

Introduction

This guide is intended to give an overview of the initial setup of the KS32, including browser-based connection to the various Graphical User Interfaces (GUI) of the KS32 & KS32 Pro automation controllers.

Inserting and Removing the Sim Card (KS32 Pro)

There is a sim drawer used to insert a sim card into the KS32 Pro controller.

The sim drawer is located on the side of the casing near the ethernet ports and looks like a black tab.

Follow these instructions to remove the sim drawer and insert the sim card:

1. Locate the sim drawer near the ethernet ports.
2. Using fingers, hold the edges of the sim drawer and slowly pull away from the controller until the sim drawer is completely removed.
3. Ensure the side of the sim drawer labelled 'top' is facing upwards.
4. Insert the sim card into the sim drawer, copper side facing downwards.
5. Carefully and slowly insert the sim drawer back into its location feeling for the internal locating hole.
6. Once located correctly, push the sim drawer completely in.

Powering The Controller

The controller should be powered and therefore turned on by wiring the removable power terminal block to an appropriate 24VAC or 24VDC power supply as described in the datasheet. Polarity of terminations to the power terminal (+/-) must be followed as labelled on the terminal block and installation guide.

When power is applied the display also turns on.

Once powered the controller will enter its boot process and **after 2-3 minutes the display graphics (if any exist) will be displayed**. It is important not to touch or interact with the display until the boot sequence is completed.

There is also a display isolation button on the controller casing (power terminal side). This should only be used to 'wake' the display once it has entered sleep mode. Using this button to turn the display on and off manually may result in a connection issue between the display and the controller CPU until a power cycle occurs.

Note: Refer to the installation guide for more information about wiring.

Default/Factory Parameters

These default parameters should be used with the connection methods below to access the controller software for the first time or until they are modified by the user.

Parameter	Value	Comment
Ethernet Port A	192.168.100/24	
Ethernet Port B	DHCP	
Management Interface Port	9090	https://
Management Interface Username	admin	
Management Interface Password	koteadmin	
Node-Red Port	1880	http://
Node-Red Username	admin	(linked with Management Interface username)
Node-Red Password	koteadmin	(linked with Management Interface password)
InfluxDB Port	8086	http://
InfluxDB Username	admin	
InfluxDB Password	koteadmin	
Wireless AP SSID	KS32	
Wireless AP Password	koteadmin	
Controller Hostname	ks32	
Hostname Domain	.local	eg http://ks32.local:1880

Graphical User Interfaces

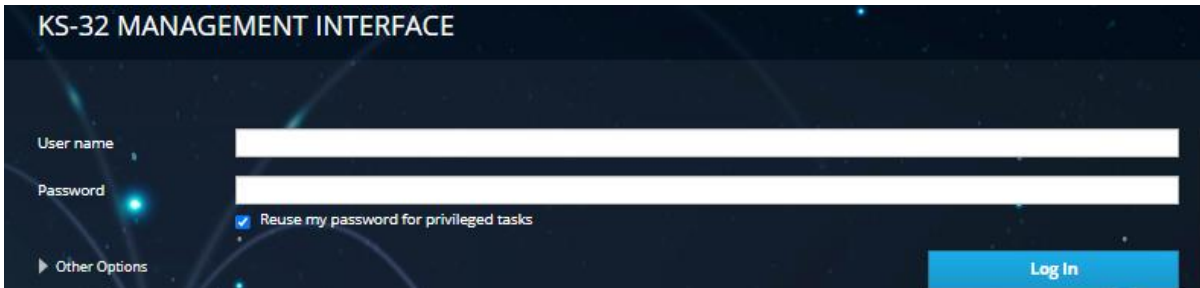
There are three main Graphical User Interfaces (GUI's) on the KS32 controller:

KS32 Management Interface

Used primarily to monitor and configure the networking and other general settings of the KS32 controller, including:

- Networking Settings (Ethernet, RS-485, Wi-Fi etc)
- Firewall Settings
- KS32 Display Settings
- Temperature Table Management
- VPN – Zerotier-One Management
- System Memory, CPU and Storage
- User Accounts Management

Note 1: When connecting to the Management Interface, ensure the 'Reuse my password for privilege tasks' checkbox is ticked to allow for full functionality.



