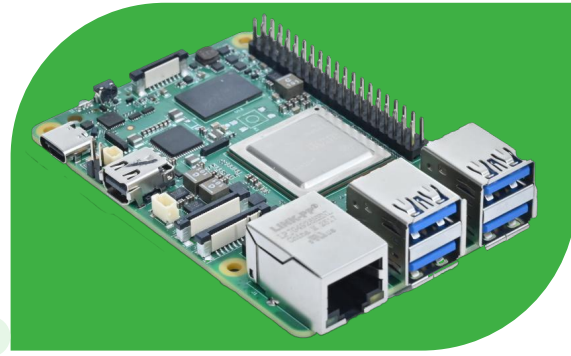


Embrace Edge AI,
Empower Intelligent Vision.

MO 68A AI Single Board Computer

- Open SDK
- Linux Distribution
- HAT Expansion



The MO 68A is an 8 TOPS Edge AI single-board computer based on the TI AM68A SoC. It is mechanically compatible — sharing the same board dimensions, 40-pin connector layout, and peripheral positions — while adding two dedicated C7x DSPs and deep-learning accelerator for on-device AI inference. Running Debian Linux, it supports Gigabit Ethernet, PCIe 3.0, 4x USB 3.0, mini DP, 2x 4-lane MIPI DSI/CSI-2, and a HAT-compatible 40-pin connector, making it ideal for AI vision boxes, intelligent cameras, and edge AI inference terminals.



Smart Energy

Focusing on energy efficiency and sustainable development



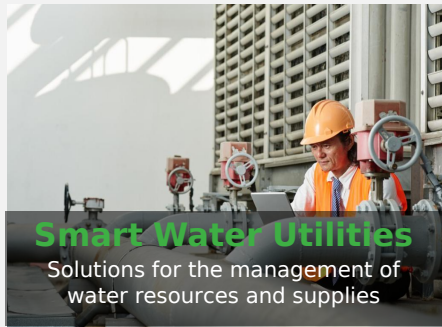
Smart City

Improving urban management and public services



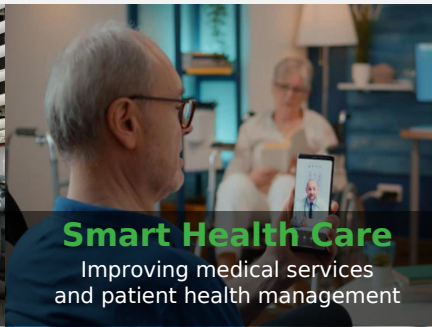
Smart Manufacturing

Real-time monitoring and controlling



Smart Water Utilities

Solutions for the management of water resources and supplies



Smart Health Care

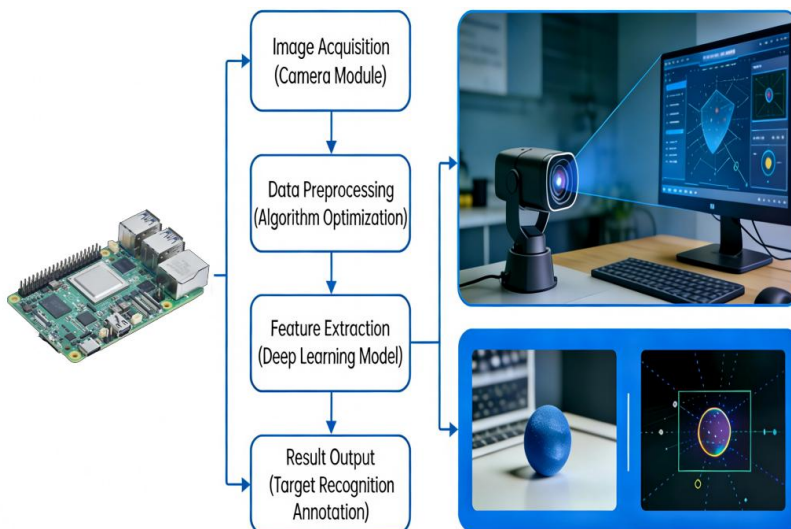
Improving medical services and patient health management



