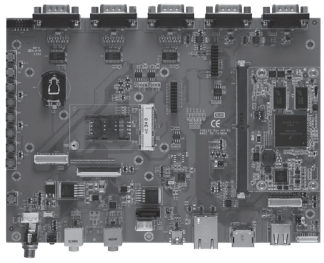
SCM120-120-EVK

Freescale i.MX6 SMARC SoM Evaluation Kit

NEW



Features

- Ultra Low power consumption Cortex™-A9
- High flexibility SMARC v1.0 compliant design
- 2 CAN 2.0B
- 24-bit TTL LCD
- LVDS/HDMI 1080P
- 10/100/1000 Mbps Ethernet
- Open GL ES2.0
- Linux3.0.35/Android4.3
- Audio

Ordering Information

Standard	
Q7M120-120-EVK-Quad-I	Evaluation Kit Board
Q7M120-120-EVK-DuaLite-I	Evaluation Kit Board

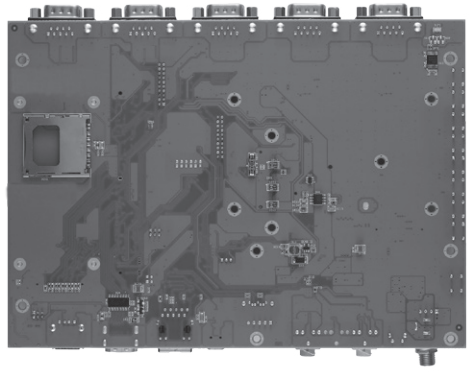
Optional	
P/N: 5078S120100E	SCM120 Heatspread (-40 °C ~70 °C)
P/N: 5078Q120200E	Heatsink (-40 °C ~75 °C)

System

Processor	On SCM120 SoM
System Memory	On SCM120 SoM
OS	Linux kernel 3.0.35, Android 4.3
RTC	Battery on the Baseboard is required
Power Requirement	+5V ± 5%, 5A
Size	200 x140 mm
Board Thickness	1.6 mm ± 0.15mm
Operation Humidity	10% ~ 95%, non-condensing

I/O

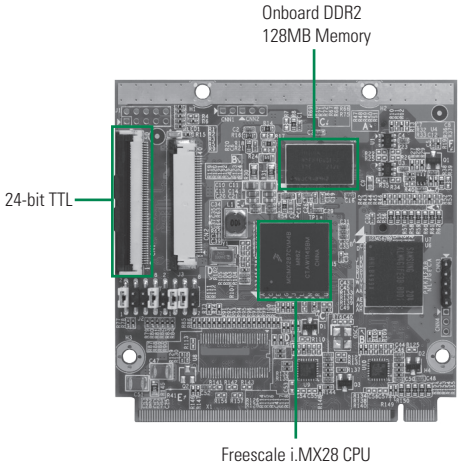
Graphics	1 24-bit TTL LCD 1 HDMI 1080P 1 Dual channel 24-bit LVDS
Ethernet	1 RJ-45 for 10/100/1000 Mbps
Audio	MIC-in
COM	4 UARTs with TX/RX/RTS/CTS
USB	2 USB 2.0 ports: 1 OTG client and 1 Host
I2C	4 I2C Interface
CAN	2 D-Sub 9-pin male connectors for 2.0B protocol-compatible Controller Area Network (CAN) interfaces
Keypad	8 button-detect circuit
Storage	1 SD/MMC socket, 1 SATA connector SPI nor Flash
Touch	4-wire touch screen controller
Mini Card	1 Full size(with SIM)
Extension Slot and Socket	1 connector with I2C/SPI/UART
MIPI	1 Serial Cammera
PCAM	1 PCAM 8bit



▲ Rear view

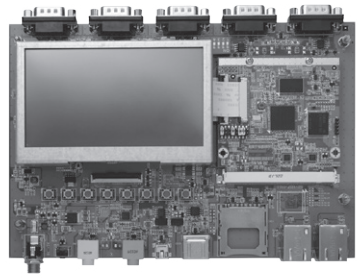
Q7M100

Q7M100 with i.MX287 454 MHz (Industrial) SoC,128 MB Memory, 4 GB eMMC, 10/100Mbps Ethernet, Audio, CAN



Features

- Ultra low power consumption ARM9
- High flexibility Qseven v1.2 compliant design
- 2 CANBus 2.0B compliant ports
- 24-bit TTL LCD
- Dual 10/100 Base-T Ethernet
- Audio



