



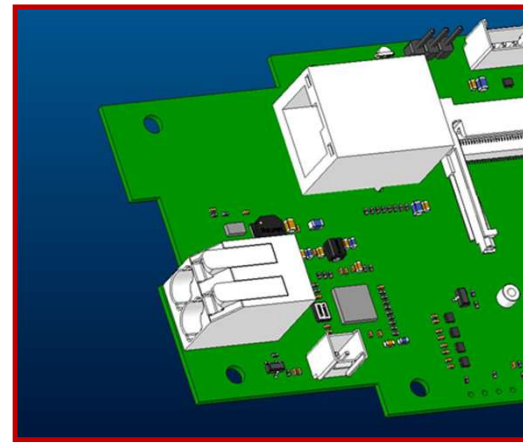
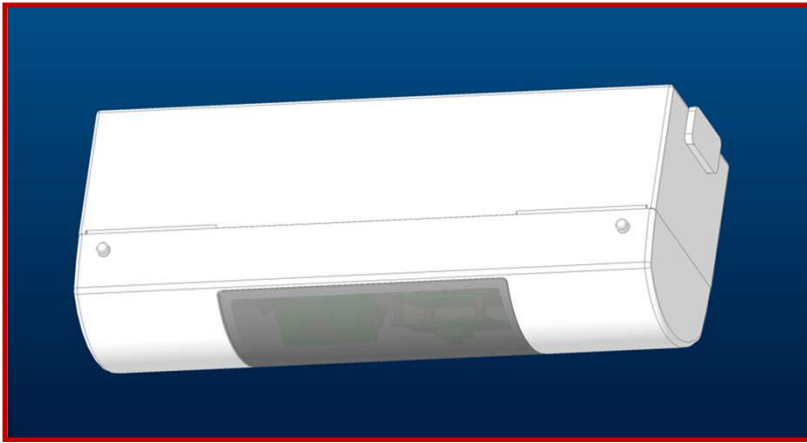
## A.I. Camera Solution

2024  
faytech group

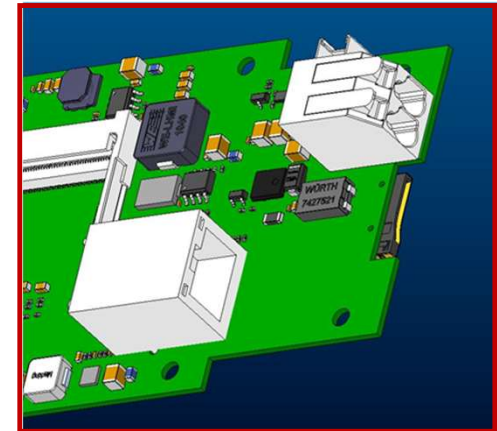


# 1. Mechanical Design

faytech's wide expertise and project experience in **Supermarket & Retail Projects** allows for flexibility and countless customization possibilities.



