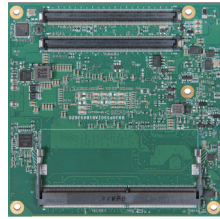
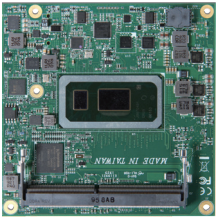


PCOM-B653VGL

Intel® Whiskey Lake-U Core™ Processor based on Type VI COM Express module with dual DDR4 SO-DIMM, DDI, eDP, Gigabit Ethernet, SATA 3.0, and USB 3.1



FEATURES

- Intel® Core™ i3/i5/i7/Celeron Processors 14nm process(Whiskey Lake U)
- Support 2xDDR4-2400 Non-ECC SO-DIMMs, up to 32G
- Support USB2.0/3.1, 2x SATAIII, 10x PCIe 3.0 LANEs
- Support VGA, LVDS/eDP, and Display port



Portwell PCOM-B653 is designed with Intel® Whiskey Lake-U processor with Type 6 pin definition. It brings three important factors including DDR4 memory support, PCIe Gen3 support, and USB 3.1 Gen2 support. Extend PCIe Gen3 ports in PCOM-B653VGL can support high speed IO card for more applications. In the meantime, it's compatible with COMe 3.0 Type 6 carrier board.

General

Product	PCOM-B653VGL			
Form Factor	COM Express® Type 6 Compact Form Factor (95 x 95mm)			
Processor	Intel® Core™			Intel® Celeron®
	i7-8665UE	i5-8365UE	i3-8145UE	4305UE
Core	4	4	2	2
Freq.	1.70 GHz	1.60 GHz	2.20 GHz	2.00 GHz
Turbo	4.40 GHz	4.10 GHz	3.90 GHz	2.00 GHz
Cache	8MB	6MB	4MB	2MB
Processor Graphics	Intel® UHD Graphics 620	Intel® UHD Graphics 620	Intel® UHD Graphics 620	Intel® UHD Graphics 610
Graphics Base Frequency	300 MHz	300 MHz	300 MHz	300 MHz
Graphics Max Dynamic Frequency	1.15 GHz	1.05 GHz	1.00 GHz	1.00 GHz
HW Encoding	H.264 AVC, MPEG2, HEVC, VP8/9, JPEG			
HW Decoding	H.264 AVC, VC1, MPEG2, VP8/9, JPEG			
HW Acceleration	DX 11.3/12, OpenGL 4.5, OpenCL 2.1			
Processor TDP	15W	15W	15W	15W
BIOS	AMI BIOS			
ECC Memory Supported	NO			
Memory	2x SO-DIMM DDR4 up to 32GB 2400MHz			

I/O Interface

SATA	2 x SATA III (Port 0/1)		
USB	4x USB 3.1 Gen2 (Port 0~3) 8x USB 2.0 (Port 0~7)		
Ethernet	Intel® I219LM		
Serial I/O	GPIO	8 bit GPIO	
	I ² C	Baud Rate : 400KHz	
	SMBus	Baud Rate : 100KHz	
	UART	Only RX/TX signal	
PEG	1x PCIe Gen3 x4		
PCI Express	1x PCIe Gen3 x4 1x PCIe Gen3 x1 1x PCIe Gen3 x1 (Option)		
Display	Default	Options	Resolution
	DDI2	VGA	VGA Up to 1920x1200 @ 60Hz
		DDI2	HDMI up to 4096x2160 @ 60Hz
	LVDS	eDP	DP Up to 4096x2304 @ 60Hz
	DDI1	LVDS	eDP Up to 4096x2304 @ 60Hz
		DDI1	LVDS Up to 1920x1200 @ 60Hz
			HDMI up to 4096x2160 @ 60Hz
			DP Up to 4096x2304 @ 60Hz
Security	TPM 2.0(Infineon SLB9670), Intel® AES		

PCOM-B653VGL

MECHANICAL & ENVIRONMENT

Dimension	95 x 95mm
Power DC IN	Normal: +12V DC AT/ATX mode
Storage Temperature	-20°C to 80°C
Operation Temperature	0°C to 60°C
Certification	Contact us
MTBF	Over 100,000 hours at 40°C
Vibration	Contact us
OS	Windows 10 Red Hat, Ubuntu, CentOS

ORDERING GUIDE

Product	Ordering P/N	Status
PCOM-B653VGL-8665UE	AB1-3K06	Available
PCOM-B653VGL-8365UE	AB1-3K04	Available
PCOM-B653VGL-8145UE	AB1-3K05	Available
Accessory	Ordering P/N	Status
PCOM-C605 carrier board	AB1-3998	Available
Cooler	B9971821	Available
Heat spreader	B830A560	Available

BLOCK DIAGRAM

PCOM-B653VGL

COM Express® Type 6 Compact Module 95x95mm AT / ATX Mode 0°C ~ +60°C

