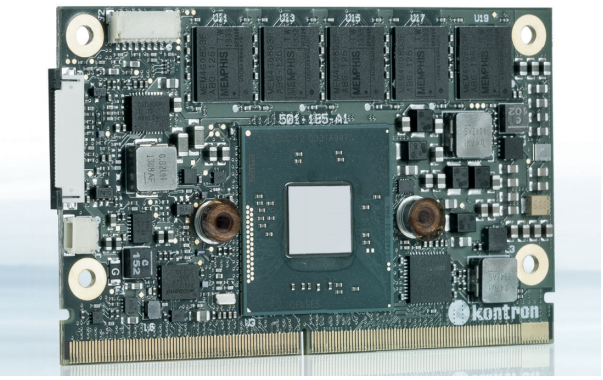
COM-51004 SMARC-sXBTi



Intel ATOM 3800 Series SOC

up to 8GB DDR3L memory down (ECC optional)

1x USB 3.0, 3x USB 2.0 (optional 1 OTG)

eMMC Flash, SDIO, 2x SATA

Industrial Temperature Operations

SMARC - Smart Mobile Architecture by SGET - small size

Intel® Atom™ E3845, E3827, E3826, E3825 or E3815

Intel® HD Graphics (Gen7)

HD Audio and I2S

5x I2C

2x SPI

Camera Interface (2x MIPI CSI)

3x COM port (2x serial, 1x 2-wire)

1x USB 3.0

2x USB 2.0

LVDS Single Channel 18/24 bit or eDP

HDMI or DP

3x PCIe x1

1x SATA 3Gb/s

Intel i210IT Gigabit LAN, 10/100/1000 MBit Ethernet

The SMARC-sXBTi Computer-on-Modules has been developed to comply with the SGET specification and is equipped with Intel® Atom™ processor E3800 series and up to 8 GB RAM, optional with ECC. They support the extended temperature range of -40°C to +85°C, measure only 82mm x 50mm and have an especially low-profile design thanks to the use of edge card connectors. Nevertheless, there is still enough space for up a 64GB on-board SSD to store OS and application data. A highlight of the pin-out is MIPI-compliant serial camera interface (MIPI CSI = Mobile Industry Processor Interface Camera Serial Interface). The powerful Intel® Gen 7 Graphics are carried out via HDMI 1.4 with up to 2560x1600 and 60 Hz and LVDS (optional eDP) to the display. Further interfaces include 1x GbE LAN via Intel® Ethernet Controller I210, 1x USB 3.0 and 2x USB 2.0, amongst others. Customer-specific extensions can be implemented via 2 SDIO and 3 PCIe x1 lanes with 5GT/s.

The SMARC™ standard was developed especially for new modules with ARM- and SOC-processors and is characterized by the extremely flat build of its form factor. It is based on the MXM 3.0 connector with 314 pins and a construction height of just 4.3 millimeters and it thus allows robust and flatly constructed designs with a cost-effective card edge connector. The connector is also available in a shock- and vibration-resistant version for rough environmental conditions. Furthermore, the standard integrates dedicated interfaces for the latest ARM and SOC processors which not only means LVDS, 24-bit RGB and HDMI support but also support of embedded DisplayPort for future designs. In addition, and for the first time, dedicated camera interfaces are being incorporated into a COM standard. OEMs profit from minimized design effort and bill of material costs. SMARC™ defines two different module sizes in order to offer a high level of flexibility regarding different mechanical requirements: a short modules measuring 82 mm x 50 mm and a full-size module measuring 82 mm x 80 mm.