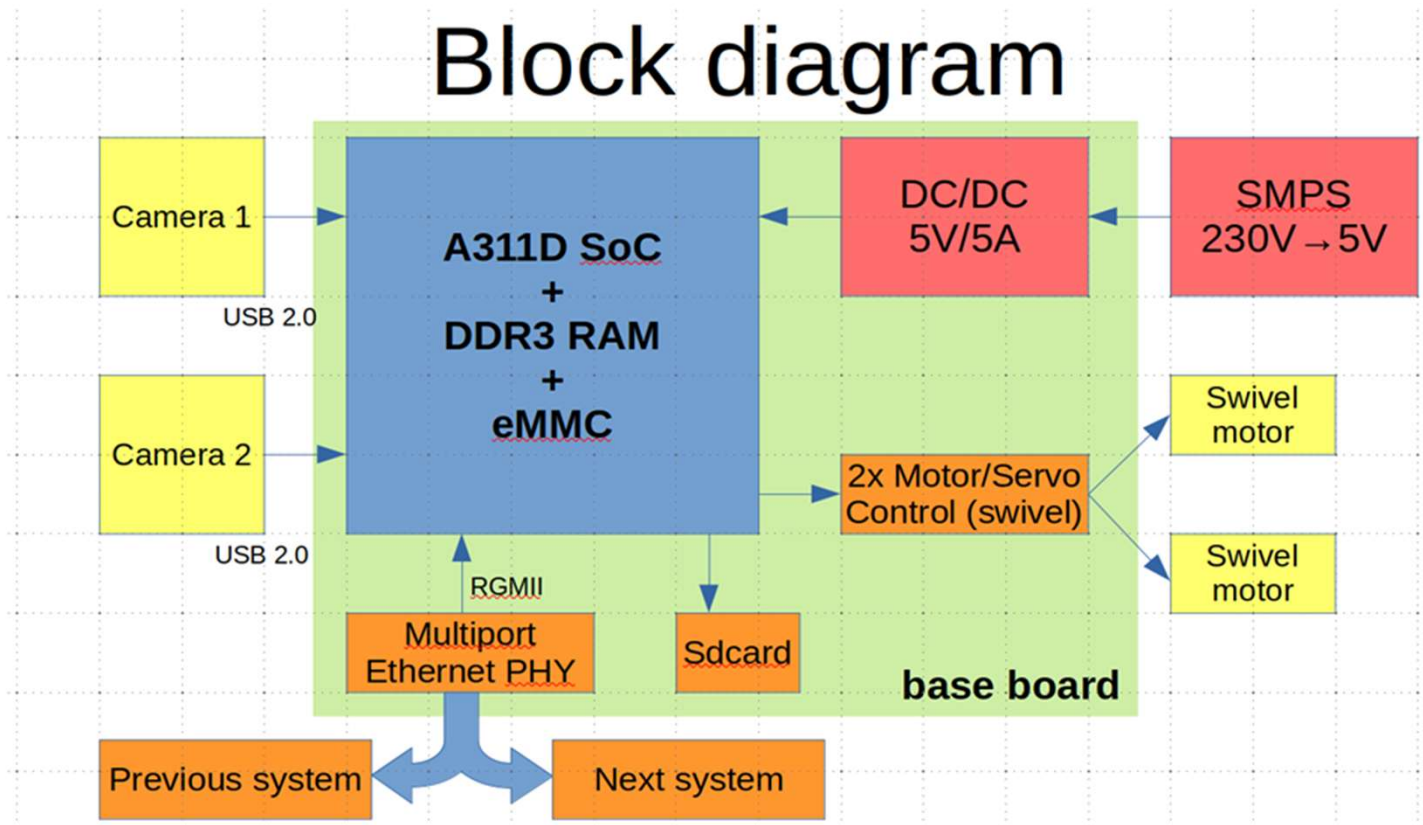
Connectors for  
Ethernet and Power



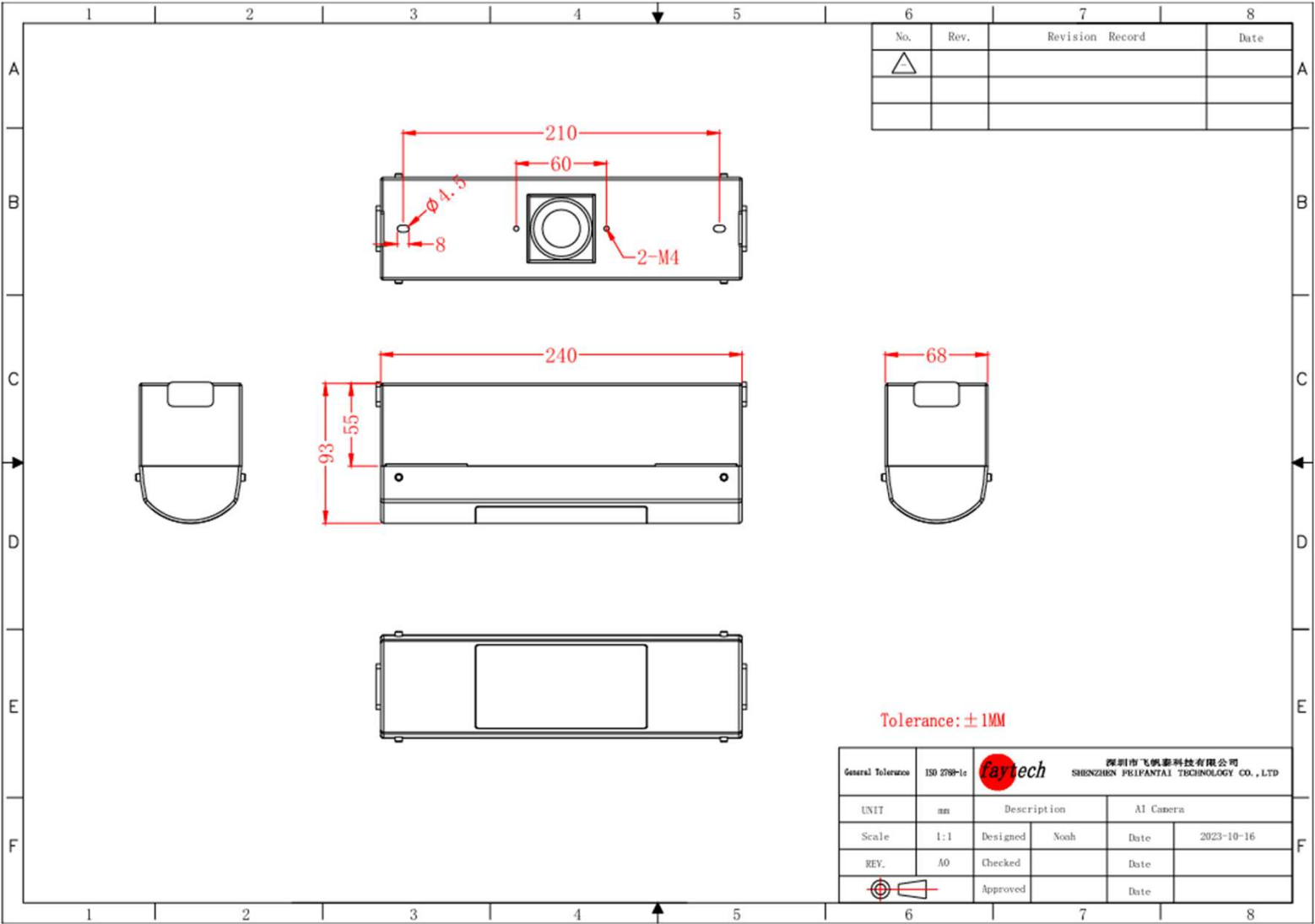
## 2. Technical Specification

Main Board	CPU	Amlogic A311D	* Option 2 & 3 require new developments.	
	RAM	2GB		
	Storage	16GB		
	Video/Picture Encoding	Video/Picture Encoding H.264 video encoding up to 1080P@30fps with low latency		
Operation System		Linux		
Power Supply		24V/3A DC		
Ethernet Switch		2 ports 2.5Gbits		
Camera Options		Option 1 (STANDARD MODEL)	Option 2	Option 3
	Module No.	HBVCAM-4K1928 V11	HBVCAM-16M2106,	ELP-USB48MP01,
	Sensor	SONY IMX317	IMX298 (1/2.8")	S5KGM1ST04-FG9
	Max. Resolution	3840 (H) * 2160 (V)	4656x3496	8000 (H) *6000 (V)
	Lens Structure	2G2P	6P	1/2 inch (4:3)
	Lens Aperture	F/2.4		
	Focal Length	4.2mm		
	FOV	85°		
	TV Distortion	<5%		
	Compression Format	MJPEG / YUV2 (YUYV)	MJPEG / YUV2 (YUYV)	MJPEG / YUV2 (YUYV)
	Resolution & Frame Rate	MJPEG 1600x1200 30FPS / YUY2 1600x1200 5FPS	MJPEG 1920x1080 30FPS / YUY2 2320x1744 1FPS	8000x6000 @ 5fps MJPEG / 4000x3000 @15fps
