

brainchip
event-based computing



Akida Edge AI Box

Quick Start Guide

Version 1.0

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1. Introduction

Welcome to the Akida Edge AI Box quick start guide. This manual will walk you through the process of setting up your Akida Edge AI Box, including the necessary network configuration for IP cameras. By following this guide, you'll be able to set up and configure your system, even if you're new to networking concepts.



2. What's Included

Your Akida Edge AI Box package should contain:

- Akida Edge AI Box
- 12V DC Power Adapter

3. Additional Equipment Needed

To effectively set up and use the Akida Edge AI Box, you'll need the following items (not included in the package). Although not required, 4 x cameras are recommended if you desire to leverage the 4-camera demonstration. Note: If

using power over ethernet (POE) cameras, ensure that this switch is POE enabled.

- Ethernet cables (CAT5e or better)
- 1 to 4 IP Cameras (minimum 720p resolution, 25FPS, with RTSP support)
 - Although not required, 4 x cameras are recommended if you desire to leverage the 4-camera demonstration.
- 1 Power over Ethernet Network Switch (minimum 5 ports)
 - PoE not necessary if cameras are AC powered
- Ethernet cables (CAT5e or better)
- A laptop or desktop computer with an Ethernet port
- HDMI monitor (minimum 720p resolution, 1280x720)
- HDMI cable
- Keyboard
- Mouse
- USB hub (for connecting keyboard, mouse and other peripherals)

4. Setting Up Your Network and Cameras

Connecting the Hardware

1. Connect your IP cameras to the ethernet switch using Ethernet cables.
2. Connect your laptop to a port on the switch using an Ethernet cable.
3. Power on the switch and cameras.

Configuring Your Laptop's Network Settings

On your laptop, open your network settings.

Set a static IP address for your Ethernet connection. For example:

- IP Address: 172.18.10.100
- Subnet Mask: 255.255.255.0
- Gateway: Leave blank

Accessing the Cameras

Open a web browser on your laptop.

- 1) Enter the default IP address of one of your cameras (refer to your camera's documentation).

- 2) Log in using the default username and password (again, refer to your camera's documentation).
- 3) Navigate to the network settings in the camera's web interface.
- 4) Set a static IP address for the camera within the same subnet as your laptop. For example, if using 4 IP cameras:

Camera 1: 172.18.10.20

Camera 2: 172.18.10.21

Camera 3: 172.18.10.22

Camera 4: 172.18.10.23

- 5) Save the settings and repeat for all cameras.

Verifying Camera Connectivity

- 1) Open a command prompt or terminal on your laptop.
- 2) Ping each camera to ensure they're accessible:

```
ping 172.18.10.20  
ping 172.18.10.21  
ping 172.18.10.22  
ping 172.18.10.23
```

- 3) If all pings are successful, your network is set up correctly.

Finding the RTSP URLs

- 1) Access each camera's web interface using its IP address.
- 2) Navigate to the RTSP or streaming settings.
- 3) Note down the RTSP URL for each camera. It typically looks like:

```
rtsp://172.18.10.20/Stream0
```

- 4) If your cameras require authentication, the URL will be in this format:

```
rtsp://username:password@172.18.10.20/Stream0
```

5. Configuring the Akida Edge AI Box

The Akida Edge AI Box can be set up using two methods: via Wi-Fi AP mode or via an Ethernet connection to a router.

Connecting the Akida Edge AI Box

- 1) Connect the Akida Edge AI Box to the ethernet switch using an Ethernet cable.
- 2) Connect the HDMI monitor to the Akida Edge AI Box.
- 3) Power on the Akida Edge AI Box using the provided 12V DC adapter.

Configuring via Wi-Fi AP Mode

- 1) On your laptop, connect to the Wi-Fi network broadcasted by the Akida Edge AI Box.
 - SSID: ap_<Akida_Edge_AI_Box_Serial_Number>
 - Password: 12345678
- 2) Open a terminal on your laptop and run the ConfigManager utility:

```
./ConfigManager
```

- 3) Follow the prompts to:
 - Set a static IP for the Akida Edge AI Box (e.g., 172.18.10.11)
 - Configure the RTSP URLs for each camera
 - Set the IP addresses for each camera

6. Verifying the Setup

- 1) Reboot the Akida Edge AI Box by unplugging the power supply and plugging it back into the Edge AI Box.
- 2) After rebooting, check that all LEDs on the Akida Edge AI Box turn green.

