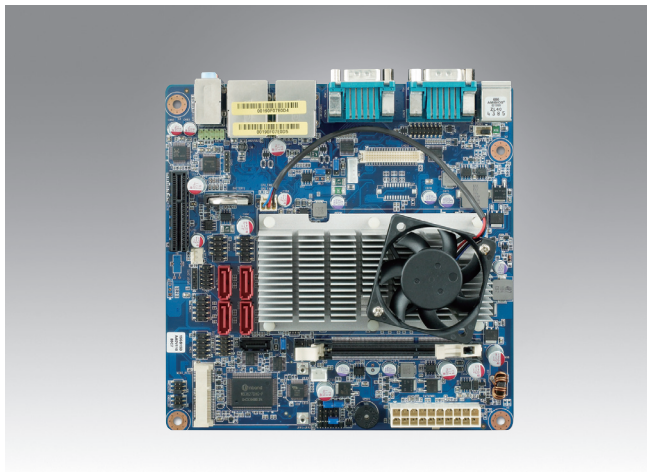


GMB-A55E

AMD® G-Series mini-ITX Motherboard



Features

- The latest AMD G-series APU supports 40nm process technology
- Supports AMD Controller Hub A55E
- AMD Radeon™ HD6320/HD6290 /HD6250 Graphics Engine supports HDMI 1.3a, DirectX 11, OpenGL4.0, dedicated hardware (UVD3.0) for H.264, VC-1, MPEG-2, DivX decode.
- Multiple display I/O supports versatile Dual display functions: HDMI, VGA, 18-bit single channel LVDS
- Dual Realtek RTL8111DL Gigabit LAN
- 1PCIe x4 Gen.2, 1 Mini PCIe
- 5SATA 3.0 (6Gb/s)
- 4COM (2Powered COM), 8 USB2.0



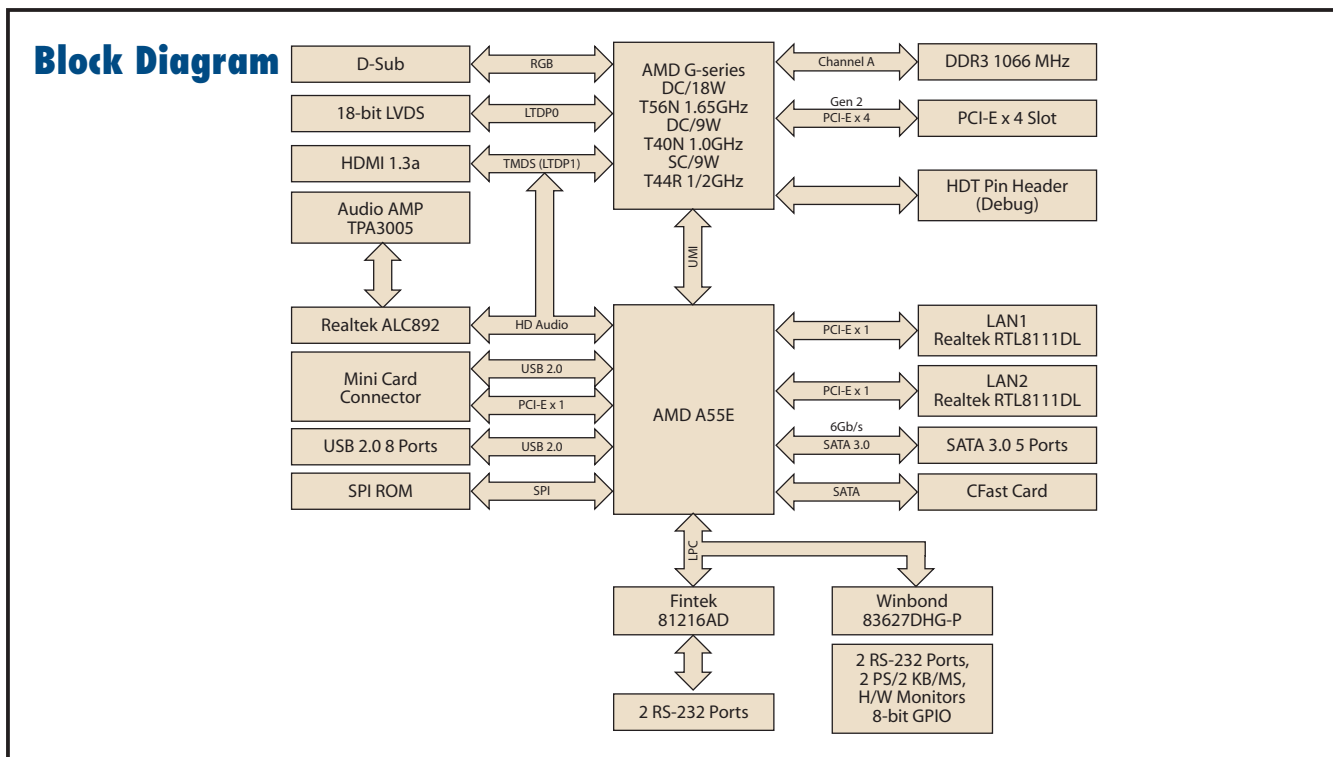
Introduction

The GMB-A55E is a complete AMD embedded platform. The APU is integrated with Radeon™ HD 6320/6290/6250 and supports dual/single core processors. With the mini-ITX form factor, GMB-A55E supports dual displays for flexible output combinations. It has one reserved Mini PCIe slot, which could work with an optional VGA card to support various extended display requirements. A full feature set of I/Os and COMs (8x USB 2.0, 4x COM ports, dual LANs, 5 SATA 3.0) is an ideal replacement for your existing solution.

