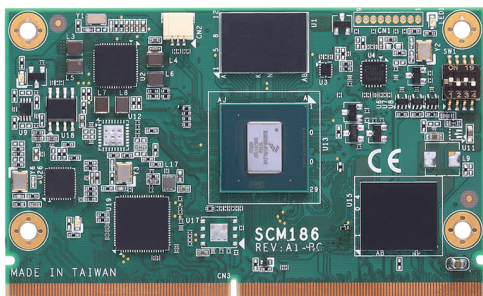
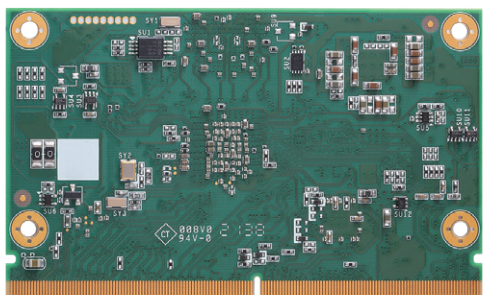


SCM186 NEW

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 2 x USB 2.0
COM	2 x UART TX/RX/RTS/CTS 1 x UART TX/RX (for debug console)
I ² C	3 x I ² 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 ² 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
Mechanical and Environmental	
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-C2 (PN: E38S186104)	SMARC Module, NXP i.MX 8M Plus 1.8GHz SoC Quad A53 with 4GB RAM, 8GB eMMC, HDMI, LVDS, LAN and USB Ports, commercial variant
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Optional

ACC100-186-HS (P/N: E39R100101)	SCM186 Heatsink kit (0°C to +70°C)
ACC100-186-HSP (P/N: E39R100102)	SCM186 Heat spreader kit
SCB184-EMMC-AX (P/N: E39E184100)	Baseboard of Embedded SMARC Module, default boot mode at eMMC, for SMARC Module with eMMC onboard