

PCOM-B641VG

Intel® Atom® Apollo Lake series SoC based on Type 6 Compact COM-Express® module with 2x DDR3L SD-DIMM Socket



FEATURES

- Intel® Atom® Apollo Lake E3900 series processors
- DDR3L SO-DIMM up to 16GB 1866 MT/s
- Multiple Displays VGA, LVDS/eDP, DP, HDMI
- Support Industrial temperature -40°C to 85°C
- Support low power consumption(6 to 12W), TPM 2.0



PCOM-B641VG, a type 6 compact COM Express® (95 x 95 mm) module which based on Intel® Atom® Apollo Lake E3900 series SoC. In this architecture, it could provide VGA, LVDS, and high quantity HDMI, eDP, DP with 4K resolution, and three independent displays. PCOM-B641VG also provides turbo mode up to 2.5GHz, including extended 4x PCIe 2.0 x 1, 3x USB 3.0, 8x USB 2.0, and 2x SATA III devices. With ultra low power consumption design(6 to 12W), wide-temp support, PCOM-B641VG could provide very energy saving and high effective performance. Portwell planned to promote PCOM-B641VG as vertical solution to aim in the different versatile applications, such as Automation, Military, Networking, Transportation and so on.

General

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Product	PCOM-B641VG				
Form Factor	Type 6, Compact Form Factor COM-Express® (95 x 95 mm)				
Processor	Intel® Celeron®	Intel® Pentium®	Intel® Atom®		
	N3350	N4200	E3930	E3940	E3950
Core	2	4	2	4	4
Freq.	1.10 GHz	1.10 GHz	1.30 GHz	1.60 GHz	1.60 GHz
Turbo	2.40 GHz	2.50 GHz	1.80 GHz	1.80 GHz	2.00 GHz
Cache	2MB	2MB	2MB	2MB	2MB
Processor Graphics	Intel® HD Graphics 500	Intel® HD Graphics 505	Intel® HD Graphics 500	Intel® HD Graphics 505	Intel® HD Graphics 505
Graphics Base Frequency	200 MHz	200 MHz	400 MHz	400 MHz	500 MHz
Graphics Max Dynamic Frequency	650 MHz	750 MHz	550 MHz	600 MHz	650 MHz
HW Encoding	HEVC/H.265, H.264, MVC, VPS, VP9, JPEG/JPEG				
HW Decoding	HEVC/H.265, H.264, MVC, VPS, MPEG2, VC-1, WMV9, JPEG/JPEG				
HW Acceleration	Gen9LP, DirectX 12, OpenGL 4.3, OpenCL 1.2, PAVP 2.0, OGL ES 3.0,				
Processor TDP	6W	6W	6.5W	9.5W	12W
BIOS	AMI BIOS				
ECC Memory Supported	No				
Memory	DDR3L SO-DIMM up to 16GB 1866 MT/s				

I/O Interface

I/O Interface			
SATA	2 x SATA III		
USB	3x USB 3.0 8x USB 2.0, (1x OTG Option)		
Ethernet	Intel® Ethernet Controller I210T		
Serial I/O	GPIO	8 GPIO	
	I ² C	Baud Rate: 400KHz	
	SMBus	Baud Rate: 100KHz	
	UART	2 Serial Port (Tx/Rx)	
PEG	N/A		
PCI Express	4x PCIe 2.0 x 1		
Display	Default	Options	Resolution
	eDP	LVDS(24bit, dual channel)	up to 1920x 1200 @ 60Hz
		eDP	up to 4096x 2160 @ 60Hz
	DDI0	DP	up to 4096x 2160 @ 60Hz
		HDMI	up to 3840x 2160 @ 30Hz
	DDI1	VGA	up to 1920x 1200 @ 60Hz
DP		up to 3840x 2160 @ 30Hz	
Security	TPM 2.0, Intel®AES		

MECHANICAL & ENVIRONMENT

Dimension	95 x 95mm
Power DC IN	Normal : +12V Wide range : +9VDC - +18VDC AT/ATX Mode
Storage Temperature	-40°C to 85°C
Operation Temperature	-40°C to 85°C
Certification	Contact us
MTBF	Over 120,000 hours at 40°C
Vibration	Contact us
OS	Windows 7/10, WES7/8 Linux Fedora/Tizen/Yocto RTOS Windriver

ORDERING GUIDE

Product	Ordering P/N	Status
PCOM-B641-E3950	AB1-3F71	Available
PCOM-B641-E3940	AB1-3F39	Available
PCOM-B641-E3930	AB1-3F38	Available
PCOM-B641-N4200	AB1-3F28	Available
PCOM-B641-N3350	AB1-3F72	Available

Accessory	Ordering P/N	Status
Heat Sink (N-sku)	B9971521	Available
Heat Sink (E-sku)	B8308491	Available
Heat Spreader (N-sku)	B8308911	Available
Heat Spreader (E-sku)	B8308901	Available
PCOM-C605 (Mini-iTX Carrier Board)	AB1-3998	Available
PCOM-C60B (ATX Carrier Board)	AB1-3G22Z	Contact us

BLOCK DIAGRAM

PCOM-B641VG

COM Express® Type 6
Compact Module 95x95mm

AT / ATX Mode

12 VDC

-40° C ~ +85° C

