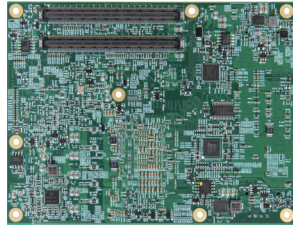
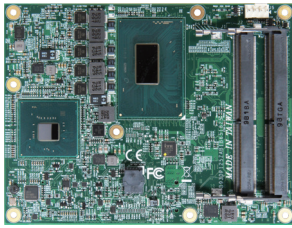


# PCOM-B651VGL

Intel® Coffee Lake-H Core™ Processor based on Type VI COM Express module with dual DDR4 SO-DIMM, DDI, LVDS, Gigabit Ethernet, SATA III, and USB 3.1 Gen2



## FEATURES

- Intel® Xeon®E/Core™ i7/i5/i3 Processors 14nm process(Coffee Lake-H)
- Support 2x DDR4-2666 Non-ECC/ECC SO-DIMMs, up to 2x 16GB
- Support USB2.0/3.1 Gen2, 4x SATAIII, 1x PCIe 3.0 x16, and 8x PCIe 3.0 x1
- Support LVDS, and 3x Display port/HDMI



PCOM-B651VGL is Intel® Coffee Lake-H platform COM Express module. It is compatible with COMe 3.0 Type 6 carrier board. The 8<sup>th</sup> Generation Intel® Core™ processor family is able to fulfill the applications demand on high performance. This module supports both ECC and Non-ECC DDR4 memory by different PCH SKUs(QM370/CM246). Customers have various models to meet different requirements in cost, performance, and memory type. PCOM-B651VGL provides one PCIe x16, eight PCIe x1 (Option to one PCIe x4), four USB 3.1 Gen2, and four SATA III.

## General

General				
Product	PCOM-B651VGL			
Form Factor	COM Express Type 6 Basic module (125 X 95mm)			
Processor	Intel® Xeon®	Intel® Core™		
	E-2176M	i7-8850H	i5-8400H	i3-8100H
Core	6	6	4	4
Freq.	2.70 GHz	2.60 GHz	2.50 GHz	3.00 GHz
Turbo	4.40 GHz	4.30 GHz	4.20 GHz	--
Cache	12MB	9MB	8MB	6MB
Processor Graphics	Intel® UHD Graphics P630	Intel® UHD Graphics 630	Intel® UHD Graphics 630	Intel® UHD Graphics 630
Graphics Base Frequency	350 MHz	350 MHz	350 MHz	350 MHz
Graphics Max Dynamic Frequency	1.20 GHz	1.15 GHz	1.10 GHz	1.00 GHz
HW Encoding	H.264/AVC, H.265/HEVC, MPEG2, JPEG, VP8, VP9			
HW Decoding	H.264/AVC, VP8, VP9, H.265/HEVC, MPEG2, JPEG/MJPEG, VC-1/WMV9			
HW Acceleration	DirectX 11/12/OpenGL 4.5/OpenCL 2.1			
Processor TDP	45 W			
BIOS	AMI BIOS			
ECC Memory Supported	YES(only with CM246 PCH)	NO		YES(only with CM246 PCH)
Memory	2x SO-DIMM DDR4 up to 32GB 2666MT/s			

## I/O Interface

SATA	4 x SATA III (Port 0~3)		
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 (default 4 input/4 output)	
	I <sup>2</sup> C	Baud Rate : 400KHz	
	SMBus	Baud Rate : 100KHz	
	UART	TX/RX signal only	
PEG	1x PCIe Gen3 x16 (can be configured to 2x8, 1x8, 2x4)		
PCI Express	8x PCIe Gen3 x1 (can be configured to x2, x4)		

	Default	Options	Resolution
Display	LVDS	LVDS (24bit, dual channel )	up to 1920x1200@60Hz
		eDP	up to 4096x2304@60Hz
	DDI	DP 1.2	up to 4096x2304@60Hz up to 4096x2304@30Hz (2176M)
		HDMI 1.4	up to 4096x2304@30Hz
	VGA	VGA	up to 1920x1200@60Hz
Security	TPM 2.0(Infinion SLB9665), Intel® AES		

# PCOM-B651VGL

## MECHANICAL & ENVIRONMENT

Dimension	125 x 95mm
Power DC IN	Normal: +12V DC Wide range: +9VDC~+18VDC AT/ATX mode
Storage Temperature	-20°C to 80°C
Operating 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-B651VGL-2176M	AB1-3J55Z	Contact us
PCOM-B651VGL-8850H	AB1-3J08Z	Contact us
PCOM-B651VGL-8400H	AB1-3J09Z	Contact us
PCOM-B651VGL-8100H	AB1-3J54Z	Contact us

Accessory	Ordering P/N	Status
PCOM-C605 (Mini-ITX Carrier Board)	AB1-3998	Available
PCOM-C60B (ATX Carrier Board)	AB1-3G22Z	Contact us
Cooler	B9971840	Available

## BLOCK DIAGRAM

### PCOM-B651VGL

COM Express® Type 6 Basic  
Module 125x95mm

AT / ATX  
Mode

12V DC

0 ~ +60°C

