908-24 V15.0.1

The Notified Body Kiwa Nederland B.V., with Notified Body number 0063 performed:
[choose applicable Modules: B+C]

Where applicable:

The issued EU-type examination certificate: [note certificate number]

Description of accessories and components, including software, which allow the radio equipment to operate as intended and covered by the DoC:

Signed for and on behalf of:

7/10/2025, Taipei

Place and date of issue

Jack Po, Director Po, Director, signature.

Appendix B – FCC Compliance Information

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 Warning

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 30 centimeters between the radiator and your body or nearby persons.

FCC Statement 5 – Responsible Party in the United States

Contact us

Askey International Corp.

Address : 4017 Clipper Court, Fremont CA 94538, USA

TEL: (510) 415-2767