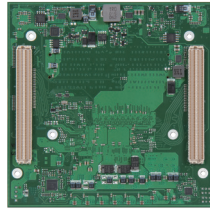
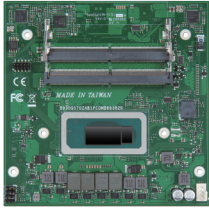


PCOM-B883VG2

COM-HPC® Client Type Size B Module with 12th Gen Intel® Core™ Processors (Formerly Alder Lake-H/P/U) DDR5 SO-DIMM, DDI, PCIe Gen4, USB4, USB3.2 Gen2, 2.5 GbE featuring TSN, discrete TPM 2.0, eDP, SATA III



FEATURES

- 12th Gen Intel® Core™ Processors and Intel® Celeron® Processor 7000 Series featuring Intel® 7 lithography
- Up to 6x performance-cores (P-cores), up to 8x efficient-cores (E-cores), up to 96x execution units for greater graphics performance
- 2x DDR5-4800 non-ECC SO-DIMMs up to 2x 32GB, and 1x PCIe Gen4 x8 (selected SKUs), 2x PCIe Gen4 x4, and 8x PCIe Gen3 x1
- 2x USB4, 2x USB 3.2 Gen 2, 8x USB 2.0, 2x SATAIII, 3x DDI, eDP



The Portwell PCOM-B883VG2 is a COM-HPC Client Type Size B module based on 12th Gen Intel® Core™ Processors (Alder Lake-H/P/U) and Intel® Celeron® Processor 7000 Series (Alder Lake-U). It is compatible with COM-HPC 1.0 standard. The platform, featuring Intel® 7 lithography and VNNI (Vector Neural Network Instructions) instruction set, offers advance computing power with 45W~15W TDP, and complete and flexible I/O capabilities for a wide range of industrial use cases and applications. The PCOM-B883VG2 COM-HPC Client Type Size B module also provides support for 8x PCIe Gen3 x1 lanes, 2x USB4, 2x USB 3.2 Gen 2 and 2x SATA III. Moreover, it supports PCIe Gen4 up to 16 lanes, 2x non-ECC DDR5 SO-DIMM, and dual 2.5GbE equipped with Intel Time Sensitive Networking (TSN) technologies, making it suitable for mission critical use conditions and AI edge computing.

CPU and General

Product	PCOM-B883VG2									
Form Factor	COM-HPC Client Type Size B module (120 X 120mm)									
SKU Type	H series			P series			U series			
	i7-12800HE	i5-12600HE	i3-12300HE	i7-1270PE	i5-1250PE	i3-1220PE	i7-1265UE	i5-1245UE	i3-1215UE	Celeron 7305E
Cores P+E/ Threads	6P + 8E/20T	4P + 8E/16T	4P + 4E/12T	4P + 8E/16T	4P + 8E/16T	4P + 4E/12T	2P + 8E/12T	2P + 8E/12T	2P + 4E/8T	1P + 4E/5T
Frequency	2.4 GHz	2.5 GHz	1.9 GHz	1.8 GHz	1.7 GHz	1.5 GHz	1.7 GHz	1.5 GHz	1.2 GHz	1.0 GHz
Turbo Frequency	4.6 GHz	4.5 GHz	4.3 GHz	4.5 GHz	4.4 GHz	4.2 GHz	4.7 GHz	4.4 GHz	4.4 GHz	N/A
Intel® Smart Cache	24 MB	18 MB	12 MB	18 MB	12 MB	12 MB	12 MB	12 MB	10 MB	8 MB
Intel® Gfx EU	96 EU	80 EU	48 EU	96 EU	80 EU	48 EU	96 EU	80 EU	64 EU	48 EU
Graphics Max Freq.	1.35 GHz	1.30 GHz	1.15 GHz	1.35 GHz	1.30 GHz	1.25 GHz	1.25 GHz	1.20 GHz	1.10 GHz	1.10 GHz
Video Decode Boxes	2	2	1	2	2	1	2	2	1	1
Processor TDP	45 W/35 W			28 W			15 W			
PCH	SoC									
ECC Memory Support	No									
BIOS	AMI BIOS									
Memory Type/ Speed	DDR5 SO-DIMM up to 64GB 4800MT/s									

I/O Interface

SATA	2x SATA III share with PCIe lane		
USB	2x USB4 2x USB 3.2 Gen2 8x USB 2.0		
Ethernet	Intel® I225LM		
Serial I/O	GPIO		8 bit GPIO (default 4 input/4 output)
	I ² C		Baud Rate : 400KHz
	SMBus		Baud Rate : 100KHz
	UART		TX/RX signal only
PCI Express Gen4	1x Gen4 x8 (selected SKU), 2x Gen4 x4		
PCI Express Gen3	8x Gen3 x1 (2 lanes share with SATA)		
Display	Default		Options
	eDP 1.4		eDP up to HBR3
			DP up to HBR3
	DDI		DP up to HBR3
Security			Resolution
			7680 x 4320@60Hz
			7680 x 4320@60Hz
			7680 x 4320@60Hz
			7680 x 4320@60Hz
			7680 x 4320@60Hz
Security	TPM 2.0		