Public Utility

Improving the efficiency and convenience of public services

Solution



Feature and Advantage

System

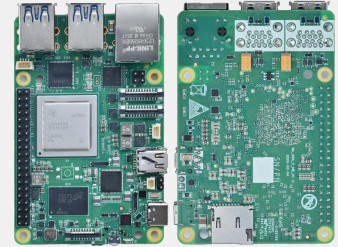
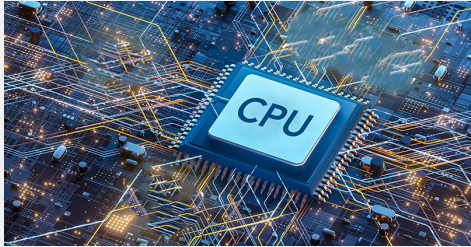
- CPU: 2× Cortex-A72 up to 2.0GHz
- AI: Deep Learning Accelerator 8 TOPS
- RAM: 4GB / 8GB (default)
- Storage: Micro SD
- Embedded Linux (Debian 13 Trixie)
- Open SDK

High-level security

- Secure Boot
- TrustZone
- OP-TEE
- Hardware Crypto Accelerator

Rich interfaces

- 1× Gigabit Ethernet
- 4× USB 3.0 Type-A
- 1× PCIe 3.0
- 1× mini DP
- 2× 4-lane MIPI DSI/CSI-2
- 1× Micro SD
- 40-pin HAT-compatible connector



Complete Vision Pipeline

- Two 4-lane MIPI CSI-2 RX interfaces
- Vision Pre-processing Accelerator (VPAC)
- Depth and Motion Perception Accelerator (DMPAC)
- 4K@60fps H.265/H.264 codec

Edge AI Inference

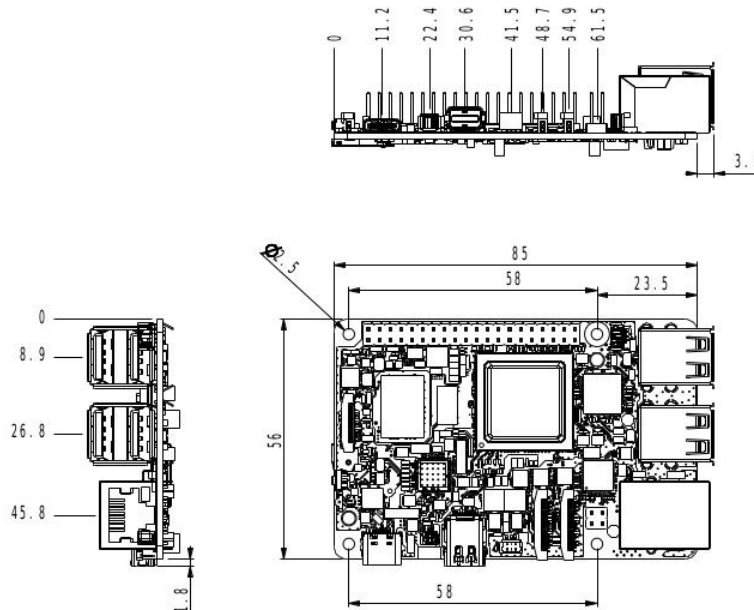
- 8 TOPS on-device AI acceleration
- TI TIDL runtime, supports TFLite / ONNX models
- 2× C7x DSP for vision pre-processing
- Zero-cloud-dependency local inference

40-pin SBC Ecosystem

- Standard SBC form factor, mechanically compatible
- 40-pin HAT-compatible connector
- Supports mainstream SBC enclosures and HAT accessories



Dimensions (mm)