Note 2: Do not remove the admin user. The password can be changed however the admin user is the only user with access to Node-Red. Other users can be created and will have access to the Management Interface.

Node-Red

[Node-Red](#) is the KS32 programming interface. It is used to interact with the controller inputs and outputs, provide logic programming, manage messaging over many protocols, manage histories, provide graphics to the KS32 display and much more. This tool empowers the KS32 to perform a wide range of functions and applications.

InfluxDB

[InfluxDB](#) is the time-series database used to locally store historical data. The GUI also allows the creating of stylish dashboards to represent this data and the ability to create alerts and analytics.

Connection Methods

There are various methods available to connect to the KS32 and KS32 Pro controller using an internet browser on a PC/Mac, smartphone or tablet.

Ethernet Port A

The controller can be accessed by connecting an ethernet cable between a PC/Mac and ethernet port 'A':

1. Connect the ethernet cable between the PC/Mac and ethernet port 'A' of the KS32.
2. Configure the PC/Mac ethernet adapter to be in the same range as the ethernet port 'A' IP address and subnet (cannot be the same IP address).

Example: Default Eth Port 'A' IP = 192.168.1.100/24 – Configure the PC/Mac to 192.168.1.200 with subnet 255.255.255.0

3. Open a web browser on the PC/Mac and enter either the controller IP and port of the GUI you are connecting to or the <hostname.domain> and port into the address bar to connect. Ensure you are using **http://** or **https://** as described in the [default parameters](#).

Examples:

<https://192.168.1.100:9090> – Management Interface

<https://ks32.local:9090> – Management Interface

<http://192.168.1.100:1880> – Node-Red

<http://ks32.local:1880> – Node-Red

<http://192.168.1.100:8086> – InfluxDB

<http://ks32.local:8086> – InfluxDB

Ethernet Port B

The controller can be accessed by connecting an ethernet cable between a modem/router with DHCP enabled and ethernet port B:

Cabled Connection:

1. Connect an ethernet cable between a DHCP enabled modem/router and ethernet port 'B' of the KS32.
2. Configure the ethernet port of a PC/Mac to use DHCP.
3. Connect an ethernet cable between the same modem/router and the PC/Mac.
4. Use a tool like [Angry IP Scanner](#) to scan the network (**skip if using hostname to connect**).
5. Find the entry that shows the hostname and note the IP address (**default: ks32**) (**skip if using hostname to connect**).
6. Open a web browser on the PC/Mac and enter either the controller IP and port of the GUI you are connecting to, or the <hostname.domain> and port into the address bar to connect. Ensure you are using **http://** or **https://** as described in the [default parameters](#).

Wifi Connection:

1. Connect an ethernet cable between a DHCP enabled modem/router and ethernet port 'B' of the KS32.
2. With a PC/Mac, smartphone or tablet connect to the Wi-Fi network of the connected modem/router.
3. Use a tool like [Angry IP Scanner](#) to scan the network (**skip if using hostname to connect**).
4. Find the entry that shows the hostname and note the IP address(**default: ks32**) (**skip if using hostname to connect**).
5. Open a web browser on the PC/Mac, smartphone or table and enter either the controller IP and port of the GUI you are connecting to, or the <hostname.domain> and port into the address bar to connect. Ensure you are using **http://** or **https://** as described in the [default parameters](#).

Wireless Access Point (KS32 Pro)

The controller acts as a wireless access point and can be accessed directly via Wi-Fi without the need for a modem/router.

1. Open Wi-Fi networks on a PC/Mac, smartphone or tablet.
2. Connect to the KS32 wireless AP SSID network.
3. Enter the wireless AP password.
6. Once connected open a web browser on the connected device and enter the <hostname.local> and port into the address bar to connect. Ensure you are using **http://** or **https://** as described in the [default parameters](#).

Examples:

<https://ks32.local:9090> – Management Interface

<http://ks32.local:1880> – Node-Red

<http://ks32.local:8086> – Node-Red