

AMD Socket S1 COM Express Module

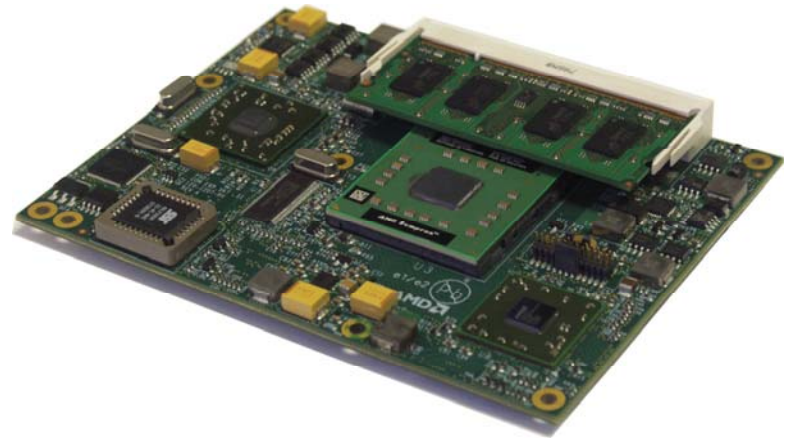


Product Datasheet

COM Express

PDSI's new **AMD Socket S1 COM Express Module (COMX-S1)** is a low cost, compact, embeddable computing core with the capability to drive a broad range of OEM applications. Built around AMD's x86-based Socket S1 processors, it enables 64-bit computing at a progression of performance levels from the ultra low-power AMD Sempron™ 2100+ (perfect for fanless applications) to the dual-core muscle of AMD Turion™ X2 TL62.

The Computer-on-Module design is fully compliant with PICMG COM Express Type 2 specifications, offering a large variety of interfaces to cover the needs of most embedded applications. The AMD M690/SB600 chipset provides I/O versatility, with interfaces for high speed data, audio, high-resolution graphics and more. PDSI's companion COM Express Carrier Board (COMX-CB) provides a plug-and-go platform with physical ports for virtually all of the I/O types supported by the COM Express Module.



Highly Compact Size : 95mm x 125mm (3.74 in x 4.92 in)

The COMX-S1 module offers an economical way to significantly reduce initial platform design time and risk, while also enabling convenient serviceability and future upgradeability – just unplug and update the COM Module while leaving the application-specific I/O carrier in place. Extended availability from PDSi is assured as key components are supported by embedded roadmaps. Reduce total ownership costs with this revolutionary computing platform standard that brings increased flexibility and modularity to higher volume embedded applications.

Key Features

- Supports AMD Socket S1 processor family including:
 - AMD Turion™ 64 X2 dual-core mobile
 - Mobile AMD Sempron™
- Up to 4 GB DDR2 SDRAM
- Video – Dual Ch LVDS, VGA, optional TV Out
- AC '97 audio interface, optional HD Audio
- 4 PCI Express interfaces (x8, x1, x1, x1)
- 8 USB ports
- 4 SATA II ports
- 1 Ethernet port (10/100/1000)
- PICMG COM Express Type 2 compatible pinout
- MicroATX Carrier Board available for rapid startup
- Extended availability assured

Compact, Versatile and Powerful

PDSi's COM Express Module fits a broad range of industries and applications:

- **Industrial** – Embedded Controllers and Computing Platforms, Data Collection and Analysis
- **Medical** – Imaging, Ultrasound, X-Ray, and Diagnostics devices
- **Instrumentation** - Test and Measurement Platforms, Data Logging
- **Gaming** - Entertainment Platforms
- **Retail** - Point of Sale Advertising Kiosks
- **Military and Aerospace** – Portable Tactical Devices, Simulators, Unmanned Vehicles

Processors AMD Socket S1 processors, including:

- AMD Sempron™ 2100+ 1.0 GHz, 8W
- AMD Sempron™ 3500+ 1.8 GHz, 25W
- AMD Sempron™ 3700+ 2.0 GHz, 25W
- AMD Turion™ X2 TL56 1.8 GHz dual core, 31 W
- AMD Turion™ X2 TL62 2.1 GHz dual core, 35 W