*All information provided is subject to change without notice. Last updated: September 23, 2022

MECHANICAL & ENVIRONMENT

Dimension	120 x 120mm
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

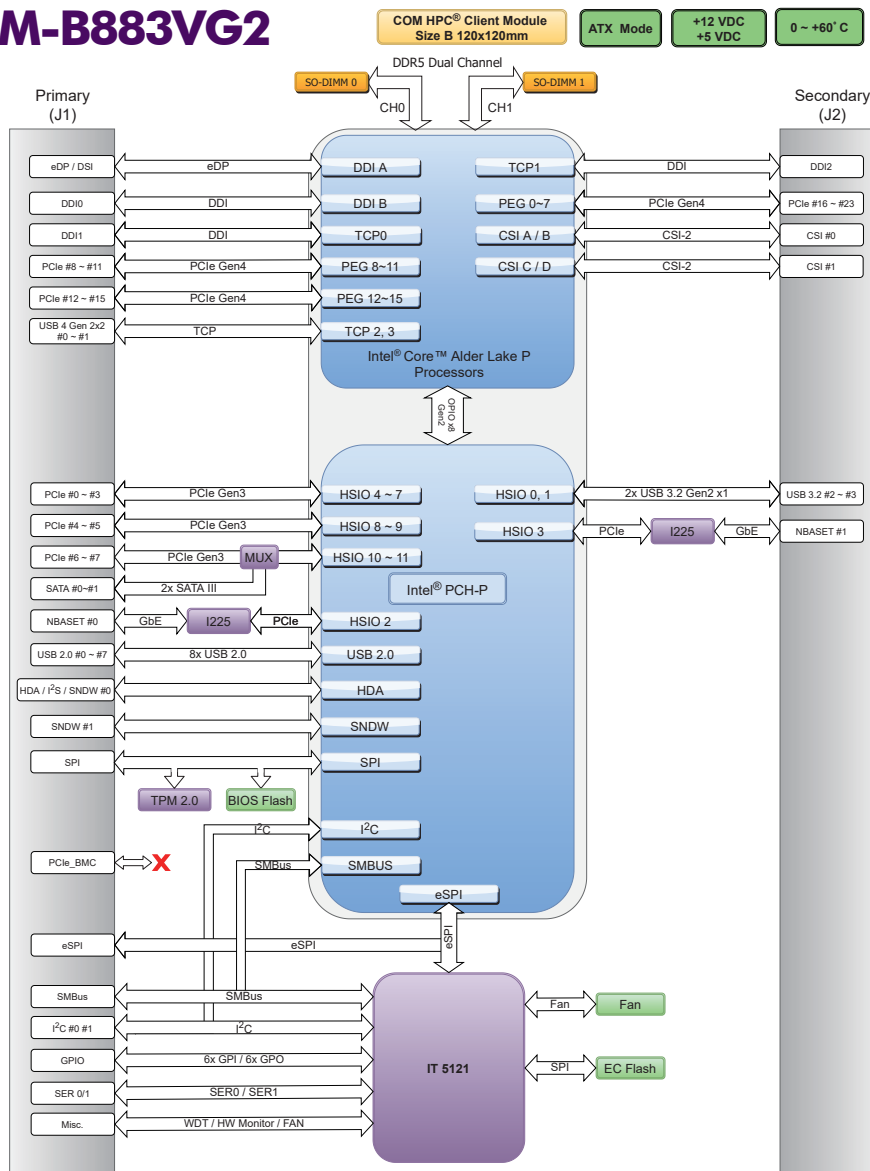
ORDERING GUIDE

Product	Ordering P/N	Status
PCOM-B883VG2-12800HE	TBD	In Development
PCOM-B883VG2-12600HE	TBD	In Development
PCOM-B883VG2-12300HE	TBD	In Development
PCOM-B883VG2-1270PE	TBD	In Development
PCOM-B883VG2-1250PE	TBD	In Development
PCOM-B883VG2-1220PE	TBD	In Development
PCOM-B883VG2-1265UE	TBD	In Development
PCOM-B883VG2-1245UE	TBD	In Development
PCOM-B883VG2-1215UE	TBD	In Development
PCOM-B883VG2-7305E	TBD	In Development

Accessory	Ordering P/N	Status
Cooler	TBD	In Development
Heatsink	TBD	In Development
Heatspreader	TBD	In Development
PCOM-C880 (ATX carrier board)	AB1-3L34Z	In Development

BLOCK DIAGRAM

PCOM-B883VG2



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