▲ Q7M100-100-EVK

System

CPU	Freescale iMX-28 Series SoC with 287 ARM926EJ-S CPU running @ 454MHz
System Memory	Maximum up to 128MB DDR2-667
OS	Linux kernel 2.6.35 compliant
SSD	eMMC flash 4 GB SDHC interface
RTC	Battery on the Carrier is required
Power Requirement	+5V ± 5% @ 800mA
Size	70 x 70 mm
Board Thickness	1.2 mm ± 0.1mm
Operating Temperature	-40°C ~ 85°C
Operation Humidity	10% ~ 95%, non-condensing

I/O

Graphics	LCD supported, up to 24-bit TTL RGB modes and 24-bit system mode
Ethernet	Dual ports 10/100 Mbps Ethernet
Audio	Mic-in/Line-out on carrier board
COM	4 x COM ports 3 x TX/RX/RTS/CTS (2 RS232 and 1 RS-422/485), 1 x TX/RX 3.3V TTL
USB	1 OTG client, and 1 host
I^2C	2
GPIO	8 interface, up to 400 kbps
SPI	Yes
CAN	2 ports

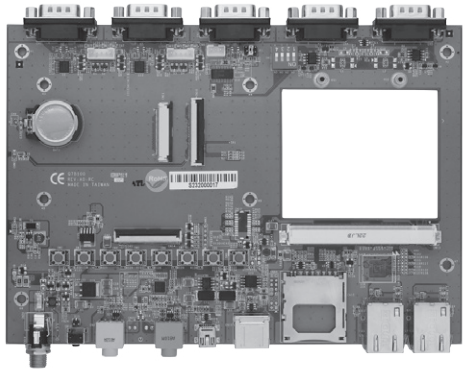
Ordering Information

Standard	
Q7M100-287	Q7M100 with Freescale iMX-287 SoC, 128MB memory, 4 GB eMMC and 10/100Mbps Ethernet, audio and CAN

Optional	
Q7M100-100-EVK	Evaluation Kit Board

Q7M100-100-EVK

Q7M100-100-EVK with i.MX287 454 MHz (Industrial) SoC,128 MB Memory, 4 GB eMMC, 10/100Mbps Ethernet, Audio, CAN with 4.3 inch panel, BSP



▲ Q7B100

Features

- Ultra low power consumption ARM9
- High flexibility Qseven v1.2 compliant design
- 5 UART
- 2 CAN
- 24-bit TTL LCD
- 10/100 Mbps Ethernet
- Linux 2.6.35

System

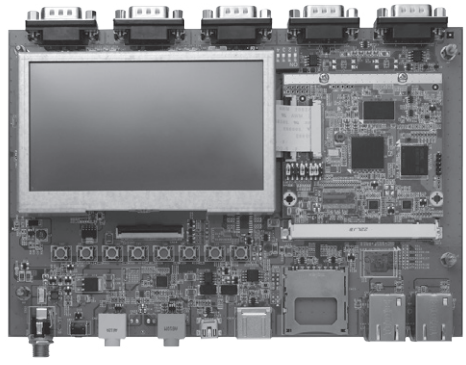
Processor	On Q7M100 SoM
System Memory	On Q7M100 SoM
OS	Linux kernel 2.6.35
RTC	Battery on the Baseboard is required
Power Requirement	+5V ± 5%, 5A
Size	200 x 140 mm
Board Thickness	1.6 mm ± 0.15mm
Operation Humidity	10% ~ 95%, non-condensing

I/O

Graphics	1 x 24-bit TTL LCD
Ethernet	2 x RJ-45 for 10/100 Mbps
Audio	2 x Audio connector on the rear I/O with MIC-in and Headphone
COM	4 x COM with TX/RX/RTS/CTS (one with 3.3V TTL level) 1 x Console Port
USB	1 x OTG client and 1 x USB 2.0
I^2C	2 x I^2C Interface
CAN	2 x D-Sub 9-pin male connectors
Keypad	8
Storage	1 x SD/MMC socket, 1 x SATA connector
Touch	4-wire touch screen controller