After successful setup, the monitor connected to the Akida Edge AI Box will display the demo interface:



Demos



Community



Terminal



Documentation

Demos: Launch pre-loaded artificial intelligence demos that showcase the capabilities of your Akida Edge AI Box

Community: Connect to our online community where you can collaborate, share projects, and access resources from other AI developers.

Terminal: Access the Linux command line interface to directly interact with and control your device using text commands.

Documentation: Access comprehensive guides, tutorials, and technical specifications for your Akida Edge AI Box through your web browser.

7. Troubleshooting

If you encounter issues:

- Check all physical connections.
- Verify IP addresses and network settings.
- Check the LED status on the Akida Edge AI Box (refer to the LED status table in the appendix).

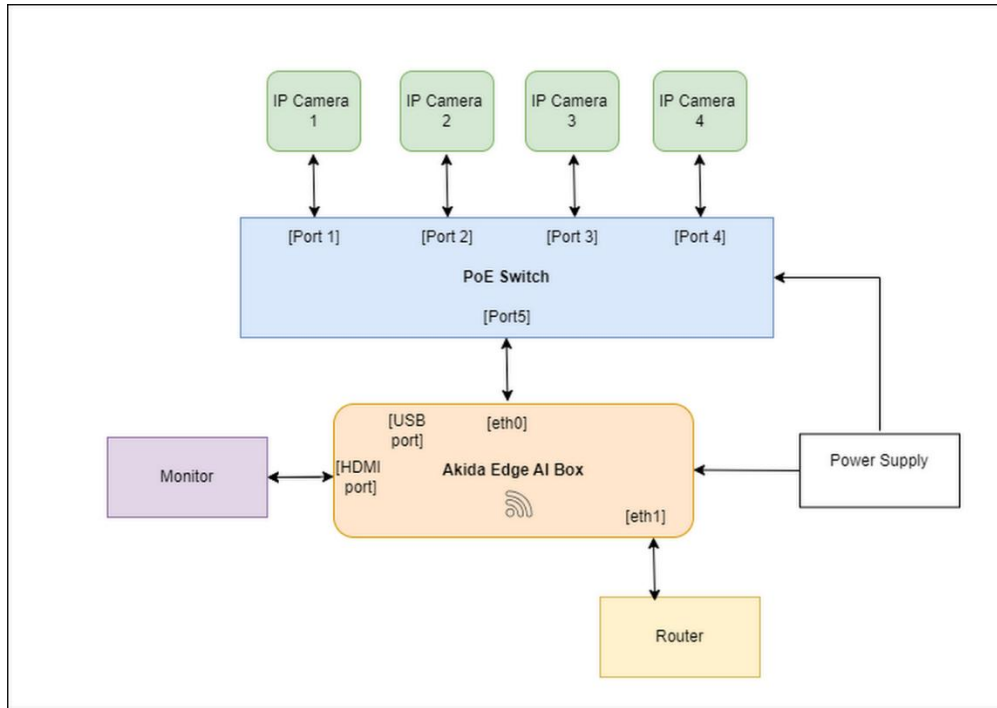
Refer to the Akida Edge AI Box User Guide for additional information

8. Tested Components

The following components have been tested and verified:

- HDMI Monitor: PHILIPS 22 inch Class Thin Full HD (1920 x 1080) Monitor
 - [Product Link](<https://a.co/d/2Ep5BTj>)
- IP Cameras: 4MP PoE IP Bullet Outdoor Camera
 - [Product Link](<https://a.co/d/1aln4KH>)
- PoE Switch: MokerLink 10 Port PoE Switch
 - [Product Link](<https://a.co/d/bPp0xtN>)
- USB Keyboard and Mouse Combo: Logitech MK270 Wireless Keyboard And Mouse Combo
 - [Product Link](<https://a.co/d/b1uacfA>)
- USB Camera: Logitech C920x HD Pro Webcam
 - [Product Link](<https://a.co/d/382tE1D>)

9. Setup Diagram



For more detailed specifications and links, please refer to the Akida Edge AI Box User Guide.