

KCU-40

WI-FI Remote Communication Module Hardware Installation Manual



SECTION 1 : SUMMARY

KCU-40 WI-FI Module is specifically designed for KUTAI ATS and Generator Controllers. (Controller Model AMF-10, GCU-100, GCU-3000, ATS-22A, ATS-33, ATS-34, ATS-PLC...etc.) Download the free app for PC, tablet, or smartphone to monitor, control, and configure the controllers remotely.

Controllers' system parameters can be setup directly in KCU-40 software (Refer to KCU Communication Software Installation Manual) for easy configuration.

- Support WPS for easy secured wireless connection.
- Support SoftAP mode for quick wireless connection.
- All transmitted data use two sets of keys for encrypt / decrypt. (Primary Key and Session Key).
- User-defined connection password privileges. Administrator (1 user) & Viewer (Up to 5 users).
- Complies with IEEE 802.11 b / g / n standards.
- Industry Canada (IC) and FCC Certified.
- Allows only monitoring; no remote control is provided.

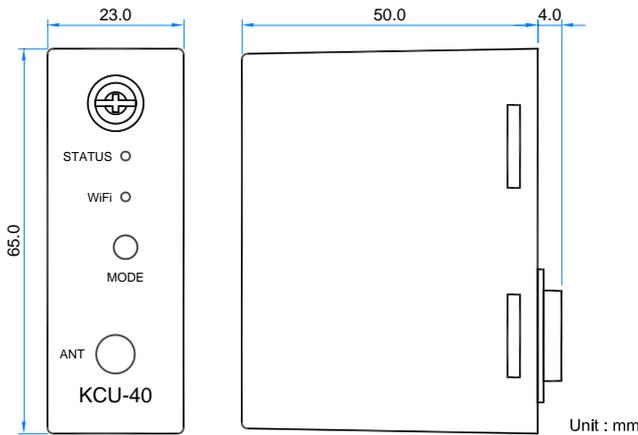


Figure 1 Outline Drawing

SECTION 2 : SPECIFICATION

Module Specifications

Power Input

5 Vdc

Power Consumption

< 1.5 watts

Environment

Operation Temperature	-20 – +70 °C
Storage Temperature	-35 – +85 °C
Relative Humidity	Max. 95%
Vibration	3 Gs @ 100 – 2 K Hz

