

# CV5A System On Module



Rhonda Software CV5A SoM is the innovative Edge AI camera platform designed for feasibility and POC studies, rapid prototyping, quick development and manufacturing of camera products. It is a smart solution for low-power and high-performance demanding applications. CV5A SoM is the first product to support efficient **8K video recording and streaming at 60p**. The platform enables elevated capabilities of CVflow architecture for DNN work acceleration and high-resolution image processing from multiple cameras.

The rich set of interfaces provides flexibility and accelerates development of intelligent vision systems for Automotive, Medical and Entertainment/Sports use cases.

## Key features

LPDDR5  
**64 Gbit**  
operating memory

eMMC  
**64 GByte**  
boot & user storage



**Ambarella™**

**CV5AX85**

Dual-core Arm® Cortex®-A76 CPU  
up to 1.6 GHz

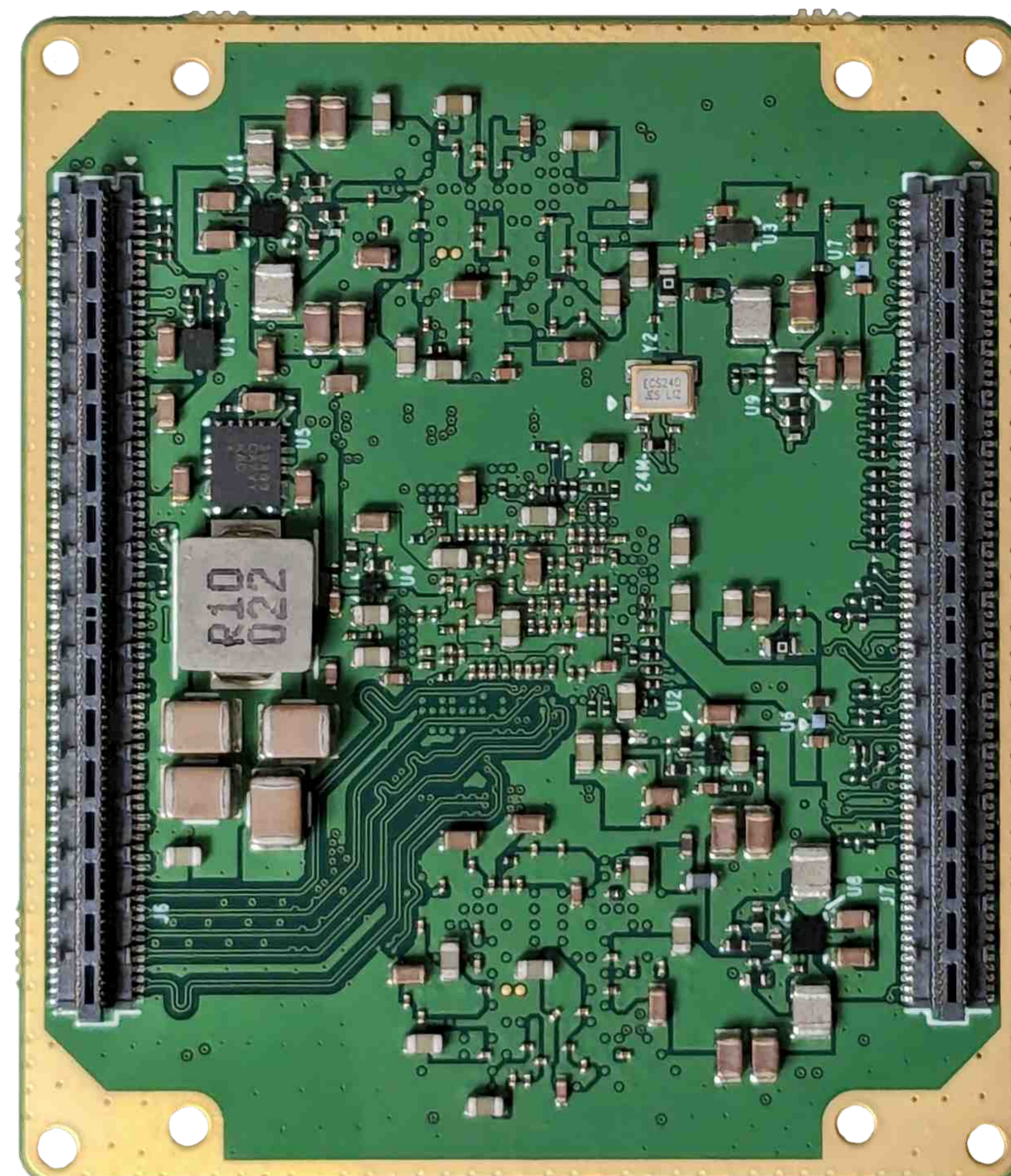
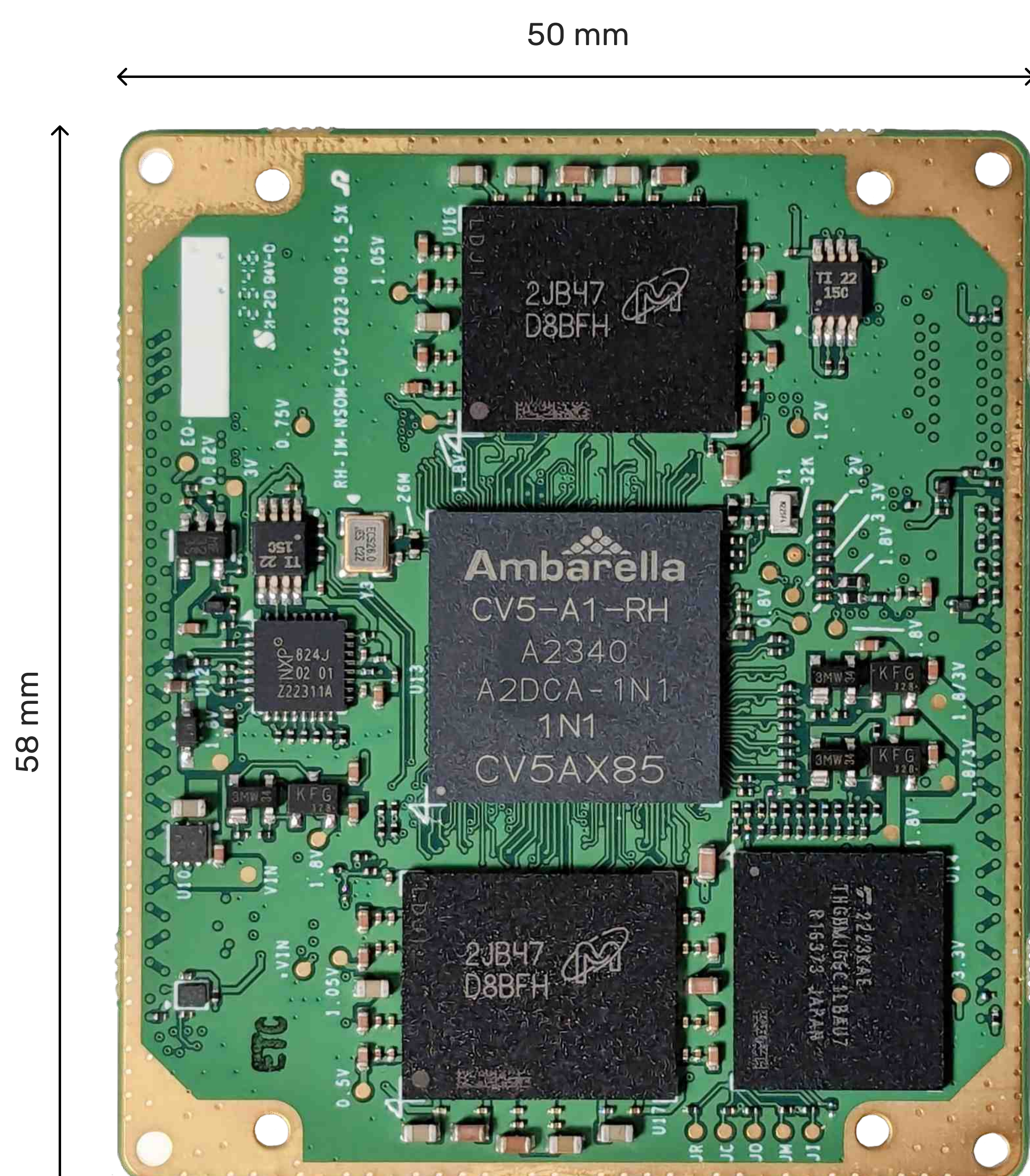
up to **14** image  
sensors

**CVflow**

Hardware accelerator for  
running CNN / DNN

**Over 30**  
**Image Quality Filters**

**8Kp60**  
MJPEG/H.264/H.265  
Video encoding



# CV5A SoM General Specifications



## Key components

- Ambarella® CV5AX85™ SoC  
Video processing up to 8Kp60
- 64Gbit LPDDR5 DRAM
- 64Gbit eMMC boot & user memory

