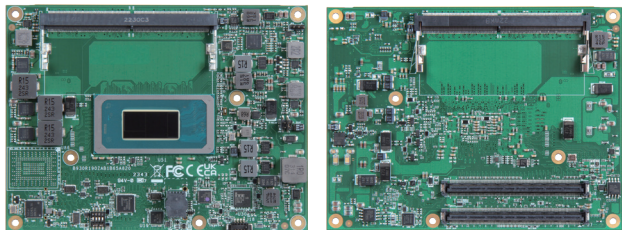


PCOM-B65A

COM Express Type 6 Basic size module with Intel® New Gen Core Ultra Series 2 Processor DDR5 SO-DIMM, DDI, PCIe Gen 4, USB 3.2 Gen2, 2.5 Gigabit TSN Ethernet, discrete TPM 2.0, eDP, SATA



FEATURES

- Intel® New Gen Core Ultra Series 2 Processor (15w-28w)
- Up to 6x performance core + 8x efficient core + 2x low power efficient core, and up to 128x graphic execution units
- 2x DDR5-5600 non-ECC SO-DIMMs up to 96GB, 1x Gen4 x8(H series), 2x Gen4 x4, and 8x PCIe Gen4 x1
- 4x USB3.2 Gen2, 2x SATA, 3x DDI, VGA, eDP/LVDS
- Options for onboard PCIe NVMe SSD



PCOM-B65A is COM Express module based on new Intel® Core Ultra Series 2 platform(code name: Arrow Lake U/H). It is compatible with COM Express Rev3.1 standard. The platform adopt the new gen Intel 4 lithography and VNNI instruction set, offers advance computing power with 15~28W thermal and embedded use condition for wide range application. It also support new integrated NPU for dedicated AI acceleration with up to 20x performance/watt improvement. This platform features the integration of Arc Graphics for up to 50% AI performance compared to previous generations. This module provides (up to) 24x PCIe Gen4 lanes, 4x USB 3.2 Gen 2, and 2x SATA. The complete and flexible I/O capacity also mapped to wide range of embedded/industrial applications, which is suit for mission critical use conditions and AI edge computing.

General

Model Name	PCOM-B65A						
Form Factor	COM Express Type6 Basic Size (125 X 95mm)						
CPU Series	Ultra 9 285H	Ultra 7 265H	Ultra 7 255H	Ultra 5 225H	Ultra 7 265U	Ultra 7 255U	Ultra 5 225U
Cores / Threads	6P+8E+ 2LPE/16T	6P+8E+ 2LPE/16T	6P+8E+ 2LPE/16T	4P+8E+ 2LPE/14T	2P+8E+ 2LPE/14T	2P+8E+ 2LPE/14T	2P+8E+ 2LPE/14T
Frequency	2.5GHz	1.2Ghz	1.2Ghz	1.2Ghz	1.8Ghz	1.8Ghz	1.2Ghz
Turbo Frequency	5.4Ghz	5.3Ghz	5.1Ghz	4.9 GHz	5.3Ghz	5.2Ghz	4.8Ghz
Intel® Smart Cache	24 MB	24 MB	24 MB	18 MB	12 MB	12 MB	12 MB
Intel® Gfx EU	128 EU	128 EU	128 EU	112EU	64 EU	64 EU	64 EU
Graphics Max Freq.	2.35GHz	2.3GHz	2.25GHz	2.2GHz	2.1GHz	2.1GHz	2.0GHz
Processor TDP (Up / Nominal / Down)	65W / 28W / 20W 65W / 45W / 20W (285H only)			28W / 15W / 12W			
PCH	SoC						
Memory Type/Speed	DDR5 SO-DIMM up to 96GB 5600MT/s						
ECC Memory Support	Non-ECC SO-DIMM						
CSO-DIMM	Not Supported						

I/O Interface

SATA	2x SATA III(2x SATA share with PCIe lane)		
USB	2x USB4 (option) 4x USB 3.2 Gen2 8x USB 2.0		
Ethernet	Intel® I226 series		
Serial I/O	GPIO	8 bit GPIO (default 4 input/4 output)	
	I²C	Baud Rate : 400KHz	
	SMBus	Baud Rate : 100KHz	
	UART	TX/RX signal only	
PCI Express	1x Gen4 x8 (only H series), 2x Gen4 x4 (all series) Up to 8x Gen4 x1 (2 lanes share with SATA)		
Display	Module display interface	Carrier output options	Resolution
	eDP / LVDS (default eDP)	eDP up to HBR3	3840 x 2160@120Hz
		LVDS (24bit, dual channel)	1920 x 1200@60Hz
	DDI 1/2/3	DP up to HBR3	3840 x 2160@120Hz
		HDMI 2.1	3840 x 2160@120Hz
VGA	VGA	1920 x 1200@60Hz	
Security	TPM 2.0		

MECHANICAL & ENVIRONMENT

Dimension	125 x 95mm
Power DC IN	Normal: +12V DC AT/ATX mode
Storage Temperature	-40°C to 85°C
Operating Temperature	0°C to 60°C
Certification	Contact us
MTBF	TBD
Vibration	TBD
OS	Windows 10/11 Ubuntu

ORDERING GUIDE

Product	Ordering P/N	Status
PCOM-B65A-285H	AB1-3U16	Available
PCOM-B65A-265H	AB1-3U10	Available
PCOM-B65A-255H	AB1-3U12	Available
PCOM-B65A-225H	AB1-3U15	Available
PCOM-B65A-265U	AB1-3U14	Available
PCOM-B65A-255U	AB1-3U13	Available
PCOM-B65A-225U	AB1-3U11	Available

Accessory	Ordering P/N	Status
Cooler (Heatpipe)	B9972300	Available
Cooler (Aluminum)	B9972330	Available
Heatsink (Heatpipe)	B830C760	Available
Heatsink (Aluminum)	B830C770	Available
Heatspreader (Heatpipe)	B830C600	Available
Heatspreader (Aluminum)	B830C780	Available
PCOM-C605R Mini-ITX Carrier	AB1-3P78	Available
PCOM-C60B ATX Evaluation Carrier	AB1-3G22	Available

BLOCK DIAGRAM

PCOM-B65A