Dimensions

65.0 (L) x 23.0 (W) x 54.0 (H) mm

Weight

46.5 g +/- 2%

Antenna Specifications

Wireless Standards

802.11b / 802.11g / 802.11n

Frequency Range

2.4 – 2.5 GHz

Antenna Gain

5 dBi

Antenna Impedance

50 ohms

Typical Range

150 M (Indoor) 250 M (Outdoor)

Connector

SMA Male RS

Antenna Size

200 x 13 mm

Cable Length

1.5 M (Standard) 2 M / 3 M (Option)

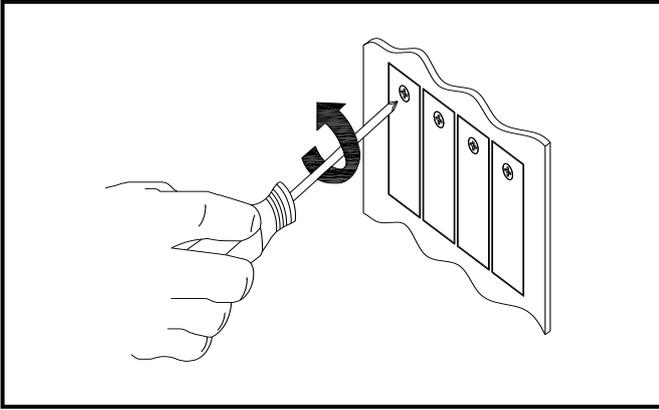
Mounting Method

Magnetic Mounts

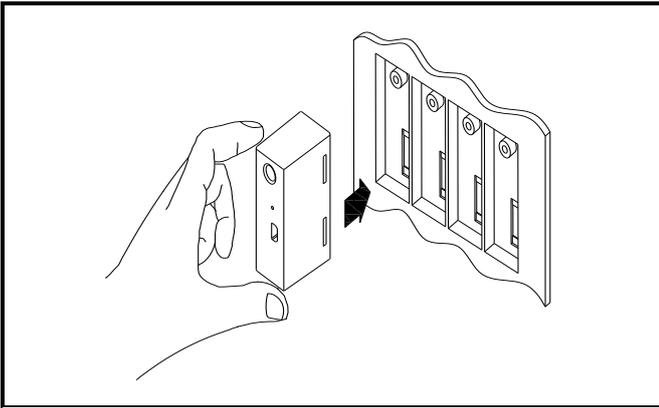
SECTION 3 : INSTALLATION

Disconnect the controllers power before installing the module and follow this simple step by step instructions to install KCU-40 in any expansion slot.

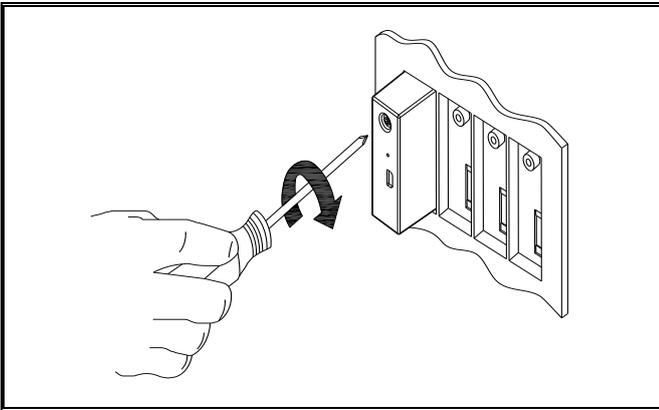
Step 1 : Remove the slot cover from the back of controller.



Step 2 : Insert KCU-40 module into the slot.



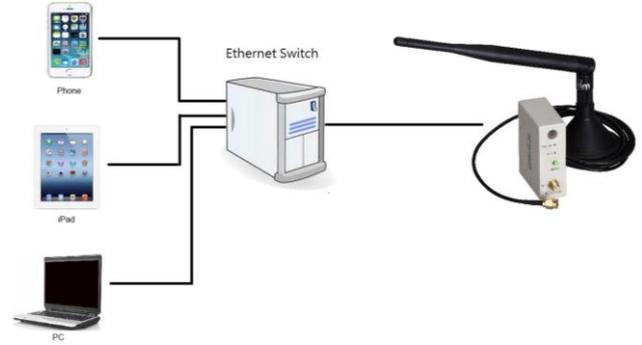
Step 3 : Tighten the screw.



ATTENTION

KUTAI reserves the right to update or modify software without notification. Please check KUTAI website for most recent software version.

SECTION 4 : INTERNET CONNECTIVITY



When KCU-40 is connected with the Internet, it'll automatically link to KUTAI communications server and waiting to connect to remote control devices.

Product serial number (marked on module) and the connection passwords (with different privileges) are required for connecting KCU-40 module.

Administrator Password : is require for monitoring, managing passwords, and configure settings. (1 user login at a time)

Viewer Password : is require for monitoring only. (Up to 5 users login simultaneously)

KCU-40 FACTORY SETTINGS	
Connectivity	SoftAP mode
Administrator Password	0000
Viewer Password	9999
MAC Address	Marked on module