Ordering Information

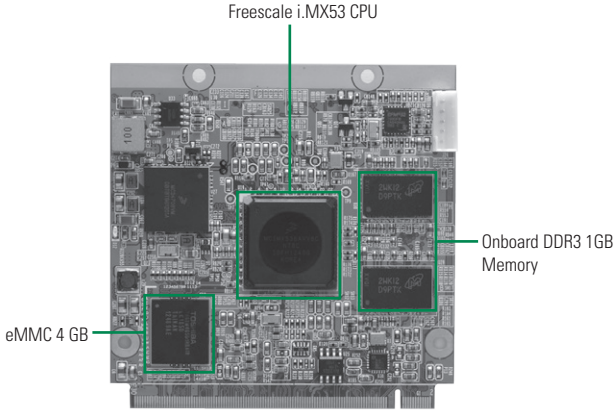
Standard	
Q7M100-100-EVK	Evaluation Kit Board



▲ Q7M100-100-EVK

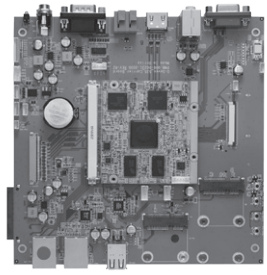
Q7M110

Q7M110 with i.MX535 1 GHz (Consumer) SoC, 1 GB Memory, 4 GB eMMC, 10/100Mbps Ethernet, Audio, CAN



Features

- Ultra low power consumption Cortex™-A8 (0°C ~ 60°C)
- High flexibility Qseven v1.2 compliant design
- 1 CAN
- 24-bit TTL LCD
- LVDS/HDMI 1080p
- Linux2.6.35/Android2.3.3
- 10/100 Mbps Ethernet
- Audio



▲ Q7M110-110-EVK

System

Processor	Freescale i.MX53 Series SoC with ARM Cortex™-A8 CPU 1GHz
System Memory	On-board DDR3 1GB
OS	Linux kernel 2.6.35 , Android 2.3.3
Storage	eMMC flash 4 GB SDIO interface SATA interface
RTC	Battery on the Baseboard is required
Power Requirement	+5V, 1A
Size	70 x 70 mm
Board Thickness	1.2 mm ± 0.1mm
Operating Temperature	0°C ~ 60°C
Operation Humidity	10% ~ 95%, non-condensing

I/O

Graphics	1 x VGA, 1 x Dual channel 24-bit LVDS 1 x HDMI 1080p, 1 x 24-bit TTL signal
Ethernet	1 x 10/100 Mbps
Audio	MIC-in/headphone
USB	1 x OTG client and 1 x USB 2.0
I^2C	2 x I^2C Interface
SPI	Yes
CAN	1 x 2.0B protocol-compatible Controller Area Network (CAN) via Qseven MXM interface
GPIO	8
UART	1 x TX/RX/RTS/CTS, 1 x TX/RX, 1 x Full function (9 PIN)

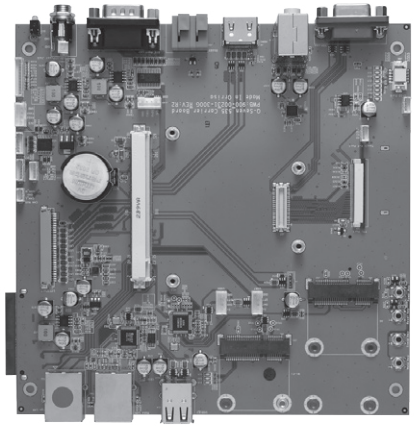
Ordering Information

Standard	
Q7M110-535-C (P/N:S38Q11020E)	Q7M110 with Freescale iMX535 1GHz (Consumer) SoC, 1GB Memory, 4 GB eMMC, 10/100 Mbps Ethernet, audio and CAN

Optional	
Q7B110-110-EVK	Evaluation Kit Board
Q7M110-536-A	Q7M110 with Freescale iMX536 800GHz (Automotive) SoC, 1GB Memory, 4 GB eMMC, 10/100 Mbps Ethernet, audio and CAN

Q7M110-110-EVK

Q7M110-110-EVK with i.MX535 1GHz (Consumer) SoC, 1 GB Memory, 4 GB eMMC, 10/100 Ethernet, Audio, CAN, BSP



▲ Q7B110

Features

- Ultra low power consumption Cortex™-A8
- High flexibility Qseven v1.2 compliant design
- 1 CAN 2.0B
- 24-bit TTL LCD
- LVDS/HDMI 1080p
- Linux2.6.35/Android2.3.3
- 10/100 Mbps Ethernet
- Audio

