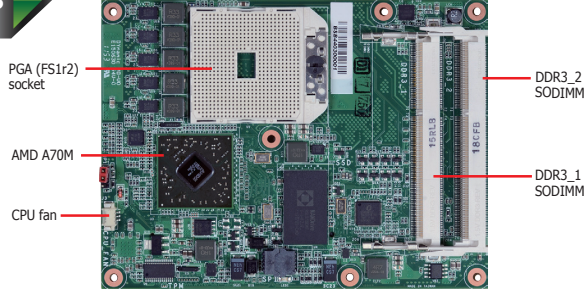




**AMD® Embedded R-Series  
COM Express® Basic**

**CM901-B**

R-Series

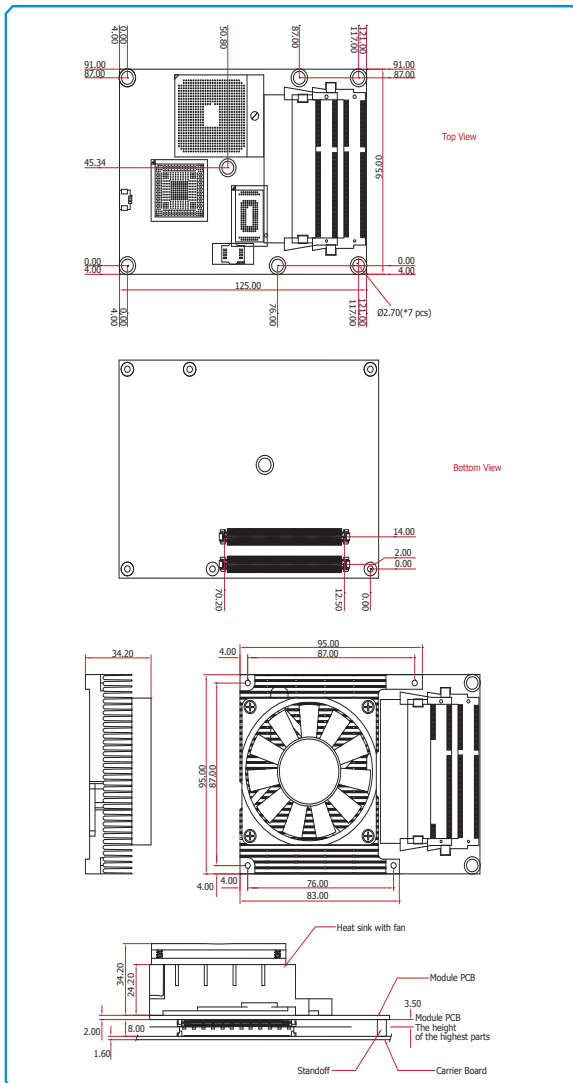


**Features**

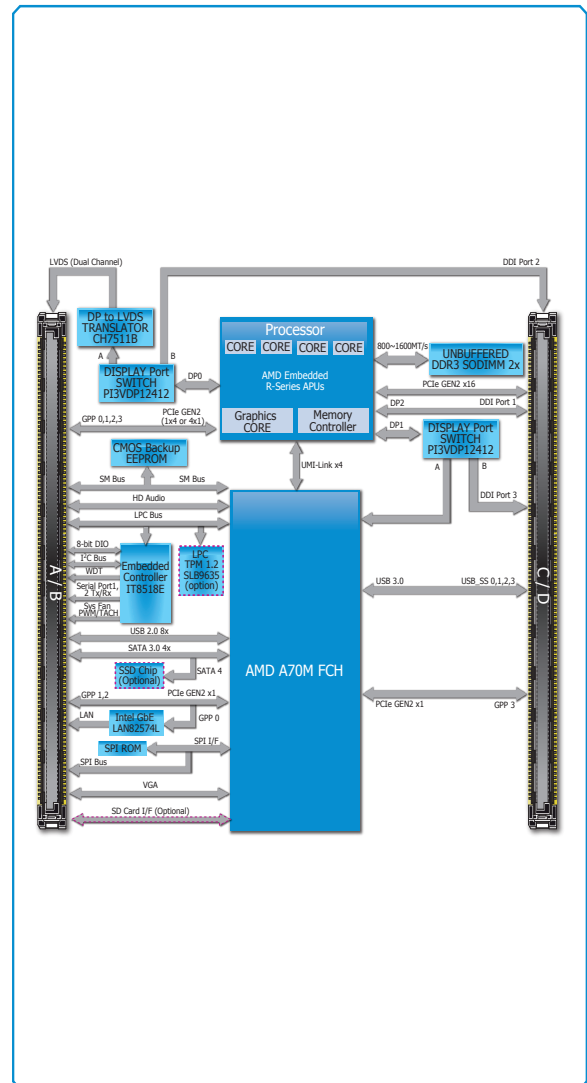
MEMORY	2 DDR3 SODIMM up to 16GB
EXPANSION	1 PCIe x16, 7 PCIe x1 1 LPC, 1 SMBus, 1 I <sup>2</sup> C, 2 serial 3 Independent Displays DP, DP/LVDS, DP/VGA 8 USB: 4 USB 3.0/2.0, 4 USB 2.0 4 SATA 3.0 8-bit DIO
LAN	1 LAN
DIMENSIONS	COM Express® R2.1 Basic, Type 6 95mm x 125mm (3.74" x 4.9")



**Mechanical Drawing**



**Block Diagram**





# CM901-B

## Specifications

\* Optional and is not supported in standard model. Please contact your sales representative for more information.