ATTENTION

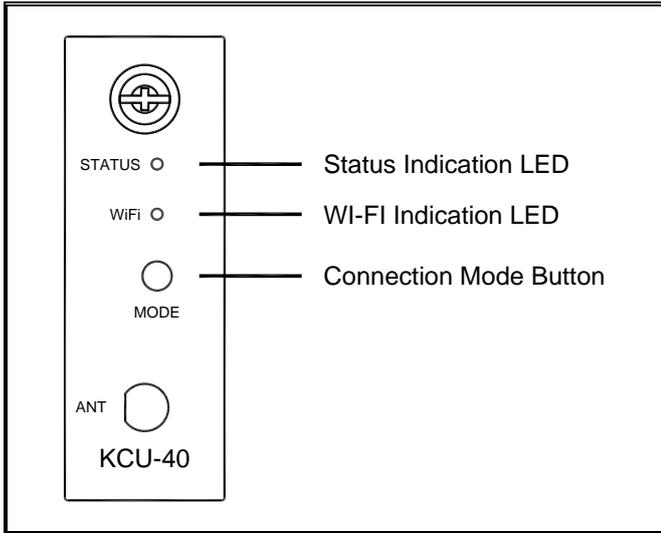
We strongly recommend that you change the connection passwords right after the first successful connection

SECTION 5 : WI-FI ROUTER SETTING

Make sure the controller is working properly and the KCU-40 module is correctly installed before setting the WI-FI Router.

KCU-40 can be connected to WI-FI Router in two ways.

- **WPS** : Wi-Fi Protected Set-up. Refer to Section 5.1.
- **SoftAp** : Wireless access point setup. Refer to Section 5.2.



5.1 WPS Automatic Connection Setup

Step 1 : Check that the WI-FI router has WPS function with two security protocols : WI-FI Protected Access (WPA) and WI-FI Protected Access II (WPA2).

Step 2 : Press “ Mode ” button on KCU-40. When WI-FI status light is solid orange it’s in WPS mode.

Step 3 : Press the WPS button on WI-FI router (Refer to WI-FI router manual for WPS button’s instruction), wait for automatic pairing in about 1 minute.

5.2 SoftAP Manual Connection Setup

Step 1 : Press KCU-40 “ Mode ” button twice. When WI-FI status light is solid red it’s in SoftAp mode.

Step 2 : Use mobile device (PC, tablet, smartphone) that has WI-FI capability. Search and connect WI-FI hostname KCU-40-xxxxxxx (MAC Address is shown on the side of KCU-40 module).

Step 3 : Launch the browser on your mobile device (IE, Chrome, etc.) Enter address : 192.168.1.3 and you’ll see the webpage like below. Click “ **Configure Network** ”

Step 4 : Click “ Scan For Wireless Network ” and KCU-40 will list all the WI-FI hostnames found.

Step 5 : Select a WI-FI network and enter a password to connect.

ATTENTION

If KCU-40 is unable to establish network connection (Automatically / Manually) within 5 minutes in WPS or SoftAP mode, KCU-40 will exit the mode automatically and resume its last successful WI-FI connection.



SECTION 6 : READING KCU-40 LEDs

STATUS INDICATION LED	WI-FI INDICATION LED	MEANING
Fast blinking red (200ms)	Solid green	Obtaining IP address
Solid orange (500ms)	Solid green	Server connecting
Slow blinking red (1.5s)	Solid green	Server connected
Fast blinking red (200ms)	Solid orange	WPS Mode
OFF	Solid red	SoftAP Mode

SECTION 7 : TROUBLE SHOOTING

SYMPTOM	POSSIBLE CAUSES	SOLUTIONS
STATUS & WI-FI Indication LEDs are off	Failed power supply	<ol style="list-style-type: none"> 1. Check if controller is receiving power and operating properly. 2. Check if KCU-40 is installed correctly in controller slot. 3. Remove KCU-40 and install it in controller slot again. 4. If you cannot locate the source of the problem please replace KCU-40 or contact authorized dealer.
KCU-40 is connected to WI-FI router but STATUS Indication LED is solid orange	Unable to connect to server	<ol style="list-style-type: none"> 1. If STATUS LED is solid orange for a long time, it means it failed to connect the server. KCU-40 cannot connect to the Internet. 2. Check WI-FI connections. 3. Reset WI-FI router. 4. If you cannot locate the source of the problem please replace KCU-40 or contact authorized dealer.