## Image sensor interface

- 2x 4-lane SLVS
- 4x 4-lane MIPI

## Video output interface

- 2x MIPI DSI / CSI-2
- HDMI® 2.0
- Analog CVBS

## Peripheral interfaces

- Gigabit RGMII
- USB 3.2 Host / Device
- PCIe
- SDIO
- I<sup>2</sup>S
- I<sup>2</sup>C
- UART
- JTAG
- SPI
- ADC
- GPIO

## Power options

- 5V from USB
- 3.5–5V from board-to-board connector
- 3.5–5V dedicated power connector

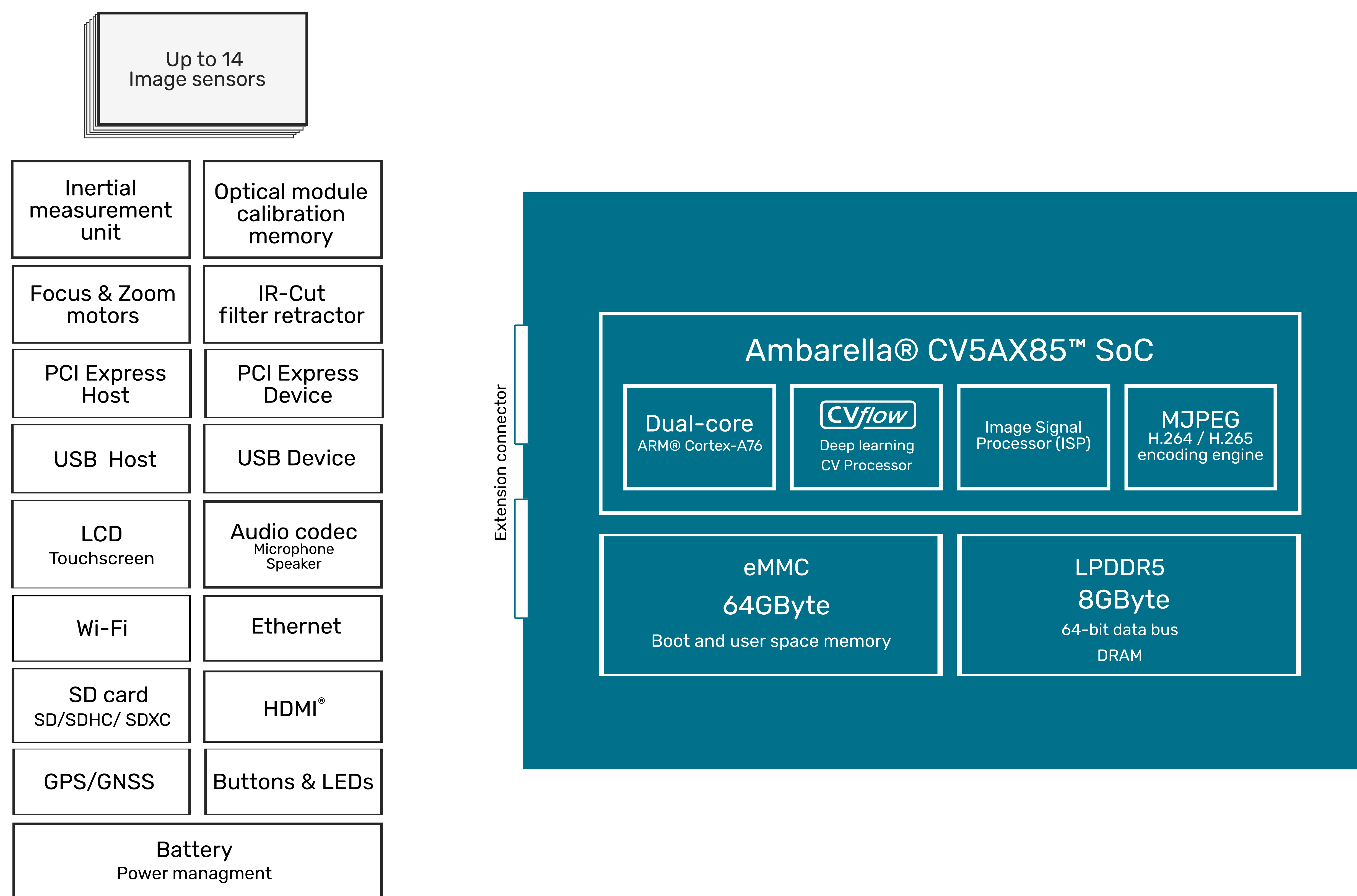
## Physical dimensions

Main board size 58×50 mm

## Operating temperature

-20°C to 85°C

# Rhonda CV5A SoM Block Diagram



Rhonda CV5A SoM product brief v.1.3

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