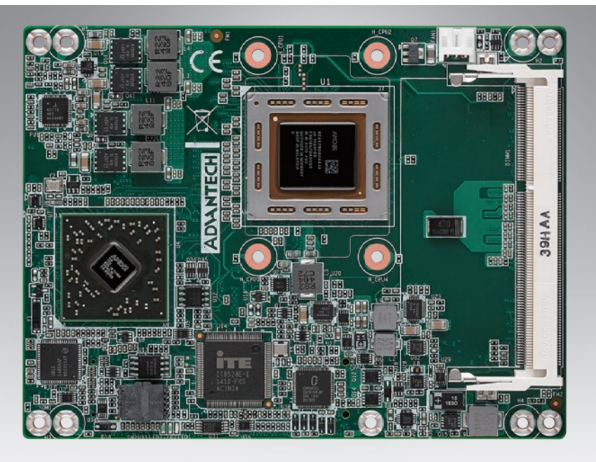


SOM-5893



AMD R-Series APU Bald Eagle

UP To 16 GB DDR3

Four Independent Displays

Outstanding graphics performance

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: Second-generation AMD embedded R-series APU

Chipset: AMD A77E FCH

Memory: 2 SODIMM socket for DDR3L-1600, up to 16GB

BIOS: AMI UEFI 64Mbit SPI BIOS

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

Display

Graphics Core: AMD Radeon HD9000 GPU supports DX11.1, OpenCL 1.2, OpenGL 4.2, and H.264 and MPEG4 decoding.

VGA: Up to 1920 x 2000 resolution

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

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

Resolution:

- HDMI 1.4. supports up to 4096 x 2160 @ 30Hz, or 1920 x 1200 @ 60Hz
- DisplayPort 1.2. supports up to 4096 x 2160 @ 30Hz
- DVI Single-Link 1920 x 1200 @ 60Hz

Display Boot Up Order:

- First: LVDS (always first priority by default)
- Second: DDIs
- Third: VGA

Dual Displays: (in DOS/BIOS mode)

- LVDS + any DDI
- LVDS + VGA
- Any DDI + VGA (after LVDS function is disabled)

Triple Displays: (after booting to OS)

- LVDS + any 1 DDI + VGA
- LVDS + any 2 DDIs
- Any 2 DDIs + VGA (after LVDS function is disabled)
- Any 3 DDIs (after LVDS function is disabled)

Quad Displays: (after booting to OS)

- LVDS + any 2 DDIs + VGA
- LVDS + any 3 DDIs
- Any 3 DDIs + VGA (after LVDS function is disabled)

Expansion Interface

PCI Express x16: Supports one PCIe x16 port (default) compliant to PCIe Gen3* (8.0 GT/s) specifications. Other combinations can be configured using the BIOS Setup utility.

Note! PCIe x16 can be reconfigured to 1 DDI + PCIe x8 + PCIe x4 without hardware modifications.

PCI Express x1: Supports seven PCIe x1 ports (default) compliant to PCIe Gen2* (5.0 GT/s) specifications. Other combinations can be configured using the BIOS Setup utility

Audio Interface: HD audio interface

LPC Bus

SMBus

I2C Bus: Up to 400KHz

SPI: Supports SPI BIOS only

I/O

Ethernet: Intel i211AT Gigabit LAN supports speeds of 10/100/1000 Mbps

SATA: Four SATA Gen3 (600 Gb/s) ports

USB Interface: Four USB3.0 and eight USB 2.0 ports

Serial Port: Two 2-wire serial ports

Express Card: Two ports

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

Thermal Protection: Supports thermal shutdown and APU throttling

Watchdog Timer: Multi-level, multi-option watchdog timer with 65536-level timer interval (0 ~ 65535 seconds)

Smart Fan: One port on module, one port on carrier board

GPIO: 8-bit GPIO

Hardware Monitor: Vin, 5VSB, CMOS

TPM: BOM option, default not available

The CPU is EOL for this product, please see [this article for more information](#)

SOM-5893 is a COM-Express basic pin-out Type 6 module that complies with the PICMG (PCI Industrial Computer Manufacturers Group) COM.0 R2.1 specification. The CPU module comprises a second-generation AMD embedded R-series APU, FCH A77E, and other peripheral chips to provide COM-specific functionalities. The latest AMD APU supports Heterogeneous System Architecture (HSA).

SOM-5893 can support four independent symmetrical displays (LVDS, DDI, and VGA) of up to 4K2K DDI resolution, enabling users to set diverse combinations of simultaneous displays. With a next-generation AMD Radeon HD9000 graphics card, DX11.1 support, OpenCL 1.2,

OpenGL 4.2, and a H.264 and MPEG4 decoder, this module offers enhanced media effects and outstanding 3D performance. Built-in high-speed I/O ports include USB 3.0 and SATAIII for transmitting big data. The PEG x16 lane with up to Gen3 compliance (8 GT/s bit rate) and 7 PCIe x1 can be configured according to users' applications via the BIOS Setup utility.

The high performance, embedded platform-level power consumption, and diverse extensions and I/O interfaces of SOM-5893 make it suitable for computing-intensive, thermally sensitive, graphics/media-intensive designs, and I/O-demanding applications.

Specifications

SOM Type:

COM Express Modules

Processor

AMD R-Series APU Bald Eagle

Clock Speed:

2.7 GHz

Real Time Clock:

Processor Misc.:

AMD R-Series APU Bald Eagle

RX-427BB, Quad Core 2.7GHz/ 35W

RX-225FB, Dual Core 2.2GHz/ 17W

Memory

BIOS/ Bootloader:

AMI uEFI

Primary I/O

8x GPIO

Disk Interface:

4x SATA III

Video Out:

VGA

LVDS & 2x DDI ports support configurable HDMI/DVI/DP

Audio:

HD Audio

Ethernet:

Intel® i211AT Gigabit Ethernet

USB:

4x USB 3.0 & 8x USB 2.0

Serial Ports:

2x COM (2-Wire)

Watchdog:

Primary I/O Misc.:

3x DDI Optional

Secondary I/O

Keypad:

PS/2:

Analog on

ALU.

D/A:

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

Type ATX: Vin, VSB, AT : Vin

Supply Voltage Vin: 8.5 (9-5%) ~ 20V (18+10%), VSB: 5V±5%, RTC Battery: 2.0-3.3V

Power Consumption (Max.) Max 7.1A ; RMS 3.3A

Power Consumption (Idle) 1.4A

Environmental

Low Operating Temperature:

0 C

High Operating Temperature:

60 C

Upper Operating Humidity:

95%

Pricing

SOM-5893RG-U2

SOM-5893RG-U2A1E, COMe-T6, RX-225FB 2x2.2GHz, 4xSATA, 2xCOM, 4xUSB3, 8xUSB2, GbE, 2xDP, 3xVGA/LVDS/DVI

\$525.00

Order:

0

Parent Product:

SOM-5893

Base Product:

SOM-5893

SOM-5893RG-U7

SOM-5893RG-U7A1E, COMe-T6, RX-427BB 4x2.7GHz, 4xSATA, 2xCOM, 4xUSB3, 8xUSB2, GbE, 2xDP, 3xVGA/LVDS/DVI

\$719.00

Order:

0

Parent Product:

SOM-5893

Base Product:

SOM-5893

Non-Stock NCNR:

0

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