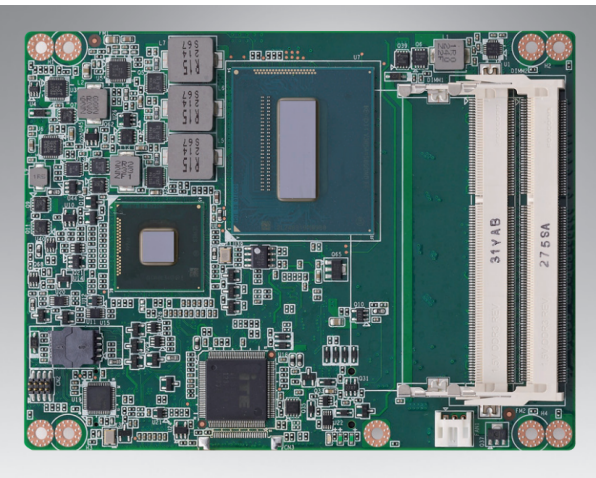


SOM-5894



4th Generation Intel® Core™ Processors H-series + QM87

up to 16 GB DDR3L two SODIMM sockets

fTriple displays with outstanding graphics performance

fMultiple high speed interface, SATA III, USB3.0 and PCIe Gen3

Board Information

Pin Definition: PICMG COM.0 R2.1 Type 6 pin-out definition

Form Factor: PICMG COM.0 R2.1 Basic Module 125 x 95 mm

System Information

CPU: 4th Generation Intel® Core Processor

Chipset: Intel® QM87 Express Chipset

Memory: 2 SODIMM Socket for DDR3L-1600/1333, up to 16GB

BIOS: AMI UEFI 128Mbit SPI BIOS

Power management: Supports power saving modes including Normal / Standby / Suspend modes. ACPI 2.0 compliant

Display

Graphic Core: Intel® HD Graphic 4600 supports DX11.1, OGL4.0, OCL1.2, and MPEG2, AVC/H.264, VC-1 HW decode/encode/transcode acceleration

VGA: Resolution up to 1920 x 1200

LVDS: Supports single/dual channel 18/24-bit, resolution up to 1920 x 1200 @

60 Hz

HDMI/DVI/DP: Supports 3 ports HDMI (default), DVI, or DP multiplexed

Resolution:

– HDMI up to 4096 x 2160 @24 Hz

– DVI up to 1920 x 1080 @ 60 Hz

– DP up to 4096 x 2160 @ 24 Hz

Dual Display:

– VGA + LVDS,

– VGA + HDMI/DVI/DP

– LVDS + HDMI/DVI/DP

– HDMI/DVI/DP + HDMI/DVI/DP

Triple Display:

– LVDS + DP + DP/HDMI

– LVDS + DP + VGA

– LVDS + HDMI + HDMI

– DP + DP + DP

– DP + HDMI +HDMI

– DVI + DP + HDMI

– VGA + DP + HDMI

Expansion Interface

PCI Express x16: Supports default 1 port PCIe x16 compliant to PCIe Gen3* (8.0 GT/s) specification, several configurable combinations may need BOM modifies.

PCI Express x1: Support default 7 ports PCIe x1 compliant to PCIe Gen2* (5.0 GT/s) specification, several configurable combinations may need BIOS modifies.

Audio Interface: Intel HD Audio interface

LPC Bus

SMBus

I2C Bus: 100 KHz (up to 400 KHz with BIOS modification. Please contact

Advantech sales or FAE for more details)

SPI: Supports SPI BIOS only

I/O

Ethernet: Intel I217LM Gigabit LAN supports 10/100/1000 Mbps Speed

SATA: Supports 4 ports SATA Gen3 (6 Gb/s)

USB Interface: Supports 4 ports USB3.0, 8 ports USB 2.0

Serial Port: Supports 2 ports 2-wire serial port

Express Card: 2 ports

Panel Control: Supports panel backlight on/off control, brightness control

Thermal Protection: Supports thermal shutdown or CPU throttling

Watchdog Timer: 65536 level timer interval, from 0~65535 sec, multi-level, multi-option watchdog timer

Smart Fan: 1 port on Module, 1 port down to carrier board

GPIO: 8-bit GPIO

Hardware Monitor: Vin, 5 VSB, CMOS

TPM: BOM option, default not available

SOM-5894 is a COM-Express Basic module with pin-out Type 6 that fully complies with the PICMG (PCI Industrial Computer Manufacturers Group) COM.0 R2.1 specification. The CPU module incorporates an Intel 4th Generation Core i processor, PCH QM87, and other peripheral chips. The latest Intel processor uses 22nm and 3D Trigate transistor technologies that brings 13% performance improvement over previous versions, and integrates a powerful Intel HD Graphic 4600 as well as DX11.1, OpenCL1.2, OpenGL4.0 API enabling better display configurations with no bandwidth limitations. With Intel PCH QM87, SOM-5894 provides advanced interfaces such as PCI Express Gen 3, SATA Gen 3, and USB3.0. Moreover, PCIe x16 can be used in combination of x4 or x8 to make it more flexible.

