

NEW



Features

- AMD® Embedded R-Series APU with A77E Fusion Controller Hub
- Up to 16GB Dual Channel DDR3L at 1600/1333 MHz
- Three DDI ports and one LVDS port supporting 4 independent displays
- Seven PCIe x1, one PCIe x16
- GbE, four SATA 6 Gb/s, four USB 3.0 and four USB 2.0
- Supports Smart Embedded Management Agent (SEMA) functions

Specifications

Core System

CPU	AMD® Embedded R-Series APU (codename: Bald Eagle) RX-427BB 2.7GHz (3.6GHz boost), 35W (4C/8CU) RX-425BB 2.5GHz (3.4GHz boost), 35W (4C/6CU) RX-225FB 2.2GHz (3.0GHz boost), 17W (2C/3CU)
Memory	Dual Channel non-ECC 1600/1333 MHz DDR3L memory up to 16GB in dual SODIMM socket
Embedded BIOS	AMI EFI with CMOS backup in 8MB SPI BIOS
Expansion Busses	PCI Express x16 (Gen3) or 2x8 or 1x8 plus 1x4 6 PCI Express x1 (AB): lanes 0/1/2/3/4/5 1 PCI Express x1 (CD): lane 6 LPC bus, SMBus (system), I ² C (user)
SEMA Board Controller	Supports: Voltage/Current monitoring, power sequence debug support, AT/ATX mode control, logistics and forensic information, flat panel control, general purpose I ² C, failsafe BIOS (dual BIOS), watchdog timer and fan control
Debug Headers	40-pin multipurpose flat cable connector Use in combination with DB-40 debug module Provides BIOS POST code LED, BMC access, SPI BIOS flashing, power testpoints, debug LEDs

Video

GPU Feature Support	AMD® Radeon HD9000, supports 4 independent and simultaneous display combinations of DisplayPort, HDMI, LVDS monitors HW acceleration decoder (UVD4.2), supporting H.264, MPEG2, VC-1, MPEG4 (DivX), WMV9, MVC HW acceleration encoder (UVD4.2), supporting video conferencing, wireless display, H.264, SVC Windows 8, Windows 7, Linux OS support DirectX 11.1, DirectX 10.1, DirectX 10, DirectX 9 support OpenGL 4.2 support OpenCL 1.2, OpenGLES 2.0, OpenCV support AMD® Eyefinity support
Digital Display Interface	DDI1 supporting DisplayPort / HDMI / DVI DDI2 supporting DisplayPort / HDMI / DVI DDI3 supporting DisplayPort / HDMI / DVI
LVDS	Single/dual channel 18/24-bit LVDS from eDP (two lanes)

Audio

Chipset	AMD® Audio Coprocessor (ACP) integrated in R-Series APU
Audio Codec	Located on carrier Express-BASE6 (ALC886 standard support)

Ethernet

Interface	10/100/1000 BASE-T connection Intel® MAC/PHY Intel® i210LM (MAC/PHY) Ethernet controller
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I/O Interfaces

USB	4x USB 3.0 (USB 0,1,2,3) and 4x USB 2.0 (USB 4,5,6,7)
SATA	4 ports SATA 6Gb/s (SATA0, SATA1, SATA2, SATA3)
Serial	2 UART ports COM1/2 with console redirection
GPIO	4 GPO and 4 GPI

Super I/O

Supported on carrier if needed (standard support for W83627DHG-P)

TPM (optional)

Chipset	Atmel AT97SC3204
Type	TPM 1.2

Power

Standard Input	ATX = 12V±5% / 5Vsb ±5% or AT = 12V±5%
Wide Input	ATX = 8.5~20 V / 5Vsb ±5% or AT = 8.5 ~20V
Management	ACPI 4.0 compliant, Smart Battery support
Power States	C0, C1, C1E, C6, CC6, S0, S3, S5, S5 ECO mode (Wake on USB S3, WOL S3/S5)
ECO mode	Supports deep S5 mode for power saving