GMB-A55E provides the best performance-to-cost solution supporting multiple display applications in gaming, amusement, signage, advertisement, kiosk, retail and surveillance.

Specifications

Processor System	APU	AMD G-series T56N 1.65 GHz	AMD G-series T44R 1.2 GHz	AMD G-series T40N 1.0 GHz
	Core Number	2	1	2
	L2 Cache	512 KB x2	512 KB x1	512 KB x2
	Power Consumption	18 W	9 W	9 W
	Package	FT1(413-BGA)		
	Fusion Controller Hub	AMD A55E		
System Memory	Technology	DDR3 1066/1333 (T56N only) (non-ECC support)		
	Socket	1x SODIMM 204 pin/single channel		
	Max. Capacity	4 GB		
Expansion Slot	PCIe x4 Slot (Gen2)	1 slot		
	Mini PCI-E	1 slots		
Integrated 2D/3D Display	Integrated Graphic Controller	AMD Radeon HD 6320 (T56N) AMD Radeon HD6290 (T40N) AMD Radeon HD6250 (T44R)		
	Dual Display	DirectX 11, OpenGL4.0, dedicated hardware (UVD3.0) for H.264, VC-1, MPEG-2, DivX decode VGA+LVDS, VGA+HDMI, LVDS+HDMI		
	VGA	Onboard - T56N (18W) supports up to 2560 x 1600 - T40N/T44R(9W) support up to 1920 x 1200		
	HDMI	Onboard, support HDMI 1.3a & 1080p up to 1920 x 1080		
	LVDS	Onboard, 18-bit single channel LVDS supports up to 1400 x 1050		
	LVDS Backlight	Yes, PWM Control (Backlight adjusted from AMD A55E Controller Hub)		
I/O	MIO	4COM RS-232, 5 SATA 3.0, 2LAN, 1HDMI, 1VGA, 1 LVDS, 1inverter, 1PS/2 Keyboard, 1PS/2 Mouse		
	USB	8 USB 2.0 (4Rear, 4 Internal)		
	GPIO	8-bit General Purpose I/O		
Gigabit Ethernet	LAN1	Realtek RTL8111DL Gigabit LAN		
	LAN2	Realtek RTL8111DL Gigabit LAN		
BIOS	BIOS Core	AMI EFI 2 MB SPI		
Others functions	Super I/O Chipset	Winbond W83627DHG-P		
	Audio Codec	Realtek ALC892, 5.1 Channel HD Audio		
	H/W Status Monitor	Monitoring temperature, voltage and cooling fan status, Auto throttling control when CPU overheats		
	Power state	S3, S4, S5		
	Watchdog Timer	Reset: 1-255 sec/min per step		
	Wake up on LAN or Ring	LAN		
Power	Power Type	ATX (support at AT mode)		
	Power Requirement	+3.3 V 0.47 A	+5 V 1.66 A	+12 V 1.07 A
	Power Connector	20-pin ATX Power Connector		
Environment	Dimension	6.69" x 6.69" (170 x 170) mm		
	Operating Temperature	0 ~ 60° C (32 to 140° F)		
	Operating Humidity	0% to 90% relative humidity, non-condensing		
	Weight	0.96 lbs (0.436 Kg)		



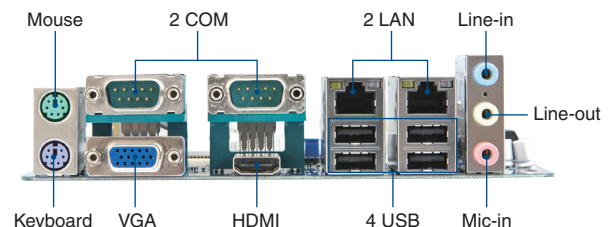
I/O

Rear I/Os

- 1 PS/2 Keyboard
- 1 PS/2 Mouse
- 1 VGA Port
- 1 HDMI Port
- 2 COM RS-232 Ports
- 4 USB 2.0 Ports
- 2 LAN RJ45 Ports
- Audio I/O (3Jacks)

Internal I/O Connectors

- 1 HDT Header
- 1 SPI Connector
- 4 USB Connectors
- 2 COM Port Headers
- 5 SATA Connectors
- 1 CFAST Connectors (only T44R & T40N)
- 1 Front Audio Header
- 1 CPU Fan Connector
- 1 System Fan Connector
- 1 Digital I/O Connector
- 1 LVDS Connector
- 1 VGA Header
- 1 LVDS Backlight Header



Ordering Information

Part Number	APU	Chipset	Memory	HDMI	VGA	COM	GbE LAN	USB 2.0
GMB-A55E-S0A1E	T56N (DC /1.65GHz)	A55E	Non-ECC	1	1	2	2	4

Design & Manufacturing Services

ODM products are designed for customers with consistent orders and specific design requirements. ODM products are subject to minimum annual order quantities and engineering charges. Evaluation units are available without such restrictions. Advantech has a dedicated project team to serve ODM customers.

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