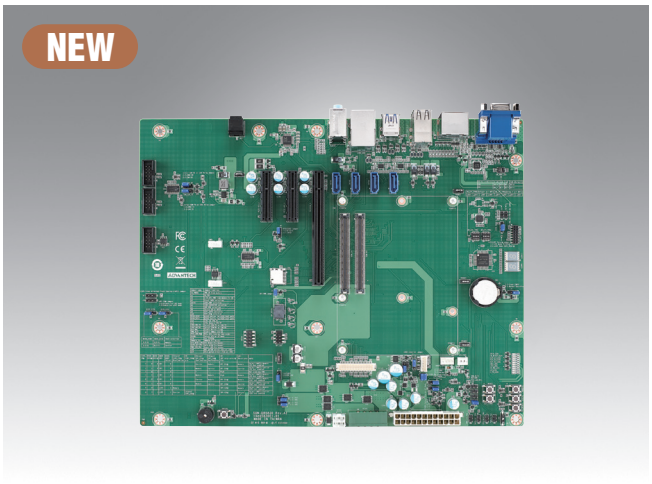
SOM-DB5830

Development Board for COM Express® Type 6/10 Pin-Out Modules



Features

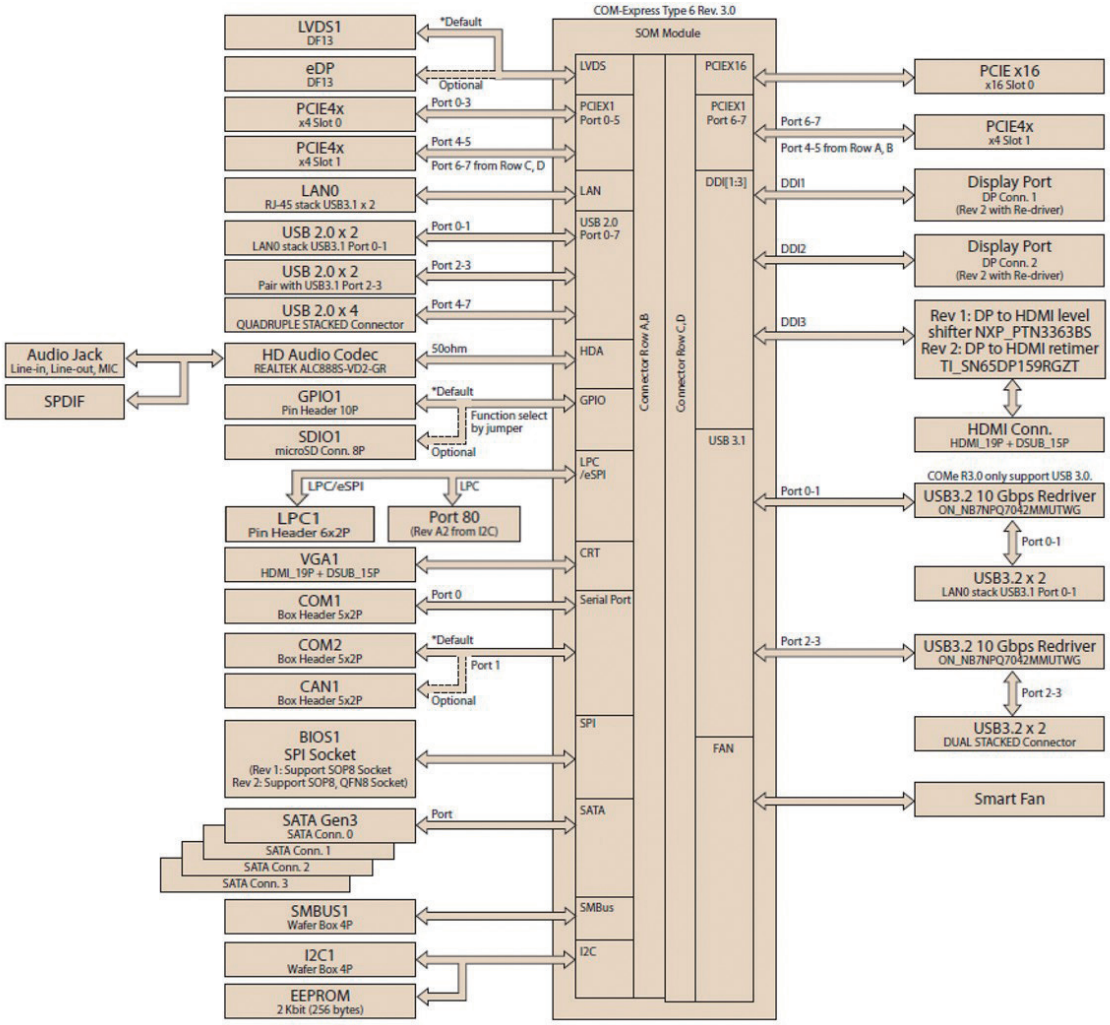
- PICMG COM R3.0 Type6 & Type10 pinout compatible
- COM ExpressR Basic/ Compact/ Mini module
- HDMI/DP, LVDS/eDP, VGA
- I/O Expansion:
  A2: PCIe Gen4 slot, USB3.2 Gen2
  A1: PCIe Gen3 slot, USB3.2 Gen2
- Visible Debug Utility: BIOS Port 80 and Power State