System

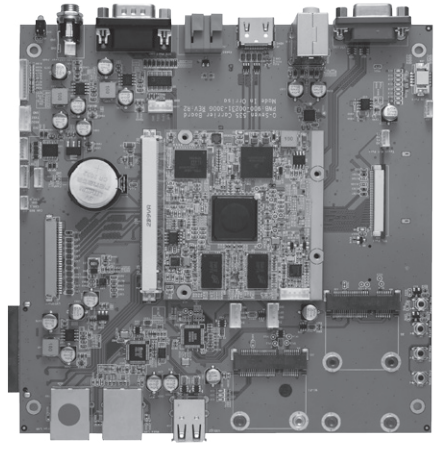
Processor	On Q7M110 SoM
System Memory	On Q7M110 SoM
OS	Linux kernel 2.6.35 , Android 2.3.3
RTC	Battery on the Baseboard is required
Power Requirement	+12V ± 5% 2A
Size	170mm x 170mm
Board Thickness	1.6 mm ± 0.15mm
Operation Humidity	10% ~ 95%, non-condensing

I/O

Graphics	1 x VGA, 1 x Dual channel 24-bit LVDS 1 x HDMI 1080p, 1 x 24-bit TTL LCD
Ethernet	2 x RJ-45 for 10/100 Mbps
Audio	MIC-in/headphone
USB	4 x USB 2.0 ports and 1x OTG
I^2C	1
CAN	1
Button	Reset/Power/Sleep/Wake
Storage	1 x SD/MMC socket, 1 x SATA connector
Touch	4-wire R-type touch screen controller
COM	1 x RS-232 (Full Function), 1 x RS-485 (TX/RX), 1 x Console port
Mini Card	1 x Full size (with SIM), 1 x half size
SPI	Yes

Ordering Information

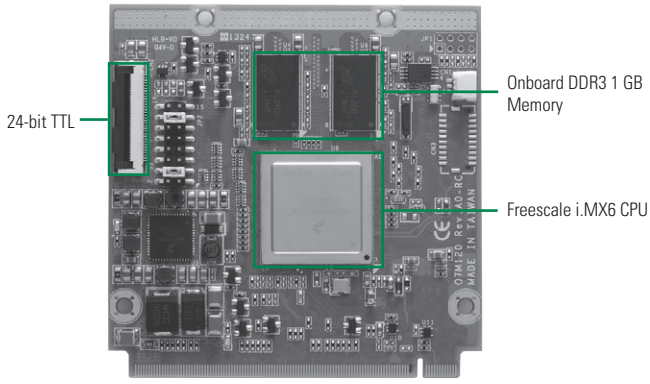
Standard	
Q7M110-110-EVK	Evaluation Kit Board



▲ Q7M110-110-EVK

Q7M120

Q7M120 with Quad/DualLite 800 MHz (Industrial) SoC, 1 GB Memory, 4 GB eMMC, Gigabit Ethernet, Audio, CAN



Features

- Ultra low power consumption Cortex™-A9
- High flexibility Qseven v2.0 compliant design
- 2 CAN
- 24-bit TTL signal
- LVDS/HDMI 1080P
- 10/100/1000 Mbps Ethernet
- Linux 3.0.35/Android 4.3
- Audio

System

Processor	Freescale i.MX6 Series SoC with Quad/DualLite/Solo ARM Cortex™-A9 CPU 800 MHz/ 1 GHz (only Solo)
System Memory	On-board DDR3 1 GB
OS	Linux kernel 3.0.35, Android 4.3
Storage	eMMC flash 4 GB, SDIO interface SATA interface (Quad cores CPU)
RTC	Battery on the Baseboard is required
Power Requirement	+5V, 1A
Size	70 x 70 mm
Board Thickness	1.2 mm ± 0.1mm
Operating Temperature	-40°C ~ +85°C (Industrial)
Operation Humidity	10% ~ 95%, non-condensing

