

CV2A System On Module



CV2A SoM is a low-power, ready-to-integrate and production ready camera platform for rapid prototyping, quick development and production for Automotive Aftermarket and Dealer-Fit applications.

Key features

LPDDR4 16 Gbit

32 GB eMMC 5.1

Stereovision engine

up to 6 image sensors

24 MIPI lanes


Ambarella™
CV2AX85

64-bit quad-core Arm® Cortex®-A53 CPU up to 1 GHz

CNN / DNN

CVflow

HW accelerator

Wi-Fi
802.11a/b/g/n/ac

Over 30
Image Quality
Filters

4Kp60
H264 H265
video processing



CV2A SoM General Specifications

Ambarella® CV2AX85™ SoC

Video processing up to 4Kp60 / 8MP60

Rich sensor interface:

- up to 6 image sensors:
 - up to 4 MIPI or SLVS lanes each
- up to 2 image sensors:
 - MIPI up to 8 lanes each
 - SLVS up to 12 lanes each

Rich video output interface:

- 4-lane MIPI DSI® / CSI-2 & FPD out
- 16-bit parallel LVCMOS
- HDMI ® 2.0
- Analog CVBS

16Gbit LPDDR4 DRAM

32GB internal eMMC 5.1 storage

WiFi (802.11a/b/g/n/ac)

Wide range of peripheral interfaces:

- Gigabit RGMII
- USB 2.0 HOST / DEVICE
- MCPI, DSI
- I²S
- UART
- JTAG
- I²C
- SPI
- ADC
- GPIO

On-board digital microphone

On-board USB-C slot

On-board Micro SD slot
SD, SDHC, SDXC card support

On-board button and 3-color LED for basic UI

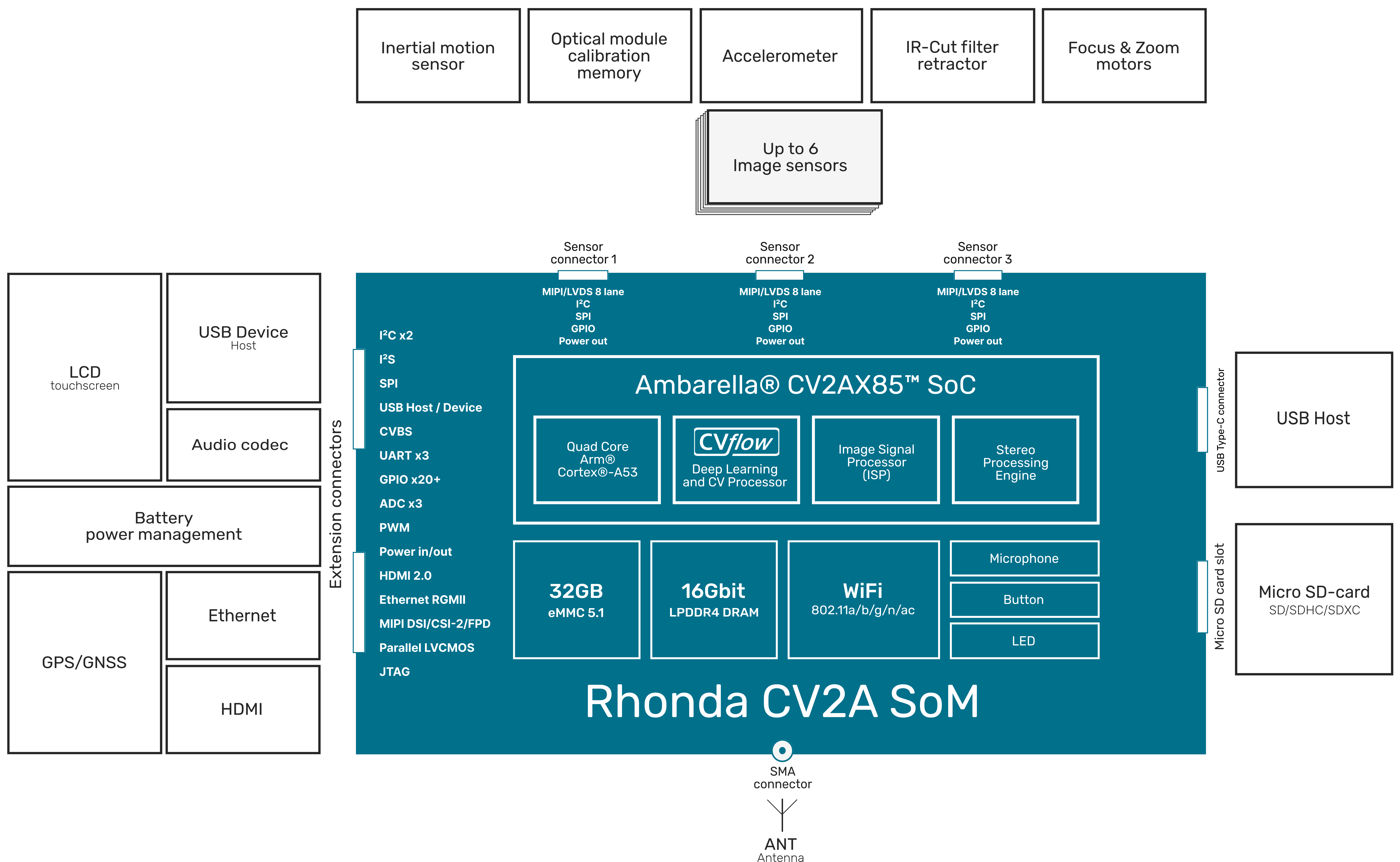
Main board physical dimensions 81 × 38 mm

Operating temperature -20°C to 85°C

Power input options:

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

CV2A SoM Block Diagram



Rhonda CV2A SoM product brief v1.3

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