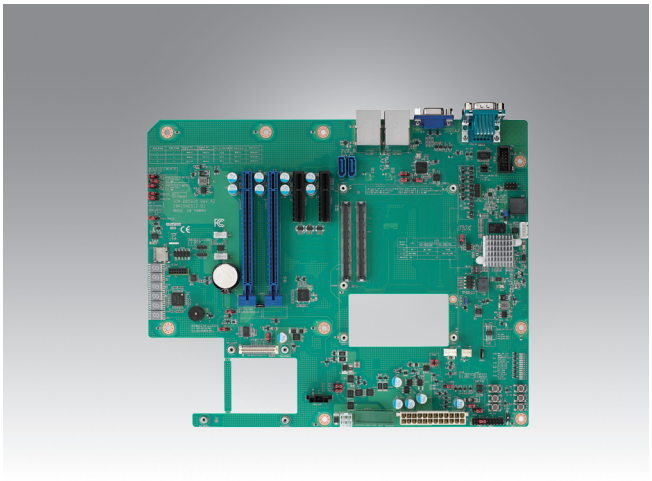
SOM-DB5920

Development Board for COM Express® Type 7 Pin-out Modules



Features

- PICMG COM.0 R 3.0 Type 7 Pin out
- COM Express® Basic/Compact module
- 10 Gigabit Ethernet support by OCP mezzanine card
- Extension: PCIe x16, PCIe x8, 2 PCIe x4
- Integrated BMC supports VGA, Dedicated NIC for IPMI, iKVM
- Visible Debug Utility: BIOS 80 Port and Power State