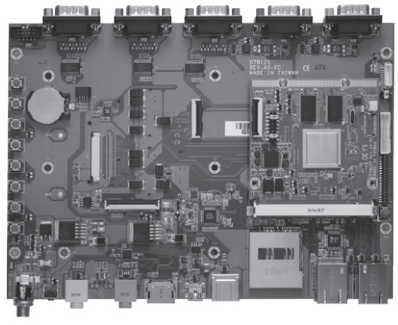
I/O

Graphics	1 x 24-bit TTL signal 2 x Signal channel 24-bit LVDS 1 x HDMI 1080P
Ethernet	1 x 10/100/1000 Mbps
Audio	Mic-in/Headphone
COM	4 x COM with TX/RX/RTS/CTS (one with 3.3V TTL level) 1 x Console port
USB	1 x OTG client and 1 x USB 2.0
I^2C	3 x I^2C Interface
SPI	Yes
CAN	2 ports as 2.0B protocol-compatible Controller Area Network (CAN) interfaces
GPIO	8 button-detect
PCIe	1 x PCIe x1

Ordering Information

Standard	
Q7M120- DualLite-I (P/N:E38Q120100)	Q7M120 with Freescale iMX6 DualLite 800 MHz (Industrial) SoC, 1 GB Memory, 4 GB eMMC, 10/100/1000 Mbps Ethernet, audio, and CAN
Q7M120- Quad-I (P/N:E38Q120102)	Q7M120 with Freescale iMX6 Quad 800 MHz (Industrial) SoC, 1 GB Memory, 4 GB eMMC, 10/100/1000 Mbps Ethernet, audio, and CAN

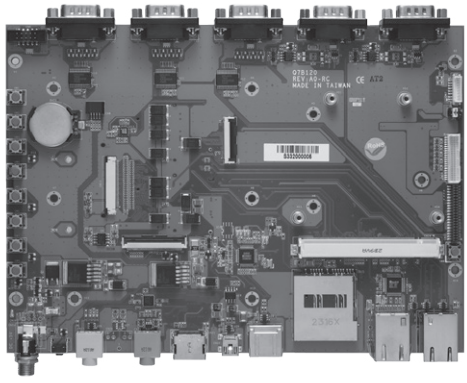
Optional	
Q7M120-120-EVK DualLite-I	Evaluation Kit Board
Q7M120-120-EVK Quad-I	Evaluation Kit Board
Q7M120-Quad-T	Q7M120 with Freescale iMX6 Quad 1 GHz (Automotive) SoC, 1 GB Memory, 4 GB eMMC, 10/100/1000 Mbps Ethernet, audio, and CAN
P/N: 5078Q120100E	Q7M120 Heatspread (-40 °C ~70 °C)
P/N: 5078Q120200E	Heatsink (-40 °C ~75 °C)



▲ Q7M120-120-EVK

Q7M120-120-EVK

Q7M120-120-EVK with Quad/DualLite 800 MHz (Industrial) SoC,1 GB Memory, 4 GB eMMC, Gigabit Ethernet, Audio, CAN, BSP



▲ Q7B120

Features

- Ultra low power consumption Cortex™-A9
- High flexibility Qseven v2.0 compliant design
- 2 CAN 2.0B
- 18/24-bit TTL LCD
- LVDS/HDMI 1080P
- 10/100/1000 Mbps Ethernet
- Linux3.0.35/Android4.3
- Audio

System

Processor	On Q7M120 SoM
System Memory	On Q7M120 SoM
OS	Linux kernel 3.0.35, Android 4.3
RTC	Battery on the Baseboard is required
Power Requirement	+5V ± 5%, 5A
Size	210 x 150 mm
Board Thickness	1.6 mm ± 0.15mm
Operation Humidity	10% ~ 95%, non-condensing

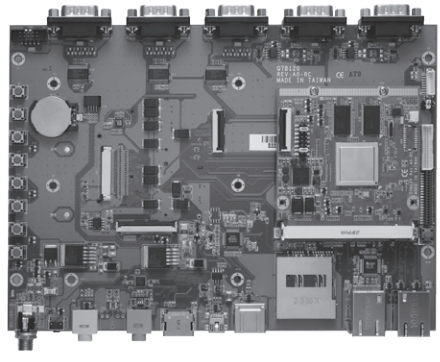
I/O

Graphics	1 x 18/24-bit TTL LCD 1 x HDMI 1080P 1 x Dual channel 24-bit LVDS
Ethernet	1 x RJ-45 for 10/100 Mbps 1 x RJ-45 for 10/100/1000 Mbps
Audio	MIC-in and Headphone
COM	4 x COM with TX/RX/RTS/CTS (one with 3.3V TTL level) 1 x Console port
USB	1 x OTG client and 1 x USB 2.0
I^2C	3 x I^2C Interface
CAN	2
Keypad	8
Storage	1 SD/MMC socket, 1 SATA connector
Touch	4-wire touch screen controller
Mini Card	2 Full size (with SIM)