		MJPEG 1920x1080 30FPS / YUY2 1920x1080 5FPS	MJPEG 2592x1944 10FPS / YUY2 4656x3496 1FPS	MJPEG 3840x2160 @ 30fps MJPEG / 1920x1080 @30fps
		MJPEG 2048x1536 30FPS / YUY2 2048x1536 3FPS	MJPEG 3264x2448 10FPS	MJPEG 1280x720 @ 30fps MJPEG
		MJPEG 2688x1512 30FPS / YUY2 2688x1512 2FPS	MJPEG 4208x3120 10FPS	
		MJPEG 2592x1944 30FPS / YUY2 2592x1944 2FPS	MJPEG 4656x3496 10FPS	
		MJPEG 3840x2160 30FPS / YUY2 3840x2160 1FPS		
	Focus Speed	NA (fixed focus)	NA (fixed focus)	Fast about 200ms
	Sensitivity	760mV/lux-sec@550nm	780mV/lux-sec	1.4V/lux-sec@550nm
	Connecting Port Type	USB2.0 High Speed	USB2.0 High Speed	USB2.0 High Speed
	Adjustable Parameters	Brightness, Contrast, Saturation, Hue, Sharpness, Gamma, White balance, Exposure	Not specified	Brightness, Contrast, Saturation, Hue, Sharpness, Gamma, White balance, Exposure
Operating Voltage	DC5V	DC5V	DC5V	
MTF50	800LW/PH(Center Horizontal)		1000LW/PH (Center)	
Cover Transparency	90% minimum			
Max. Power consumption	940mW	1000mW	Work current: 550Ma- 610mA	
Camera Cover	Color	Grey		
	Transparency	90% minimum		
Camera Angle Adjustment		Upward: 20° C Downward: 20° C		