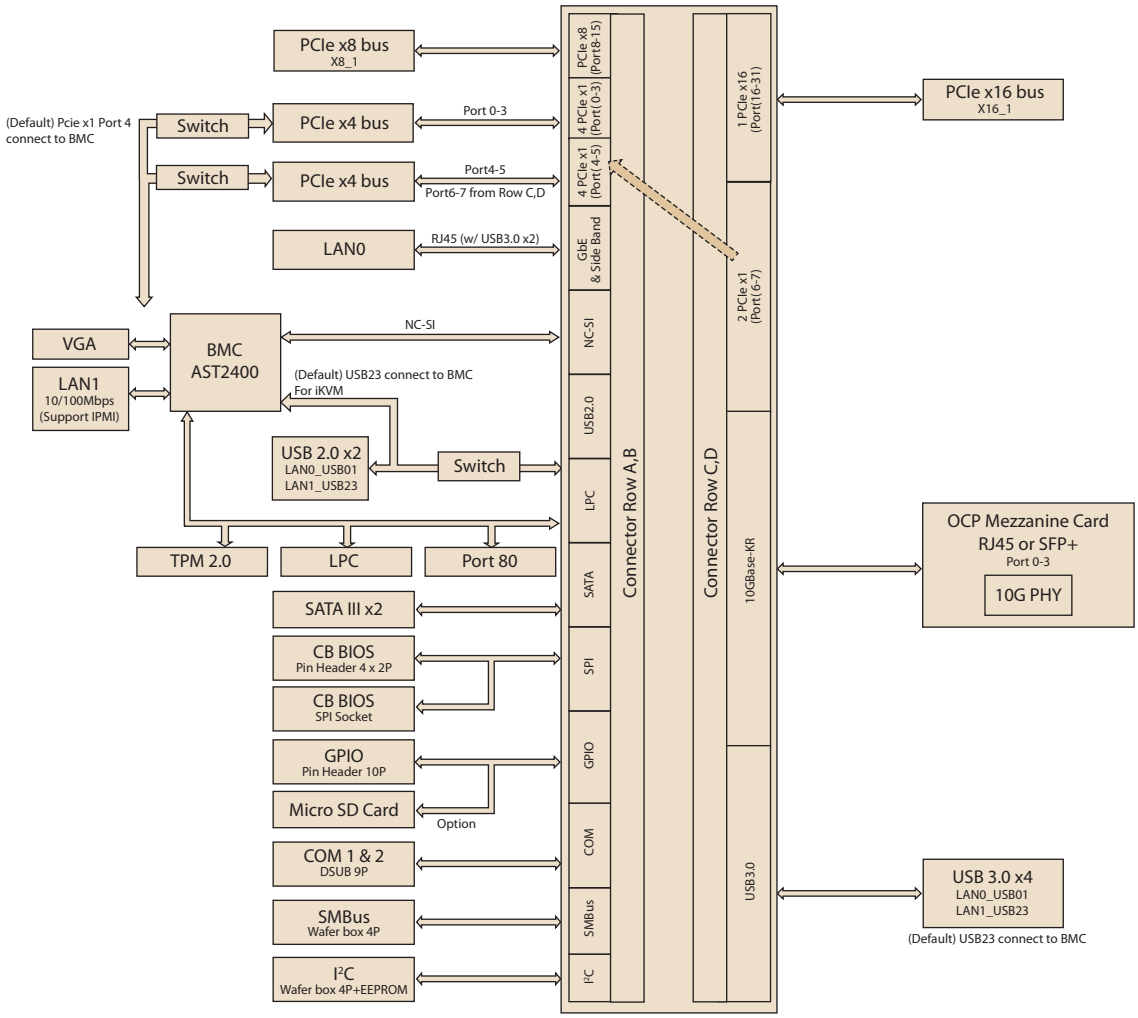
Specifications

Compatible Models		Advantech COM Express Basic Module (125 x 9 5mm) and COM Express Compact Module (95 x 95 mm)
Graphic	Controller	AST2500 Integrated 2D Graphics Controller
	Frequency	266MHz
	Graphics Memory	512MB @ DDR4 2400
Display	VGA	1920 x 1200 (from AST2500)
Expansion	PCI Express x16	1
	PCI Express x8	1
	PCI Express x4	2
	LPC	1
	eSPI (option)	1
Ethernet	Fast Ethernet	1 port 1000Base-T (RJ-45) supports 10/100/1000 Mbps from AST2500, supports IPMI
	Gigabit Ethernet	1 port 2.5GBase-T (RJ-45) supports up to 2.5Gbps from Module side
	10 Gigabit Ethernet	Up to 4 Ports, support 10GBase-T or SFP+ physical layer transferred by OCP mezzanine card
Serial Bus	SMBus	1
	I²C Bus	1
	CAN Bus (option)	1 (Mux with SER2)
	PMBus	1 (from AST2500)
I/O	SATA	2 (Type B Connector)
	USB	4 x USB3.2 (shared by 4 x USB3.1 Connectors)
	SPI Bus	1
	COM Port	2 x 2wire COM Ports (from EC) & 1 x Box Header 5x2p (from AST2500)
	GPIO	8
	SDIO (option)	1 (Pin Mux with GPIO)
	Fan	2 (1 Smart Fan from Module side, 1 fixed-voltage Fan)
	Port 80	1
	IPMB	1 (from AST2500)
Power	Type	ATX: Vin, VSB; AT: Vin or Vdc
	Supply Voltage	Vin: 12V ±5%, VSB: 5 ±5% Vdc: 8.5V (9-5%) ~ 20V (19+10%)
Environment	Temperature	Operating Standard: 0 ~ 60 °C (32 ~ 140 °F), only SOM-EA64 supports 0 ~ 45 °C (32 ~ 113 °F
	Humidity	Operating: 40° C @ 95% relative humidity, non-condensing Storage: 60° C @ 95%relative humidity, non-condensing
Mechanical	Dimensions	304.8 x 244 mm (12" x 9.6")