Ordering Information

Standard	
Q7M120-120-EVK DualLite-I	Evaluation Kit Board
Q7M120-120-EVK Quad-I	Evaluation Kit Board

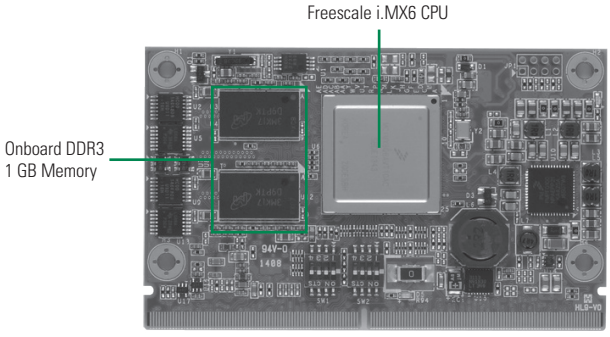
Optional	
P/N: 5078Q120100E	Q7M120 Heatspread (-40 °C ~70 °C)
P/N: 5078Q120200E	Heatsink (-40 °C ~75 °C)



▲ Q7M120-120-EVK

SCM120

SCM120 with Quad/DualLite 800 MHz (Industrial) SoC, 1 GB Memory, 4 GB eMMC, Gigabit Ethernet, Audio, CAN



Features

- Ultra low power consumption Cortex™-A9
- High flexibility SMARC v1.0 compliant design
- 2 CAN 2.0B
- 24-bit TTL signal
- LVDS/HDMI 1080P
- 10/100/1000 Mbps Ethernet
- Linux3.0.35/Android4.3
- Audio

System

Processor	Freescale i.MX6 Series SoC with Quad/DualLite ARM Cortex™-A9 CPU 800 MHz
System Memory	On-board DDR3 1GB
OS	Linux kernel 3.0.35, Android 4.3
Storage	eMMC flash 4 GB, SDIO interface, SATA interface (Only Quad Support)
RTC	Battery on the Baseboard is required
Power Requirement	+3V~+5.25V
Size	82 x 50 mm
Board Thickness	1.2 mm ± 0.1mm
Operating Temperature	-40°C ~ +85°C (Industrial)
Operation Humidity	10% ~ 95%, non-condensing

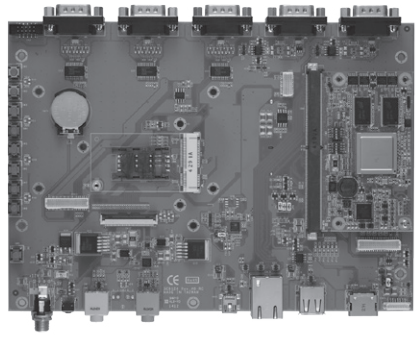
I/O

Graphics	1 x 24-bit TTL signal 1 x Dual channel 24-bit LVDS 1 x HDMI 1080P
Ethernet	1 x 10/100/1000 Mbps Ethernet
Audio	Mic-in/Headphone
COM	3 x COM with TX/RX/RTS/CTS 1 x Console port
USB	1 x OTG client and 1 USB 2.0
I^2C	4 x I^2C Interface
SPI	2
CAN	2 ports
GPIO	8
PCIe	1 x PCIe
Camera	1 x MIPI v1.0, 2 x Lane 1 x PCAM 8-bit

Ordering Information

Standard	
SCM120-DualLite-I	SCM120 with Freescale iMX6 DualLite 800 MHz (Industrial) SoC, 1 GB Memory, 4 GB eMMC, 10/100/1000 Mbps Ethernet, audio, and CAN
SCM120-Quad-I	SCM120 with Freescale iMX6 Quad 800MHz (Industrial) SoC, 1 GB Memory, 4 GB eMMC, 10/100/1000 Mbps Ethernet, audio, CAN and SATA

Optional	
SCM120-120-EVK DualLite-I	Evaluation Kit Board
SCM120-120-EVK Quad-I	Evaluation Kit Board
P/N: 5078S120100E	SCM120 Heatspread (-40 °C ~70 °C)
P/N: 5078Q120200E	Heatsink (-40 °C ~75 °C)



▲ SCM120-120-EVK