### 3. A311D Mainboard Block Diagram



4. Product Drawing



# Feature



AI-based price-attractive object recognition and tracking for industrial customers:



## High Quality Camera

With multiple cameras and angles



## AI tracking management system

For real-time data analysis reports



## Compact & robust design

For seamless integration



## Great in combination with

Of 1000 cd/m<sup>2</sup>



## Seal with cable holes

Faytech® ARM Touch PCs (A311D)



## Factory & Retail Automation with

AI Auto-tracking and Auto-recognition

# Project Examples – AI Camera Rail 1.0

## Ethernet & Power Connectors

- Includes 2 Ethernet ports with 2.5Gbits
- 24V DC-In power supply

## AI Ready CPU

- A311D Quad-Core Cortex-A73 + Dual-core Cortex-A53 + 5 TOPS NPU inside

## Casing

- Standard ABS or customizable options available

## 48MP Camera

- On rotating motor for 96° field of view
- 4K resolution, 4.2mm focal length and lens aperture of F/2.4

## General

- Able to allow for Retail & Grocery automation through AI vision.
- 2.5GB switch enabling daisy chain network topology for easy integration and installation.
- perfect for tracking traffic in supermarkets or even self-checkout options.





# Project Examples – AI Camera Rail 2.0

## LED Bar Lights

- LED lights for supermarket & retail environments

## Casing

- Standard ABS or customizable options available

## Daisy Chain Connectors

- Multiple lights & cameras linked together through daisy chain connection
- Single network cable to cover distance of 15-30m

## Additional 48MP Cameras

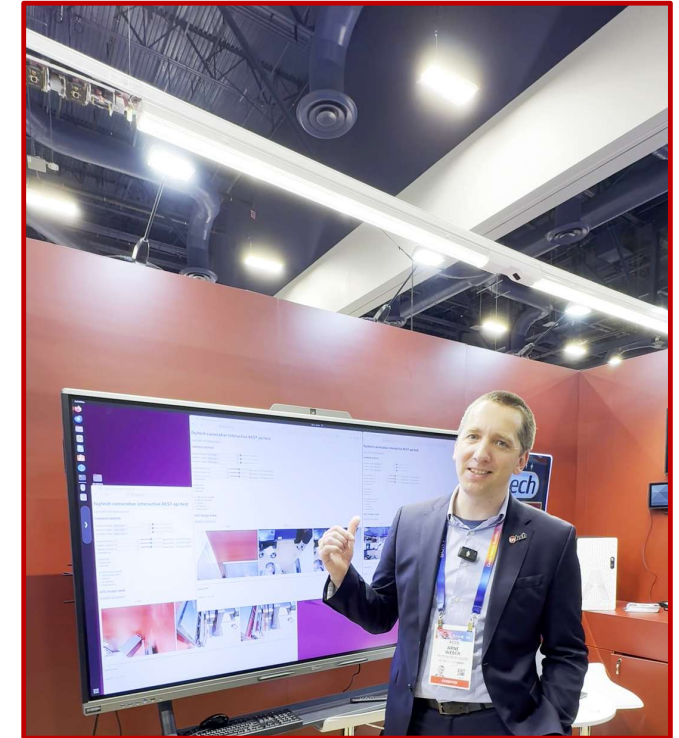
- Additional cameras to increase field of view

## General

The AI Camera Rail excels at processing and transmitting data through a single network connection. Its advanced REST API capabilities enable users to adjust camera angles, modify focus, capture images, and run AI programs facilitating complete process automation.

## AI Camera Rail 1.0

- Same specifications as the previously introduced camera rail 1.0
- Integrated in rail system with lights



Introduced at CES 2025

Check out the [video](#)!







THANK YOU

faytech.com

