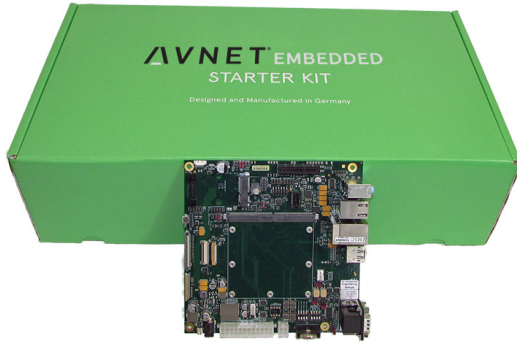


MSC SM2S-SK-AL-EP1

SMARC 2.0 Starterkit for Small-size E3900 Modules



170 x 170



Description

The SMARC 2.0 Starter Kit for SMARC modules with the Intel Atom E3900 processors is based on a Mini-ITX SMARC 2.0 carrier board MSC SM2S-MB-EP1 and contains all necessary products to quickly enable the user to run and evaluate the SM2S-AL module range.

The kit does not contain a SMARC module in order to give the user greater flexibility as to which particular module version and CPU speed variant is desired.

As part of the SMARC 2.0 Starterkit, two heatsinks will be supplied (one for Atom-based modules and one for Pentium/Celeron-based modules). A power supply with cable kit is also included for convenience.

Direct screen output on a PC monitor is possible using the on-board DisplayPort output. As an option to the Starter Kit several suitable LCD kits of various resolutions and sizes are available upon request.

Highlights

- SMARC 2.0 carrier board in Mini-ITX format with socket for SMARC 2.0 modules
- Heatsinks suitable for all module variants of the SM2S-AL module family
- 12V power supply and cable kit included for immediate operation of the Starterkit
- Bootable Linux installation in Flash, ready-to-run
- DP and HDMI graphics output
- LVDS graphics output on standard 30-pin connector; backlight connector includes adjustable backlight voltage and dimming
- Ethernet (10/100/1000 LAN) connector
- SATA, 4x USB 2.0 Host, USB Host/Client, UART, SD-Card socket
- Getting Started manual
- Optional TFT kits available

Technical Data - MSC SM2S-SK-AL-EP1

Technology	SMARC 2.0
Formfactor	Mini-ITX
Storage Interfaces	1x SATA-II (3Gps) connector
USB	2x USB 3.0 host port 2x USB 2.0 host port 1x USB 2.0 OTG port (MicroUSB) 1x USB 2.0 on Mini PCI Express slot
Serial Interfaces	1x RS232 (UART0) on DB9 connector with 2-wire hand shake 1x RS232 (UART1) on pin header w/o hand shake
Bus Interfaces	PCI Express lanes from module can be connect to either 1x PCI Express x4 Gen.2 slot or 1x Mini PCI Express x1 Card slot 1x CAN 2.0B on DB9 connector 1x CAN 2.0B on pin header 1x eSPI connector SPI, SMBus, I2C, and GPIO on pin header
Display Interfaces	DisplayPort connector HDMI connector 40-pin eDP connector LVDS on Jili30 connector with EEPROM for display data and backlight connector MIPI CSI-2 camera interface on 15pin FFC connector
Network Interface	10/100/1000BASE-T Ethernet on RJ45 connector
Audio Interface	Audio codec, routed to three audio jacks
Miscellaneous	4-pin fan connector, PWM controlled by module Socket for CR2032 type RTC battery (3V) Serial EEPROM for board data Serial EEPROM for LVDS display data SPI Boot Flash, socket Power and Reset button Configuration switches/jumper
Feature Highlights	SMARC™ 2.0 carrier board for full and short size modules Support of listed carrier board features and interfaces depends on used module
Power Requirement	12V Power supply contained in Starterkit
Environment	Temperature Range: 0°C ... +60°C operating -20°C ... +85°C storage Humidity: 5 ... 90% (operating, non condensing) 5 ... 90% (storage, non-condensing)
Dimensions	170 x 170 mm
Certificates	UL / CE

Cooling	Heatsinks for Small-size modules included
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Carrier	MSC SM2-MB-EP1
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Order Reference - MSC SM2S-SK-AL-EP1

Order Number	Description	Reference	Cat
70253	Starterkit for SMARC Small Size modules with Intel Atom E39xx (Apollo Lake) processor. Includes MSC SM2-MB-EP1 Baseboard, Heatsinks and Power Supply. The Starterkit does not include the SMARC module. Please order your choice of MSC SM2F-AL module separately.	MSC SM2S-SK-AL-EP1-KIT001	PV

Accessories

Order Number	Description	Reference
10.1" Displaykit		
78879	Displaykit suitable for all COM Carrier Boards and all COM Starterkits. Comprises 10.1" WXGA LCD with PCAP Touch Sensor and Touch Controller. Includes all cables required to connect to COM Carrier Boards (LVDS, B/L & Touch).	MSC DIS-AM1280800-101-KIT SETPAC
12.1" Displaykit		
78880	Displaykit suitable for all COM Carrier Boards and all COM Starterkits. Comprises 12.1" WXGA LCD with PCAP Touch Sensor and Touch Controller. Includes all cables required to connect to COM Carrier Boards (LVDS, B/L & Touch)	MSC DIS-AM1280800-121-KIT SETPAC
5.0" Displaykit		
81871	Displaykit suitable for all COM Carrier Boards and all COM Starterkits. Comprises 5.0" WVGA LCD with PCAP Touch Sensor and Touch Controller. Includes all cables required to connect to COM Carrier Boards (LVDS, B/L & Touch)	MSC DIS-AM800480-050-KIT SETPAC
7" Displaykit		
78911	Displaykit suitable for all COM Carrier Boards and all COM Starterkits. Comprises 7.0" WVGA LCD with PCAP Touch Sensor and Touch Controller. Includes all cables required to connect to COM Carrier Boards (LVDS, B/L & Touch)	MSC DIS-AM800480-070-KIT SETPAC

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