



### FEATURES

- Intel® Atom® Processor x7000 Series
- On board LPDDR5 SDRAM up to 16GB
- On board eMMC 32GB
- Low Power Consumption (6W to 12W), 4K Display resolution
- Support wide temperature -40°C ~ 85°C (Selected SKU)
- Support Intel® TCC/TSN with 2.5GbE (Selected SKU)



PCOM-BA03GL, a Type 10 Mini COM Express® (84 x 55 mm) module which based on Intel® Atom® x7000 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 3.6GHz, 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 promote PCOM-BA03GL as vertical solution to aim in the different versatile applications, such as automation, military, hospitality, transportation and so on.

### CPU and General

CPU and General					
Product	PCOM-BA03GL				
Form Factor	Type 10, Mini Form Factor COM-Express® ( 84 x 55 mm)				
Processor	Intel® Atom				
	x7425E	x7211RE	x7213RE	x7433RE	x7835RE
Core	4	2	2	4	8
Freq.	1.5 GHz	1.0 GHz	2.0 GHz	1.5 GHz	1.3 GHz
Turbo	3.4 GHz	3.2 GHz	3.4 GHz	3.4 GHz	3.6 GHz
Cache	6MB	6MB	6MB	TBC	TBC
Processor Graphics	Intel® UHD Graphics for 12 <sup>th</sup> Gen Intel® Processors				
Graphics Base Frequency	800 MHz	400 MHz	600 MHz	600 MHz	800 MHz
Graphics Max Dynamic Frequency	1.0 GHz	800 MHz	800 MHz	800 MHz	1.0 GHz
HW Encoding	TBC				
HW Decoding	TBC				
HW Acceleration	Gen 11 LP, DirectX 12, OpenGL4.6, Vulkan				
Processor TDP	12W	6W	9W	9W	12W
BIOS	AMI BIOS				
In-Band ECC	Yes	Yes	Yes	Yes	Yes
Memory (on board LPDDR5)	16GB 4800 MT/s	16GB 4800 MT/s	16GB 4800 MT/s	16GB 4800 MT/s	16GB 4800 MT/s
Storage (on board eMMC)	TBC	TBC	TBC	TBC	TBC
Temperature Range	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 8 x USB 2.0		
Ethernet	2.5 GbE		
Serial I/O	GPIO	8 GPIO	
	I <sup>2</sup> C	Baud Rate: 3.2MHz	
	SMBus	Baud Rate: 1MHz	
	UART	2 Serial Port (Tx/Rx)	
PEG	N/A		
PCI Express	4x PCIe 3.0 x1		
Display	Default	Options	Resolution
	DDI	DP	up to 4096x 2160 @ 60Hz
	LVDS / eDP	HDMI	up to 4096x 2160 @ 60Hz
		LVDS(24bit, dual channel)	up to 2560x 1600 @ 60Hz
	eDP	up to 4096x 2160 @ 60Hz	
Security	TPM 2.0, Intel®AES		

# PCOM-BA03GL

## MECHANICAL & ENVIRONMENT

Dimension	84 x 55 mm
Power DC IN	4.75V to 20V, AT/ATX Mode
Storage Temperature	-40°C to 85°C
Operating Temperature	-40°C to 85°C
Certification	TBD
MTBF	TBD
Vibration	TBD
OS	Win 11, Ubuntu , Yocto

## ORDERING GUIDE

Product	Ordering P/N	Status
PCOM-BA03GL-x7425E-16G-32G	AB1-3S29Z	Available
PCOM-BA03GL-x7211RE-16G-32G	AB1-3S41Z	Available
PCOM-BA03GL-x7213RE-16G-32G	AB1-3S43Z	Available
PCOM-BA03GL-x7433RE-16G-32G	AB1-3S44Z	Available
PCOM-BA03GL-x7835RE-16G-32G	AB1-3S42Z	Available

  

Accessory	Ordering P/N	Status
Heatsink (Atom)	TBC	TBC
Heatsink (i3)	TBC	TBC
Heatspreader (Atom)	TBC	TBC
Heatspreader (i3)	TBC	TBC
PCOM-CA00 (Micro-ATX Carrier board)	AB1-3917	Available

## BLOCK DIAGRAM

### PCOM-BA03GL