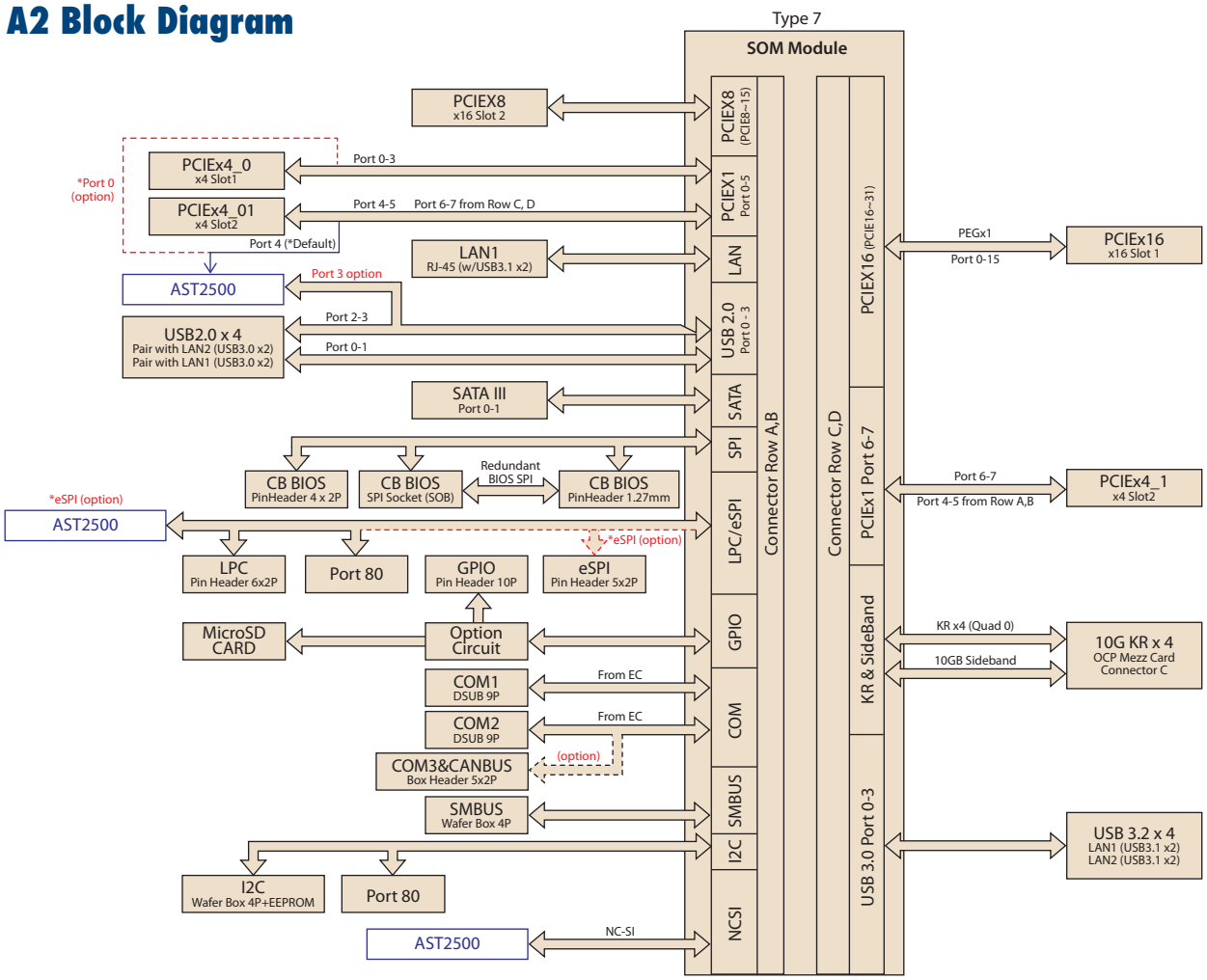
All product specifications are subject to change without notice.

Last updated: 27-Mar-2024

A1 Block Diagram



A2 Block Diagram



Ordering Information

Part No.	Description
SOM-DB5920-00A1	COM Express Development Board for T7 Pin-out, support 10GBASE-T
SOM-DB5920-F0A1	COM Express Development Board for T7 Pin-out, support SFP+ I/O
SOM-DB5920-01A1	COMe Type 7 Devel. Board Rev.A1 w/10G PHY EA62 (4 port)
SOM-DB5920-F1A1	COMe Type 7 Devel. Board Rev.A1 w/10G PHY EA63 (4 port)
SOM-DB5920-01A2	COMe Type 7 Devel. Board Rev.A2 w/10G PHY EA64 (4 port, Copper)
SOM-DB5920-F1A2	COMe Type 7 Devel. Board Rev.A2 w/10G PHY EA65 (4 port, Fiber)

Packing List

Part No.	Description	Quantity
SOM-DB5920	COM Express Development Board	1
SOM-EA60	Mezzanine Card with 2 Ports RJ45 for 10GBase-T (for SOM-DB5920-00A1)	1
SOM-EA61	Mezzanine Card with 2 Ports SFP+ for 10G (for SOM-DB5920-F0A1)	1
SOM-EA62	SOM-EA62 A101 4ports 10G Copper OCP Card (for SOM-DB5920-01A1)	1
SOM-EA63	SOM-EA63 A101 4ports 10G Fiber OCP Card (for SOM-DB5920-F1A1)	1
SOM-EA64	SOM-EA64 A101 4ports 10G Copper OCP Card (for SOM-DB5920-01A2)	1
SOM-EA65	SOM-EA65 A101 4ports 10G Fiber OCP Card (for SOM-DB5920-F1A2)	1
SOM-EA10	PCIex4 to 4 PCIex1 Riser Card	1
1700008941	Serial ATA Cable 7P/7P 32cm	2
1960046435T100	I/O Bracket for SOM-DB5900	1
1931000590	Screw M2.5* L: 5mm (for OCP assembly)	4
1930006864-01	Screw M3* L: 8mm	9
1910000035-01	Copper M3* L: 15mm	9