With top performance and lower power consumption, various extensions and I/O interfaces, SOM-5894 is suitable for computing intensive design, thermal sensitive design, graphics/media insensitive design, and I/O demanding applications.

Specifications

SOM Type:

COM Express Modules

Processor

4th Generation Intel® Core™ Processors H-series

Clock Speed:

2.7 GHz

Real Time Clock:

Processor Misc.:

4th Generation Intel® Core™ Processors H-series

i7-4700EQ, Quad Core 2.4 GHz/47W

i5-4400E, Dual Core 2.7 GHz/37W

i5-4402E, Dual Core 1.6 GHz/25W

i3-4100E, Dual Core 2.4 GHz/37W

i3-4102E, Dual Core 1.6 GHz/25W

2000E, Dual Core 2.2 GHz/37W

2002E, Dual Core 1.5 GHz/25

Memory
BIOS/Bootloader:

AMI EFI

Memory Misc.:

DDR3L, 1.35V, 1333/1600 MHz

Dual 204P SODIMM 16 GB max

Primary I/O
GPIO:

8x GPIO

Disk Interface:

4x SATA III supports RAID 0/1/5/10

Video Out:

VGA

LVDS and 3x DDI (HDMI/DVI/DP)

Audio:

Intel HD Audio

Ethernet:

Intel i217 Gigabit

USB:

4x USB 3.0 & 8x USB 2.0

Serial Ports:

2x COM (2-Wire)

Watchdog:

Secondary I/O
LPC/UART:

Keypad:

PS/2:

Analog on
A/D:

D/A:

Dimensions
DIMENSIONS:

4.92 × 3.74 in

Form Factor:

COM Express Basic

Dimensions Misc.:

Dimensions 125 x 95 mm (4.92" x 3.74")

Power Requirements

Power Misc.:

Type ATX: Vin, VSB, AT: Vin

Supply Voltage Vin: 8.5(9-5%)~20V(19+5%), VSB: 5V±5%, RTC Battery: 2.0-3.3V

Power Consumption (Max.) (8G DDR3L 1600) i7-4700EQ: +12V @ 42.12W

Power Consumption (Idle) (8G DDR3L 1600) i7-4700EQ: +12V @ 8.52W

Environmental

Low Operating Temperature:

0 C

High Operating Temperature:

60 C

Upper Operating Humidity:

95%

Environmental Misc.:

Optional operating Temperature range- -40 ~ 85° C

Pricing

SOM-5894C3-S7A

SOM-5894C3-S7A1E, COMe-T6, i3-4102E 2x1.6GHz, 4xSATA, 2xCOM, 4xUSB3, 8xUSB2, GbE, 3xDDI, VGA, 2xLVDS

\$665.00

Order:

0

Parent Product:

SOM-5894

Base Product:

SOM-5894

SOM-5894C3-U5A

SOM-5894C3-U5A1E, COMe-T6, i3-4100E 2x2.4GHz, 4xSATA, 2xCOM, 4xUSB3, 8xUSB2, GbE, 3xDDI, VGA, 2xLVDS

\$665.00

Order:

0

Parent Product:

SOM-5894

Base Product:

SOM-5894

SOM-5894C3-U5B

SOM-5894C3-U5B1E, COMe-T6, i3-4100E 2x2.4GHz, ECC, 4xSATA, 2xCOM, 4xUSB3, 8xUSB2, GbE, 3xDDI, VGA, 2xLVDS

\$665.00

Order:

0

Parent Product:

SOM-5894

Base Product:

