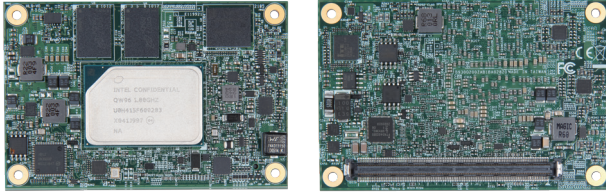


# PCOM-BA02GL

Intel® Atom® x6000 series SoC based on Type 10 mini COM-Express® module with LPDDR4 SDRAM



## FEATURES

- Intel® Atom® Processor x6000 Series (Elkhart Lake)
- On board LPDDR4 SDRAM up to 8GB  
On board eMMC up to 64GB
- Low Power Consumption (6W to 12W), 4K Resolution
- Support wide temperature -40°C ~ 85°C (Selected SKU)
- Support Intel® TCC/TSN with 2.5GbE



PCOM-BA02GL, a Type 10 Mini COM Express® (84 x 55 mm) module which based on Intel® Elkhart Lake Atom® x6000 and Pentium® N and J Series Processors. In this architecture, it could provide LVDS, and high quantity HDMI, eDP, DP with 4K resolution. And it also provides turbo mode up to 3.0GHz, with extending 4x PCIe 3.0 x1, 2x USB 3.2 Gen2, 8x USB 2.0, and 2x SATA III devices. With ultra low power consumption(6W to 12W), wide-temp support, it could provide very energy saving and high effective performance. Portwell want to promotes PCOM-BA02GL as vertical solution to aim in the different versatile applications, such as automation, military, hospitality, transportation and so on.

## General

Product		PCOM-BA02GL				
Form Factor		Type 10, Mini Form Factor COM-Express® ( 84 x 55 mm)				
Processor	Intel® Pentium	Intel® Celeron	Intel® Atom			
	J6426	N6211	x6211E	x6413E	x6425E	x6425RE
Core	4	2	2	4	4	4
Freq.	2.0 GHz	1.2 GHz	1.3 GHz	1.5 GHz	2.0 GHz	1.9 GHz
Turbo	3.0 GHz	3.0 GHz	3.0 GHz	3.0 GHz	3.0 GHz	N/A
Cache	1.5MB	1.5MB	1.5MB	1.5MB	1.5MB	1.5MB
Processor Graphics		Intel® UHD Graphics for 10 <sup>th</sup> Gen Intel® Processors				
Graphics Base Frequency	400 MHz	250 MHz	350 MHz	500 MHz	500 MHz	400 MHz
Graphics Max Dynamic Frequency	850 MHz	750 MHz	750 MHz	750 MHz	750 MHz	N/A
HW Encoding		H.264, H.265/HEVC, VP9, JPEG/MPEG				
HW Decoding		H.264, MPEG2, V1-1/WMV9, H.265/HEVC, VP8/9, JPEG/MPEG				
HW Acceleration		Gen 11 LP, DirectX 12, OpenGL4.5, OpenGL ES 3.2, Vulkan				
Processor TDP	10W	6.5W	6W	9W	12W	12W
BIOS		AMI BIOS				
In-Band ECC	N/A	N/A	Yes	Yes	Yes	Yes
Memory (on board LPDDR4)	8GB 3200 MT/s	4GB 3200 MT/s	4GB 3200 MT/s	8GB 3200 MT/s	8GB 3200 MT/s	8GB 4267 MT/s
Storage (on board eMMC)	32GB	16GB	16GB	16GB	32GB	16GB
Temperature Range	0 ~ 60 °C	0 ~ 60 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C

## I/O Interface

SATA	2 x SATA III		
USB	2 x USB 3.2 Gen2/2.0 + 6 x USB 2.0		
Ethernet	2.5 GbE with GPY215 (x6425RE SKU additional support TSN/TCC)		
Serial I/O	GPIO	8 GPIO	
	I <sup>2</sup> C	Baud Rate: 400KHz	
	SMBus	Baud Rate: 100KHz	
	UART	2 Serial Port (Tx/Rx)	
PEG	N/A		
PCI Express	4 x PCIe 3.0 x 1		
Display	Default	Options	
	DDI	DP	Resolution up to 4096x 2160 @ 60Hz
		HDMI	up to 4096x 2160 @ 60Hz
	LVDS	LVDS(24bit, dual channel)	up to 2560x 1600 @ 60Hz
eDP		up to 4096x 2160 @ 60Hz	
Security	TPM 2.0, Intel®AES		

## MECHANICAL & ENVIRONMENT

Dimension	84 x 55 mm
Power DC IN	4.75V to 20V, AT/ATX Mode
Storage Temperature	-40°C to 85°C
Operation Temperature	0°C to 60°C -40°C to 85°C (Selected SKU)
Certification	TBD
MTBF	TBD
Vibration	TBD
OS	Win 10 IoT Enterprise Ubuntu , Yocto

## ORDERING GUIDE

Product	Ordering P/N	Status
PCOM-BA02GL-J6426-8G-32G	AB1-3L78	Contact us
PCOM-BA02GL-N6211-4G-16G	AB1-3L77	Contact us
PCOM-BA02GL-x6211E-4G-16G	AB1-3L79	Contact us
PCOM-BA02GL-x6413E-8G-16G	AB1-3L76	Contact us
PCOM-BA02GL-x6425E-8G-32G	AB1-3K47	Contact us
PCOM-BA02GL-x6425RE-8G-16G	AB1-3L75	Contact us

Accessory	Ordering P/N	Status
Heatsink (Atom)	B830B480	Available
Heatsink (Pentium/Celeron)	B830B490	Available
Heatspreader (Atom)	B830B500	Available
Heatspreader (Pentium/Celeron)	B830B510	Available
PCOM-CA00(Micro-ATX Carrier board)	AB1-3917	Available

## BLOCK DIAGRAM

### PCOM-BA02GL

COM Express® Type 10  
Mini Module 84x55mm