Specifications

Form Factor		ATX
Compatible Models	Form Factor	Compatible to COM Express Basic, Compact, MIni Modules
	Pin-out Type	Type6/10 Pin-out Compatible
Display	VGA	1 (D-SUB 15P Female)
	LVDS/eDP	18/24-bit single or dual channel
	HDMI	1
	Display Port	2
Ethernet	Connector	Up to 2.5G (A1:1G, A2: 2.5G)
	Speed	10/100/1000/2500 Mbps
Expansion	PCI Express x16	1 Slot (Speed A1: Gen3, A2: Gen4)
	PCI Express x4	2 Slots (Speed A1: Gen3, A2: Gen4)
	LPC	Yes
I/O	SATA3.0	4 Ports
	USB3.2 Gen2	4 Ports (Type A)
	COM Port	2 Ports
	GPIO	8-bit
	SDIO	1 (Mux with GPIO)
	SPI Bus	Rev 1: Support SOP8 Socket Rev 2: Support SOP8, QFN8 Socket
	TPM	TPM2.0 (Infineon SLB9665) A1 only
	Port 80	1
	Fan	2 (1 smart fan from module side, 1 fixed-voltage fan)
	Audio	Line-in, Line-out, MIC, SPDIF (Realtek ALC888 HD Audio Codec)
Serial Bus	SMBus	Yes
	I²C Bus	Yes
	CAN Bus	Yes (Mux with SER1)
Power	Type	ATX: Vin, VSB; AT: Vin
	Supply Voltage	Vin: 4.5V ~ 20V; VSB: 4.75V ~ 5.25 V, RTC Battery: 2.0V ~ 3.3V
Environment	Operating Temperature	Standard: 0 ~ 60 °C (32 ~ 140 °F)
	Storage Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
	Humidity	Operating: 40 °C @ 95% relative humidity, non-condensing Storage: 60 °C @ 95%relative humidity, non-condensing
	Vibration Resistance	3.5 Grms
Mechanical	Dimensions	304.8 mm x 244 mm (12" x 9.6")

