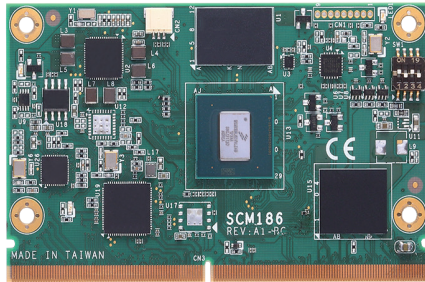
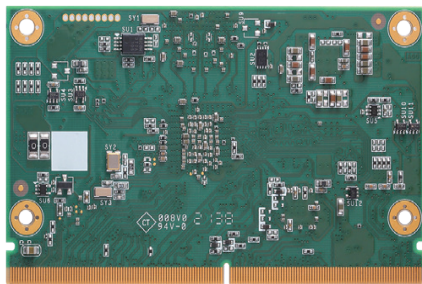


# SCM186 NEW

RISC Embedded SMARC v2.0 SoM with i.MX 8M Plus Quad 1.8 GHz SoC, 4GB RAM and 8GB eMMC



▲ Top view



▲ Rear view

## Features

- SMARC 2.0 (82 x 50 mm)
- NXP i.MX 8M Plus Quad A53 Core Processor
- Neural Processing Unit (NPU), up to 2.3 TOPS
- Cortex-M7 for Real-time Control
- Dual CANbus
- HDMI up to 4K Resolution
- Dual-channel 24-bit LVDS
- 10/100/1000 Mbps Ethernet
- USB 3.2 Gen1
- MIPI-CSI
- Audio
- Yocto 3.3

## Specifications

### Core System

CPU	NXP i.MX 8M Plus 1.8GHz SoC with Quad A53
System Memory	LPDDR4 4GB
AI Accelerator	NPU, up to 2.3 TOPS
Operating System	Yocto 3.3, Linux Kernel 5.10.35
Storage	1 x SDIO3.0 interface 1 x 8GB eMMC
RTC	Battery on the baseboard is required
Power Requirement	+5V ± 5%

### I/O

Graphics	1 x Dual-channel 24-bit LVDS 1 x HDMI (up to 1080p@60Hz/ 4K@30Hz)
Ethernet	1 x 10/100/1000 Mbps Ethernet
USB	2 x USB 3.2 Gen1 4 x USB 2.0
COM	2 x UART TX/RX/RTS/CTS 1 x UART TX/RX (for debug console)
I <sup>2</sup> C	3 x I <sup>2</sup> C interface
QSPI	1 x QSPI
SPI	1 x SPI
CANbus	2 x CANbus
GPIO	12 x GPIO
OS Flash	1 x OS Flash

Audio	2 x I <sup>2</sup> S
Camera Input	1 x MIPI-CSI 4-lane 1 x MIPI-CSI 2-lane
Security	1 x TPM 2.0 (option, none in default)
Storage	1 x SDIO3.0 interface
PCIe	1 x PCIe Gen3 x1
<b>Mechanical and Environmental</b>	
Dimensions	82 x 50 mm (3.23" x 1.97")
Board Thickness	1.2 mm ± 0.1 mm
Operating Temperature	0°C to +70°C (-32°F to +158°F)
Operating Humidity	10% to 95%, non-condensing
Storage Temperature	-40°C to +85°C (-40°F to +185°F)
Storage Humidity	10% to 95%, non-condensing

## Ordering Information

### Standard

SCM186-4R8E-C (P/N: E38S186101)	SMARC 2.0, NXP i.MX 8M Plus SoC Quad A53 with 4GB RAM, 8GB eMMC, HDMI, LVDS, LAN and USB Ports (Heatsink Excluded)
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### Optional

E39R100101	SCM186 Heatsink Kit (0°C to +70°C)
SCM186-4R8EC-184EVK	Evaluation Kit Boards, SMARC Module SCM186-4R8E-C with Baseboard SCB184 (Heatsink Excluded)

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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