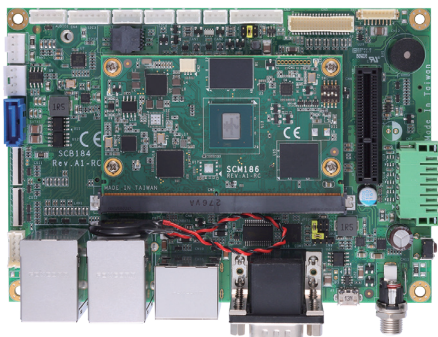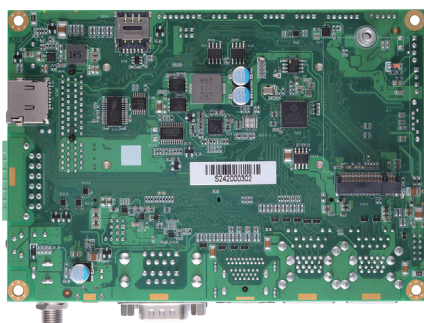# SCM186-4R8EC-184EVK NEW

SMARC v2.0 SoM Evaluation Kit with i.MX 8M Plus Quad 1.8 GHz SoC, 4GB RAM, 8GB eMMC, GbE LAN, USB, Audio, and CANBus for Evaluation Purposes
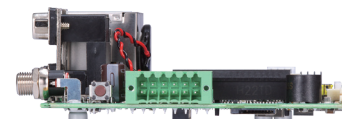

▲ Top view

▲ Rear view

Features

- 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 2.0B
- Dual-channel 24-bit LVDS
- HDMI up to 4K resolution
- GbE LAN
- Quad USB 3.2 Gen1
- Audio
- Micro SD socket & SIM socket
- M.2 B-Key slot for 5G module
- 12V-24V wide voltage
- Yocto 3.3

▲ Front view

▲ Side view

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 Micro SD slot 1 x 8GB eMMC

Internal I/O and Features

PCIe*	1 x PCIe x4 slot (SCM186 support PCIe Gen3 x1)
USB	2 x USB 2.0
Audio	1 x Line In/ Line Out
CANBus	2 x CANBus
I^2C	2 x I^2C Header
QSPI	1 x QSPI Header
SPI	1 x SPI Header
Graphics	1 x Dual-channel 24-bit LVDS

LTE/5G	1 x SIM card slot 1 x M.2 B-Key 3052 slot for 5G Module
SATA*	1 x SATA for SATA III (not support on SCM186) 1 x SATA Power (not support on SCM186)
Fan	1 x Fan control
Storage	1 x 8GB eMMC
RTC	1 x RTC-Battery (CR2032)
Security*	1 x TPM2.0 (option, none in default)
External I/O	
Ethernet*	2 x GbE LAN (SCM186 support 1 x GbE LAN)
USB	4 x USB 3.2 Gen1 Type A
Graphics*	1 x HDMI 1 x DisplayPort (not support on SCM186)
COM	1 x DB9 for RS232 1 x DB9 for RS232/RS485
OS Flash	1 x OS Flash
GPIO	10 x GPIO
Power	1 x Lockable DC jack (12V-24V)
Reset	1 x Reset button
Storage	1 x Micro SD slot
Mechanical and Environmental	
Power Input	12V-24V DC-in
Dimensions	146 x 102 mm (approx. 5.75" x 4.02")
Operating Temperature	0°C to +60°C (-32°F to +140°F)
Operating Humidity	10%- 95%, non-condensing

* The connected SMARC module must also support the features for the connector to function. Refer to the SMARC module's datasheets for information about supported features.

Ordering Information

Standard

SCM186-4R8EC-184EVK	Evaluation Kit Boards, SMARC Module SCM186 with baseboard SCB184 (Heatsink excluded)

* Specifications and certifications may vary based on different requirements.

Optional

SCM186-HS-H	Heatsink, passive cooling solution for SMARC module SCM186 (0˚C to +60˚C)