



## FEATURES

- Intel® Atom® Processor x6000 Series (Elkhart Lake)
- On board LPDDR4 SDRAM up to 8GB  
On board eMMC up to 64GB
- Low Power Consumption (4.5 to 12W), 4K Resolution
- Support wide temperature -40°C ~ 85°C
- 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 10th 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

## 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		
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	Resolution
	DDI	DP	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 / IoT Core 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)	TBD	Contact us
Heatsink (Pentium/Celeron)	TBD	Contact us
Heatspreader (Atom)	TBD	Contact us
Heatspreader (Pentium/Celeron)	TBD	Contact us
PCOM-CA00(Micro-ATX Carrier board)	AB1-3917	Available

## BLOCK DIAGRAM

### PCOM-BA02GL

COM Express® Type 10  
Mini Module 84x55mm