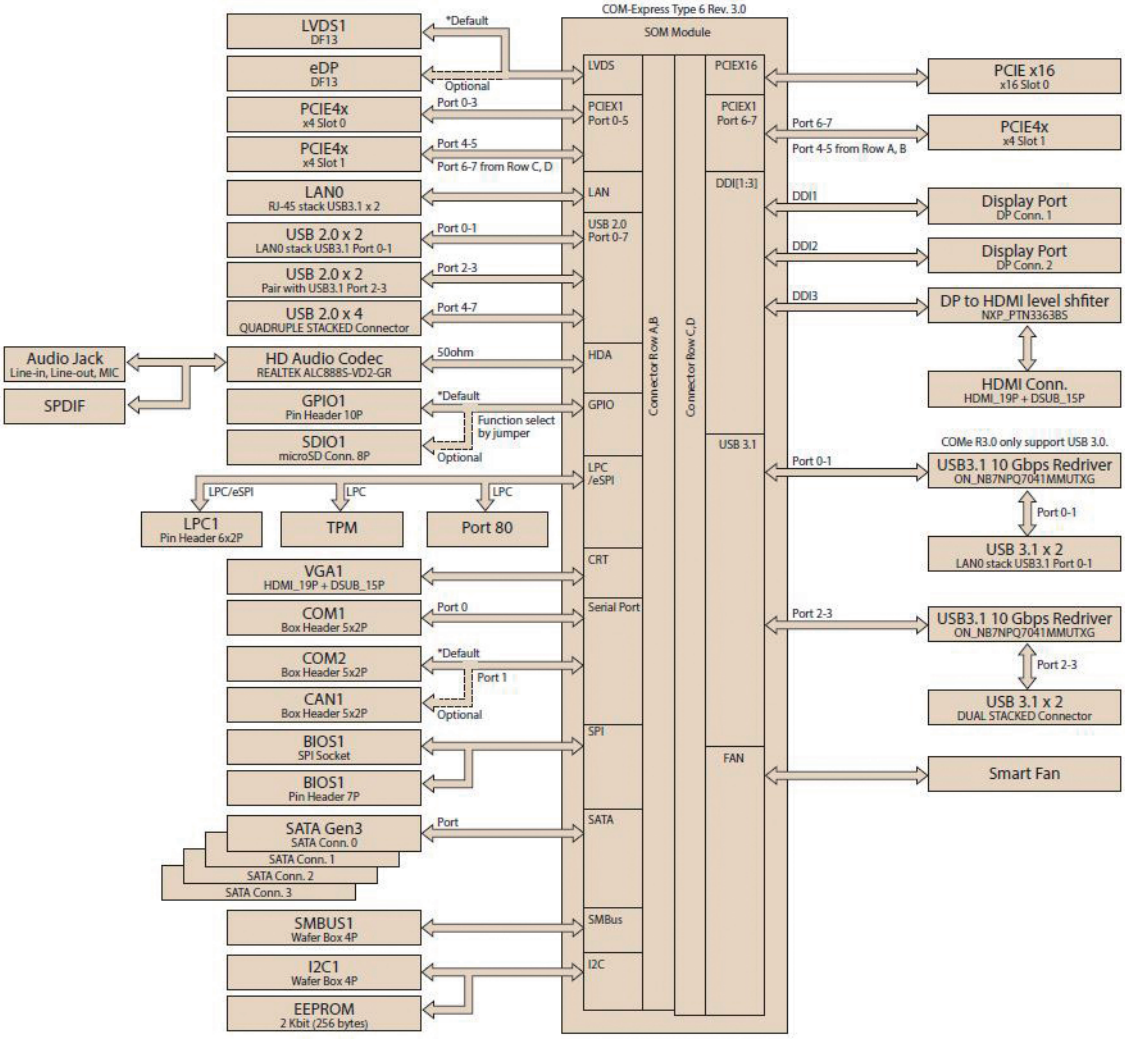
Block Diagram

Block Diagram for A2



Block Diagram

Block Diagram for A1



Ordering Information

Part number	Version	Type 6 compatible	Type 10 compatible	PCIe bandwidth	eDP/LVDS	Height of COMe connector	Operating Temperature
SOM-DB5830-00A2	A2	Yes	Yes	Gen 4	LVDS	5mm	0 ~ 60 °C
SOM-DB5830A-00A2	A2	Yes	Yes	Gen 4	eDP	5mm	0 ~ 60 °C
SOM-DB5830X-00A2	A2	Yes	Yes	Gen 4	LVDS	5mm	-40 ~ 85 °C
SOM-DB5830-00A1	A1	Yes	N/A	Gen 3	LVDS	5mm	0 ~ 60 °C
SOM-DB5830A-00A1	A1	Yes	N/A	Gen 3	eDP	5mm	0 ~ 60 °C

Any other SKUs or combination is project based support. Please contact sales for details.

Packing List

Part No.	Description	Quantity
SOM-EA10 A2	PCIe x4 - to- 4 PCIe x1 Riser Card (gen3)	1
1700008941	Serial ATA Cable 7P/7P 32cm	2
1701100300	Flat COM Port Cable	2

Part No.	Description	Quantity
1960077251T000	I/O Bracket for SOM-DB5830	1
1910001675	POST M2.5*4L 2.5*5L 2.5 2.1 5 5 Cu Ni	5
1920001128	NUT M D=5 5 2.1 3 Cu Ni	5