Specifications

SOM Type:
Microcontroller SODIMM Modules

Processor

Processor:
Intel® Atom™ E3800 Series SOC
Clock Speed:
1.91 GHz
Real Time Clock:
Processor Misc.:
Intel® Atom™ E3800 Series

E3845 Quad Core 1.91GHz/10W

E3827: Dual Core 1.75GHz/8W

E3826: Dual Core 1.46GHz/7W

E3825: Dual Core 1.33GHz/6W

E3815: Single Core 1.46GHz/5W

Memory

BIOS/ Bootloader:
Phoenix UEFI
Primary Flash:
Onboard eMMC (Optional)
Memory Misc.:

Up to 8GB DDR3L memory onboard

Primary I/O

GPIO:
12x GPIO
Disk Interface:
SATA II
Video Out:
LVDS
eDP
HDMI or DP
SPI:
2x SPI
Audio:
HD Audio
Ethernet:
Intel i210IT Gigabit Ethernet
USB:
1x USB 3.0 & 3x USB 2.0
Serial Ports:
3x COM
I2C:
5x I2C
Watchdog:
Primary I/O Misc.:
Intel® HD Graphics (Gen7)

Secondary I/O

LPT Port:
Keypad:
PS/2:
Secondary I/O Misc.:
Camera Interface (2x MIPI CSI)

Analog on

A/D:
D/A:

Dimensions

Dimensions:
3.23 × 1.96 in
Form Factor:
314-pin SODIMM
Dimensions Misc.:
Dimensions 50mm x 82mm

Power Requirements

Power Misc.:
Supply Voltage 3.0V - 5.25V

ACPI 5.0

Environmental

Low Operating Temperature:
-40 C
High Operating Temperature:
85 C
Upper Operating Humidity:
93%
Environmental Misc.:
Heat-spreader and heat-sink are required for proper heat dissipation. The heat-spreader was developed as a thermal interface, so that users can easily develop a proper cooling solution to fit their specific application needs. The heat-spreader and commonly available adhesive heat-sinks should work as an interim bench-top development solution. As the COM-51004 CPUs only have a 5-10W TPD (based on cpu used) adequate cooling solutions can easily be found off the shelf.

Pricing

COM-51004-151-R
51004-1000-15-1, SMARC-sXBTi, E3815 2x1.45Ghz, 1GB DDR3, 1xSATA, 3xCOM, 1xUSB3, 3xUSB2, 1xGbE, HDMI or DP (-40~85C)
$229.00
Order:
0
Parent Product:
COM-51004
Base Product:
COM-51004
COM-51004-132-R
51004-2000-13-2, SMARC-sXBTi, E3825 2x1.33GHz, 2GB DDR3, 1xSATA, 3xCOM, 1xUSB3, 3xUSB2, 1xGbE, HDMI or DP (-40~85C)
$262.00
Order:
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Parent Product:
COM-51004
Base Product:
COM-51004
COM-51004-152-R
51004-2000-15-2, SMARC-sXBTi, E3826 2x1.46GHz, 2GB DDR3, 1xSATA, 3xCOM, 1xUSB3, 3xUSB2, 1xGbE, HDMI or DP (-40~85C)
$270.00
Order:
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Parent Product:
COM-51004
Base Product:
COM-51004
COM-51004-172-R
51004-1040-17-2, SMARC-sXBTi 1M/4S, E3827 2x1.75GHz, 1GB DDR3, 4GB eMMC, 1xSATA, 3xCOM, 1xUSB3, 3xUSB2, 1xGbE, HDMI or DP (-40~85C)
$280.00
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Parent Product:
COM-51004
Base Product:
COM-51004
COM-51004-1722R
51004-2000-17-2, SMARC-sXBTi, E3827 2x1.75GHz, 2GB DDR3, 1xSATA, 3xCOM, 1xUSB3, 3xUSB2, 1xGbE, HDMI or DP (-40~85C)
$279.00

Order:
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Parent Product:
COM-51004
Base Product:
COM-51004
COM-51004-194-R
51004-2000-19-4, SMARC-sXBTi, E3845 4x1.91GHz, 2GB DDR3, 1xSATA, 3xCOM, 1xUSB3, 3xUSB2, 1xGbE, HDMI or DP (-40~85C)
$296.00
Order:
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Parent Product:
COM-51004
Base Product:
COM-51004
COM-51004-1944R
51004-4016-19-4, SMARC-sXBTi 4M/16S, E3845 4x1.91GHz, 4GB DDR3, 16GB MLC eMMC, 1xSATA, 3xCOM, 1xUSB3, 3xUSB2, 1xGbE, HDMI or DPv (-40~85C)
$399.00
Order:
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Parent Product:
COM-51004
Base Product:
COM-51004
Non-Stock NCNR:
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