SOM-5894

SOM-5894C3Z2-S7A

SOM-5894C3Z2-S7A1E, COMe-T6, i3-4102E 2x1.6GHz, 4xSATA, 2xCOM, 4xUSB3, 8xUSB2, GbE, 3xDDI, VGA, 2xLVDS (-40~85C)
\$1,035.00
Order:
0
Parent Product:
SOM-5894
Base Product:
SOM-5894
SOM-5894C3Z-S7A
SOM-5894C3Z-S7A1E, COMe-T6, i3-4102E 2x1.6GHz, 4xSATA, 2xCOM, 4xUSB3, 8xUSB2, GbE, 3xDDI, VGA, 2xLVDS (-20~80C)
\$925.00
Order:
0
Parent Product:
SOM-5894
Base Product:
SOM-5894
SOM-5894C5-S6A
SOM-5894C5-S6A1E, COMe-T6, i5-4402E 2x1.6GHz, 4xSATA, 2xCOM, 4xUSB3, 8xUSB2, GbE, 3xDDI, VGA, 2xLVDS
\$825.00
Order:
0
Parent Product:
SOM-5894
Base Product:
SOM-5894
SOM-5894C5-S6B
SOM-5894C5-S6B1E, COMe-T6, i5-4402E 2x1.6GHz, ECC, 4xSATA, 2xCOM, 4xUSB3, 8xUSB2, GbE, 3xDDI, VGA, 2xLVDS
\$825.00
Order:
0
Parent Product:
SOM-5894
Base Product:
SOM-5894
SOM-5894C5-U7A
SOM-5894C5-U7A1E, COMe-T6, i5-4400E 2x2.7GHz, 4xSATA, 2xCOM, 4xUSB3, 8xUSB2, GbE, 3xDDI, VGA, 2xLVDS
\$825.00
Order:
0
Parent Product:
SOM-5894
Base Product:
SOM-5894
SOM-5894C5Z2-S6A
SOM-5894C5Z2-S6A1E, COMe-T6, i5-4402E 2x1.6GHz, 4xSATA, 2xCOM, 4xUSB3, 8xUSB2, GbE, 3xDDI, VGA, 2xLVDS (-40~85C)
\$1,260.00
Order:
0
Parent Product:
SOM-5894
Base Product:
SOM-5894

SOM-5894C5Z2-S6B
SOM-5894C5Z2-S6B1E, COMe-T6, i5-4402E 2x1.6GHz, ECC, 4xSATA, 2xCOM, 4xUSB3, 8xUSB2, GbE, 3xDDI, VGA, 2xLVDS (-40~85C)
\$1,260.00
Order:
0
Parent Product:
SOM-5894
Base Product:
SOM-5894
SOM-5894C5Z-S6A
SOM-5894C5Z-S6A1E, COMe-T6, i5-4402E 2x1.6GHz, 4xSATA, 2xCOM, 4xUSB3, 8xUSB2, GbE, 3xDDI, VGA, 2xLVDS (-20~80C)
\$1,150.00
Order:
0
Parent Product:
SOM-5894
Base Product:
SOM-5894
SOM-5894C5Z-S6B
SOM-5894C5Z-S6B1E, COMe-T6, i5-4402E 2x1.6GHz, ECC, 4xSATA, 2xCOM, 4xUSB3, 8xUSB2, GbE, 3xDDI, VGA, 2xLVDS (-20~80C)
\$1,150.00
Order:
0
Parent Product:
SOM-5894
Base Product:
SOM-5894
SOM-5894C7-U4A
SOM-5894C7-U4A1E, COMe-T6, i7-4700EQ 4x2.4GHz, 4xSATA, 2xCOM, 4xUSB3, 8xUSB2, GbE, 3xDDI, VGA, 2xLVDS
\$990.00
Order:
0
Parent Product:
SOM-5894
Base Product:
SOM-5894
SOM-5894C7-U4B
SOM-5894C7-U4B1E, COMe-T6, i7-4700EQ 4x2.4GHz, ECC, 4xSATA, 2xCOM, 4xUSB3, 8xUSB2, GbE, 3xDDI, VGA, 2xLVDS
\$990.00
Order:
0
Parent Product:
SOM-5894
Base Product:
SOM-5894
SOM-5894CR-S5A
SOM-5894CR-S5A1E, COMe-T6, Celeron 2002E 2x1.5GHz, 4xSATA, 2xCOM, 4xUSB3, 8xUSB2, GbE, 3xDDI, VGA, 2xLVDS
\$485.00
Order:
0
Parent Product:

SOM-5894

Base Product:

SOM-5894

SOM-5894CR-U2A

SOM-5894CR-U2A1E, COMe-T6, Celeron 2000E 2x2.2GHz, 4xSATA, 2xCOM, 4xUSB3, 8xUSB2, GbE, 3xDDI, VGA, 2xLVDS

\$485.00

Order:

0

Parent Product:

SOM-5894

Base Product:

SOM-5894

Non-Stock NCNR:

0

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