Chipset

- Northbridge
- AMD M690E (standard video) or
 - AMD M690T (optional TV Out)
- Southbridge
- ATI SB600

Memory

Up to 4 GB DDR2 667 SDRAM
(200 pin SODIMM)

BIOS

AMI BIOS
User BIOS Flash boot via LPC bus

Hard Disk

4 SATA II ports
1 ATA-133 E-IDE port

CRT Video

Analog VGA (up to 2048x1536)

Flat Panel Video

24-bit dual-channel LVDS display interface

TV Out

Composite Video, S-Video, or Component Video (YPbPr).
(TV Out option uses M690T chipset.)

Audio

AC '97 interface standard
HD Audio option (requires compatible carrier)

EtherNet

1 x GbE (Broadcom BCM5787)

USB

8 USB 2.0 ports

PCIe / PCI

1 PCIe/PEG x 8
3 PCIe x 1
1 PCI 2.1 32 bit / 33 MHz

System Management

SMBus / I²C Bus

Other Features

Suspend States (S0/S3/S4/S5)
WakeOnLAN, LAN Boot

Operating Systems

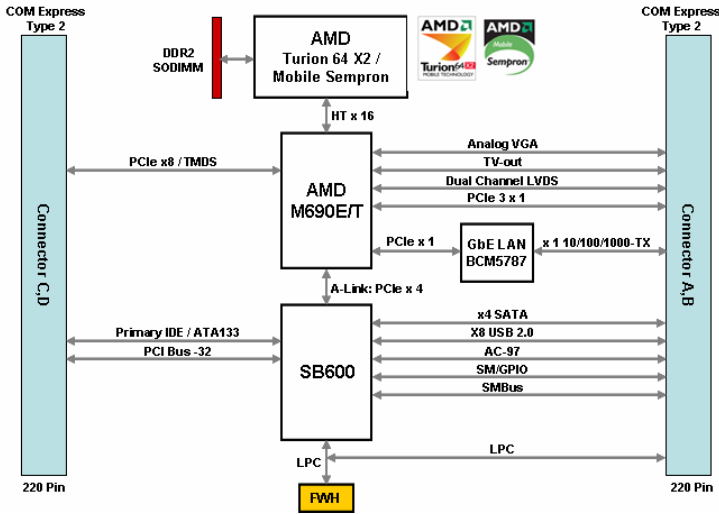
Linux, Windows, Solaris x86

FormFactor/Dimensions

PICMG COM Express Basic, Type 2
95 mm x 125 mm

Temperature & Humidity

Operation : 0 to 50 degC
10% - 90% non-condensing



Ordering Guide	Ordering Part Number (OPN)	Description
To configure OPN:	COMX-S1- 1 1 0 - xx - x	AMD Socket S1 COM Express Module, with:
(1) Confirm Audio Output	<div style="background-color: #ffff00; padding: 2px;">Memory</div> <div style="background-color: #ffcc00; padding: 2px;">Processor</div> <div style="background-color: #00ffff; padding: 2px;">Video Output</div> <div style="background-color: #ff00ff; padding: 2px;">Audio Output</div> <div style="background-color: #00ff00; padding: 2px;">Heatsink</div>	0 512 MB SODIMM
(2) Confirm Video Output		1 1 GB SODIMM
(3) Select Heatsink		2 2 GB SODIMM
(4) Select Processor		3 4 GB SODIMM
(5) Select Memory Size		A1 AMD Sempron™ 2100+ 1.0 GHz, 8W
		B1 AMD Sempron™ 3500+ 1.8 GHz, 25W
		B2 AMD Sempron™ 3700+ 2.0 GHz, 25W
		C1 AMD Turion™ X2 TL56 1.8 GHz dual core, 31W
		C2 AMD Turion™ X2 TL62 2.1 GHz dual core, 35W
		0 Standard video, no TV Out
		T Video with TV Out capability (option – contact PDSi)
		1 Standard AC'97 interface
	H HD Audio (option)	
	0 None (OEM must supply suitable heatsink)	
	P Passive Heatsink – no fan – forced air may be required	
	1 Active Heatsink with 40 mm fan	