

# PCOM-BA01

Intel® Atom® E3900 series SoC based on Type 10 Mini COM-Express® module with LPDDR4 SDRAM, eMMC and USB 3.0



## FEATURES

- Intel® Atom® Processor E3900 Series (Apollo Lake)
- On Board LPDDR4 SDRAM up to 8GB, On Board eMMC up to 64GB
- Low Power Consumption (6 to 12W)
- Supports Wide Operating Temperature and Wide Voltage
- Support LVDS, eDP, DP, HDMI and Turbo mode up to 2.5GHz



PCOM-BA01, a Type 10 Mini COM Express® (84 x 55 mm) module which based on Intel® Apollo Lake Atom® E3900 series SoC. In this architecture, it could provide VGA, LVDS, and high quantity HDMI, eDP, DP with 4K resolution. And it also provide turbo mode up to 2.5GHz, with extending 4 x PCIe 2.0 x 1, 2 x USB 3.0, 8 x USB 2.0, and 2 x SATA III devices. With ultra low power consumption(6 to 12W), wide-temp support, it could provide very energy saving and high effective performance. Portwell want to promotes PCOM-BA01 as vertical solution to aim in the different versatile applications, such as Automation.

## General

Product	PCOM-BA01				
Form Factor	Type 10, Mini Form Factor COM-Express® ( 84 x 55 mm)				
Processor	Intel® Atom®			Intel® Pentium®	Intel® Celeron®
	E3950	E3940	E3930	N4200	N3350
Core	4	4	2	4	2
Freq.	1.60 GHz	1.60 GHz	1.30 GHz	1.10 GHz	1.10 GHz
Turbo	2.00 GHz	1.80 GHz	1.80 GHz	2.50 GHz	2.40 GHz
Cache	2MB	2MB	2MB	2MB	2MB
Processor Graphics	Intel® HD Graphics 505	Intel® HD Graphics 505	Intel® HD Graphics 500	Intel® HD Graphics 505	Intel® HD Graphics 500
Graphics Base Frequency	500 MHz	400 MHz	400 MHz	200 MHz	200 MHz
Graphics Max Dynamic Frequency	650 MHz	600 MHz	550 MHz	750 MHz	650 MHz
HW Encoding	HEVC/H.265, H.264, MVC, VPS, VP9, JPEGMJPEG				
HW Decoding	HEVC/H.265, H.264, MVC, VPS, MPEG2, VC-1, WMV9, JPEGMJPEG				
HW Acceleration	Gen9LP, DirectX 12, OpenGL 4.3, OpenCL 1.2, PAVP 2.0, OGL ES 3.0				
Processor TDP	12W	9.5W	6.5W	6W	6W
BIOS	AMI BIOS				
ECC Memory Supported	No				
Memory	On board LPDDR4 SDRAM up to 8GB 2133 MT/s				

## I/O Interface

SATA	2 x SATA III		
USB	2 x USB 3.0 8 x USB 2.0, (Option 1 x OTG)		
Ethernet	Intel® Ethernet Controller I210IT/AT		
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	4x PCIe 2.0 x1		
Display	Default	Options	Resolution
	DDI	DP	up to 4096x 2160 @ 60Hz
		HDMI	up to 3840x 2160 @ 30Hz
	LVDS	LVDS(24bit, dual channel)	up to 1920x 1200 @ 60Hz
eDP		up to 4096x 2160 @ 60Hz	
Security	Intel® AES		