### APU

- AMD® Embedded R-Series APUs
  - : R-464L Quad-core 2.3GHz, 35W
  - : R-460H Quad-core 1.9GHz, 35W
  - : R-272F Dual-core 2.7GHz, 35W
  - : R-268D Dual-core 2.5GHz, 35W
- PGA (FS1r2) socket
- 32nm process technology

### CHIPSET

- AMD® A70M Fusion Controller Hub

### SYSTEM MEMORY

- Two 204-pin DDR3 SODIMM sockets
- Supports DDR3 (1.5V), LVDDR3(1.35V), ULVDDR3 (1.25V) up to 1600MHz
- Supports dual channel memory interface
- Supports up to 16GB system memory
- DRAM device technologies: 1Gb, 2Gb, 4Gb and 8Gb DDR3 DRAM technologies are supported for x8 and x16 devices, unbuffered, non-ECC

### ONBOARD GRAPHICS FEATURES

- Supports DP, DP/LVDS and DP/VGA interfaces
- VGA: resolution up to 1920x1600 @ 60Hz
- LVDS: Single Channel - 18/24-bit; Dual Channel: 36/48-bit, resolution up to 1920x1200 @ 60 Hz
- DP: resolution up to 4096x2160 @ 30Hz

### ONBOARD AUDIO FEATURES

- Supports High Definition Audio interface

### ONBOARD LAN FEATURES

- Intel® 82574L Gigabit Ethernet controller
- Integrated 10/100/1000 transceiver
- Fully compliant with IEEE 802.3, IEEE 802.3u, IEEE 802.3ab

### SERIAL ATA (SATA) INTERFACE

- Supports 4 Serial ATA interfaces
- 4 SATA 3.0 with data transfer rate up to 6Gb/s
- Integrated Advanced Host Controller Interface (AHCI) controller
- Supports RAID 0/1

### SSD\*

- 4GB/8GB/16GB/32GB
- Write: 30MB/sec (max), Read: 70MB/sec (max)
- SATA to SSD onboard

### USB INTERFACE

- XHCI Host Controller supports up to 4 super speed USB 3.0 ports

### WATCHDOG TIMER

- Watchdog timeout programmable via software from 1 to 255 seconds

### TRUSTED PLATFORM MODULE (TPM)\*

- Provides a Trusted PC for secure transactions
- Provides software license protection, enforcement and password protection

### EXPANSION INTERFACES

- Supports 8 USB 2.0 ports (first 4 USB ports support up to USB 3.0)
- Supports 1 PCIe x16 interface
- Supports 7 PCIe x1 interfaces (the first 4 PCIe x1 can be configured to support PCIe x4)
- Supports LPC interface
- Supports SMBus interface
- Supports I<sup>2</sup>C interface
- Supports 2 serial interfaces (TX/RX)
- Supports 8-bit Digital I/O (4 In, 4 Out)

### DAMAGE FREE INTELLIGENCE

- Monitors APU temperature
- Monitors APU fan speed
- Monitors APU\_VDD/APU\_VDDNB/APU\_VDDIO\_SUS/1V2/1V1 voltages
- Watchdog timer function

### BIOS

- 32Mbit SPI BIOS

### POWER CONSUMPTION

- 31.12 W with R-464L at 2.3GHz and 2x 1GB DDR3 SODIMM

### OS SUPPORT

- Windows XP Professional x86 & SP3 (32-bit)
- Windows 7 Ultimate x86 & SP1 (32-bit)
- Windows 7 Ultimate x64 & SP1 (64-bit)
- Windows 8 Enterprise x86 (32-bit)
- Windows 8 Enterprise x64 (64-bit)

### TEMPERATURE

- Operating: 0°C to 60°C
- Storage: -40°C to 85°C

### HUMIDITY

- 10% to 90%

### POWER

- Input: 12V, 5VSB (optional), VCC\_RTC

### PCB

- Dimensions
  - COM Express® Basic
  - 95mm (3.74") x 125mm (4.9")
- Compliance
  - PICMG COM Express® R2.1, Type 6

### CERTIFICATION

- CE
- FCC Class B
- RoHS

## Ordering Information

Model Name	Part Number	Description
CM901-B	777-CM9011-000G	AMD® Embedded R-Series APUs

## Packing List

• 1 CM901-B board
• 1 DVD

## Optional Items

• COM331-B carrier board kit
• COM101-BAT carrier board kit
• Heat spreader: TBD
• Heat spreader with heat sink and fan: TBD
• Heat sink with fan: TBD

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

### US

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +1 347 719 4508

Support: +1 347 719 4508

1309 Coffeen Ave  
Ste 1200  
Sheridan  
WY 82801  
USA

### EMEA

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +44 (0)1785 879 050

Support: +44 (0)1785 879 050

Unit A5 Douglas Park  
Stone Business Park  
Stone  
ST15 0YJ  
United Kingdom

VAT Number: 120 9546 28

Business Registration Number: 07699660