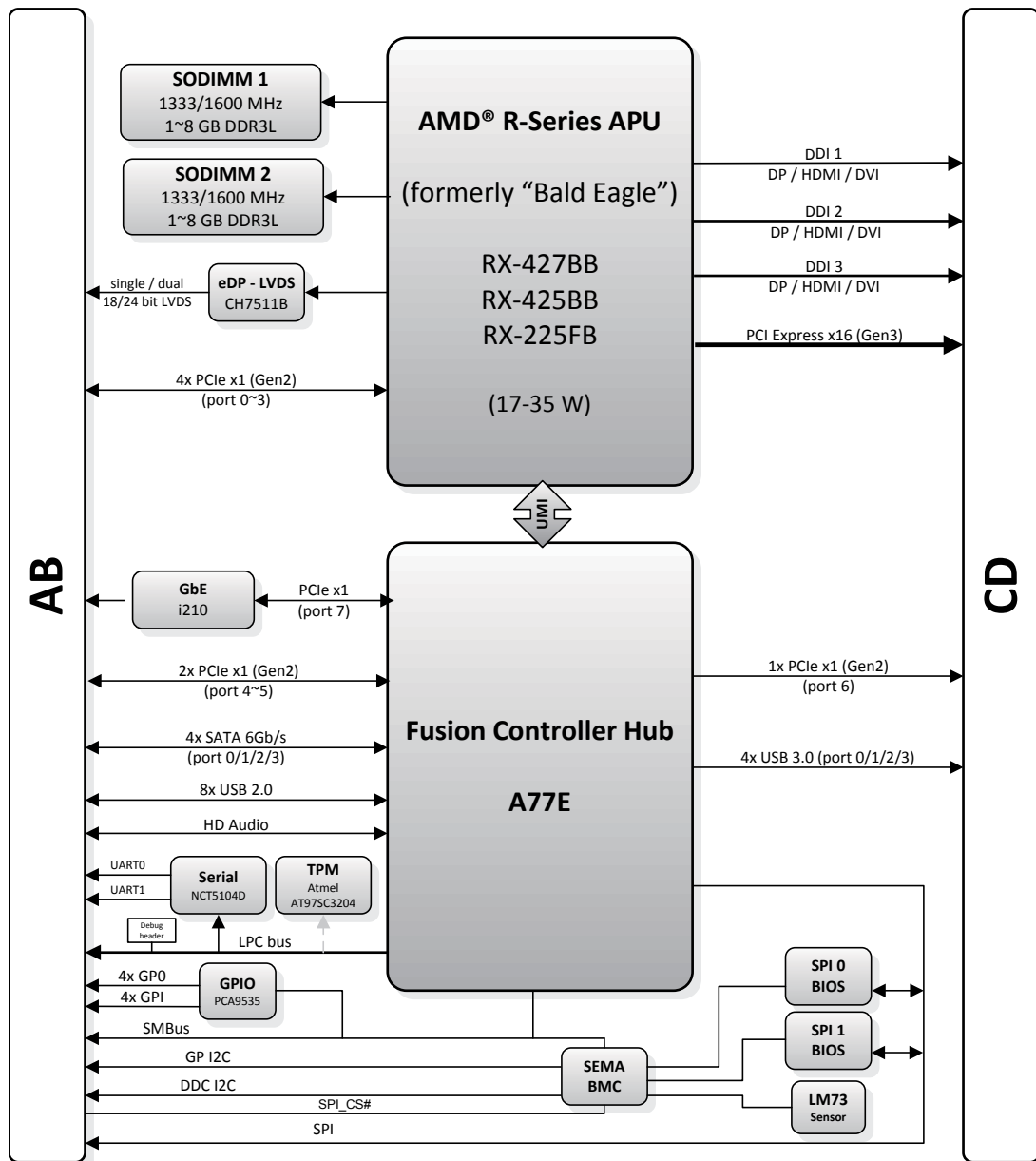
Mechanical and Environmental

Form Factor	PICMG COM.0: Rev 2.1 Type 6
Dimension	Basic size: 125 mm x 95 mm
Operating Temperature	Standard: 0°C to 60°C
Humidity	5-90% RH operating, non-condensing 5-95% RH storage (and operating with conformal coating)
Shock and Vibration	IEC 60068-2-64 and IEC-60068-2-27
HALT	Thermal Stress, Vibration Stress, Thermal Shock and Combined Test

Operating Systems

Standard Support	Windows 7/8 32/64-bit, Linux 32/64-bit
Extended Support (BSP)	WES7/8, Linux 32/64-bit

Functional Diagram



Ordering Information

Modules

Model Number	Description/Configuration
Express-BE-RX-427BB	Basic COM Express® Type 6 module with AMD® R-Series APU RX-427BB at 2.7 GHz with Radeon HD9000 graphics
Express-BE-RX-425BB	Basic COM Express® Type 6 module with AMD® R-Series APU RX-425BB at 2.5 GHz with Radeon HD9000 graphics
Express-BE-RX-225FB	Basic COM Express® Type 6 module with AMD® R-Series APU RX-225FB at 2.2 GHz with Radeon HD9000 graphics

Development Tool

Model Number	Description/Configuration
Starter Kit COM Express 6 PLUS	COM Express formfactor starter kit with Express-BASE6 board, power supply, and accessory kit

Accessories

Model Number	Description/Configuration
Heat Spreaders	
HTS-BE-B	Heatspreader for Express-BE with threaded standoffs for bottom mounting
HTS-BE-BT	Heatspreader for Express-BE with threaded standoffs for bottom mounting
Passive Heatsinks	
THS-BE-BL	Low profile heatsink for Express-BE with threaded standoffs for bottom mounting
THS-BE-BTL	Low profile heatsink for Express-BE with threaded standoffs for top mounting
THSH-BE-BL	High profile heatsink for Express-BE with threaded standoffs for bottom mounting
Active Heatsink	
THSF-BE-B	High profile heatsink with fan for Express-BE with threaded standoffs for bottom mounting

Note: All specifications are subject to change without further notice.