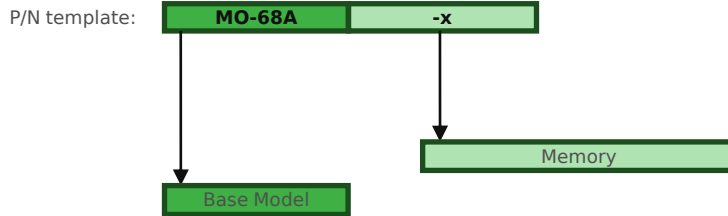
Product Specifications

Hardware Specifications			
Item	MO 68A		
Hardware Platform			
CPU	TI AM68A, 2x Cortex-A72 @ 2.0GHz		
AI Accelerator	2x C7x DSP + Deep Learning Accelerator, 8 TOPS		
ISP / Vision	On-chip ISP + VPAC (RGB-IR, WDR, LDC)		
RAM	LPDDR4 4GB / 8GB (default)		
Interfaces			
Ethernet	1x Gigabit Ethernet		
USB	4x USB 3.0 Type-A		
PCIe	1x PCIe 3.0		
Display	1x mini DP + up to 2x 4-lane MIPI DSI		
Camera	up to 2x 4-lane MIPI CSI-2		
Audio	I2S via 40-pin connector		
40-pin Connector	GPIO / I2C / I2S / SPI / UART / PCM, HAT-compatible		
Fan Connector	1x 4-pin fan connector (5V, PWM, GND, TACH)		
Button	1x Reset button		
Storage	Micro SD		
Debug UART	1x TTL UART		
Security			
Secure Boot	Support (ARM TrustZone + OP-TEE)		
Others			
RTC	Support (battery backup)		
Watchdog	Hardware watchdog		
Power			
Power Input	USB Type-C 5V/5A DC		
Power Consumption	25W (MAX)		
Mechanical characteristics			
Dimensions	85 x 56mm	Weight	53g
Housing	PCB	Cooling	Active fan (optional)
Ambient Temperature			
Storage Temperature	-20 ~ 70°C	Operating Temperature	0 ~ 50°C
Indicator			
LED	PWR, STATUS		

Software Specifications	
Item	MO 68A
Operating System	
OS	Debian 13 Trixie
Kernel	Linux Kernel 6.12
AI & Vision	
AI Runtime	TI TIDL, supports TFLite / ONNX
Vision SDK	TI EdgeAI SDK
Camera Framework	V4L2
Display Framework	DRM / KMS
Network Protocol	
IP Application	TCP/UDP, ICMP, DNS, DHCP
IP Routing	Static routing
Security	
Secure Boot	Support
TrustZone	Support
OP-TEE	Support
Crypto Accelerator	Hardware AES-256
Development	
Languages	Python, C/C++
Libraries	OpenCV, GStreamer, NumPy
Package Manager	apt (Debian)
Open SDK	Supports custom system build by customer
System Management	
Remote Access	SSH
Firmware Upgrade	SD card flash
Debug	UART console

Ordering Guide

Description of selection



Base Model

Base Model	-x	Memory
MO-68A	4G	4GB
MO-68A	8G	8GB

Example

Model:MO-68A-8G

“**MO-68A**” means Base Model.

“**-8G**” means 8GB memory.

For more information, please visit <https://www.inhand.com>

About Us

InHand Networks is a leading IoT solutions provider founded in 2001, dedicated to driving digital transformation across industries and empowering customers to unlock their full potential and achieve accelerated growth.

We specialize in delivering industrial-grade connectivity solutions for diverse sectors, such as enterprise networks, industrial and building IoT, digital energy, smart commerce, and mobility. Our comprehensive product portfolio and services cater to various applications worldwide, including smart manufacturing, smart grid, intelligent transportation, smart retail, etc. With a global footprint spanning over 60 countries, we serve customers in China, the United States, France, Germany, the United Kingdom, Italy, and beyond.



3650 Concorde Pkwy, Suite 200
 Chantilly, VA 20151, USA
 T: +1 (703) 348-2988
 E: info@inhand.com
www.inhand.com