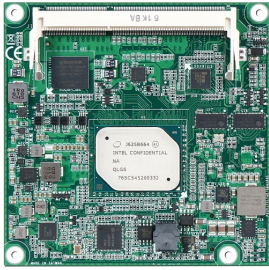


# PCOM-B641VG

Intel® Atom® E3900 series SoC based on Type 6 COM Express® Rev3.0 module with DDR3L 2x SO-DIMM sockets, VGA, eDP/LVDS, DDI, GbE, and SATA 6 Gb/s



## FEATURES

- Intel Atom® E3900 Series ultra low power processor
- Supports DDR3L-1866 MT/s SDRAM on two SO-DIMM sockets
- 8x USB 2.0 and 3x USB 3.0
- Wide voltage support, from 6V to 18V



PCOM-B641VG, COM Express® Type 6 Compact Module designed with 6<sup>th</sup> Generation Intel Atom® processors, supporting wide operation temperature -40°C to +85°C (E series processors only).

## General

General					
Product	PCOM-B641VG				
Form Factor	COM Express® Type 6 Compact Rev. 3.0				
Processor	Intel® Celeron® N3350	Intel® Pentium® N4200	Intel Atom® x5-E3930	Intel Atom® x5-E3940	Intel Atom® x7-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	2 MB	2 MB	2 MB	2 MB	2 MB
Processor Graphics	Intel® HD Graphics 500	Intel® HD Graphics 505	Intel® HD Graphics 500	Intel® HD Graphics 500	Intel® HD Graphics 505
Graphics Base Frequency	200.00 MHz	200.00 MHz	400.00 MHz	400.00 MHz	500.00 MHz
Graphics Max Dynamic Frequency	650.00 MHz	750.00 MHz	550.00 MHz	600.00 MHz	650.00 MHz
HW Encoding	HEVC/H.265, H.264, MVC, VP8, VP9, JPEG/MJPEG				
HW Decoding	HEVC/H.265, H.264, MVC, VP8, VP9, MPEG2, VC-1, WMV9, JPEG/MJPEG				
HW Acceleration	Gen9 LP, DX 9.3/10/11.1/12, OpenGL 4.3, OGL ES 3.0, OpenCL 1.2, PAVP 2.0, HDCP 1.4/2.0				
Processor TDP	6W	6W	6.5W	9.5W	12W
BIOS	AMI Aptio5 UEFI BIOS				
ECC Memory Supported	No				
Memory	2x DDR3L SO-DIMM sockets Dual channel Up to 8GB 1866 MT/s				

## I/O Interface

SATA	2x SATA III		
USB	8x USB 2.0 / 1 OTG (optional) 3x USB 3.0		
Ethernet	1x GbE (I210-IT)		
Serial I/O	GPIO	8 GPIO (4 GPI and 4 GPO)	
	I <sup>2</sup> C	Baud Rate : 400KHz	
	SMBus	Baud Rate : 100KHz	
	UART	2 Serial Port (TX and RX)	
PEG	N/A		
PCI Express	1x PCIe 2.0 x4 (Can be configured to 1x4 / 2 x2 / 4 x1)		
Display	Default	Options	Resolution
	VGA	VGA	Up to 1920x1200 @ 60Hz
		DDI2-DP	Up to 4096x2160 @ 60Hz
	LVDS	LVDS	Up to 1920x1200 @ 60Hz
		eDP 1.3	Up to 3840x2160 @ 60Hz
	DDI1-DP	DP 1.2	Up to 4096x2160 @ 60Hz
HDMI 1.4b		Up to 3840x2160 @ 30Hz	
Security	TPM 2.0 (Infineon SLB9670) , Intel® AES		

## MECHANICAL & ENVIRONMENT

Dimension	95 x 95mm
Power DC IN	Nominal : +12V DC Wide range : +6VDC ~ +18VDC AT / ATX Mode
Storage Temperature	-40°C to 80°C
Operating Temperature	0°C to 70°C / -40°C to 80°C (E Series processors only)
Certification	Contact us
MTBF	Over 120,000 hours at 40°C
Vibration	Random 5Hz to 2KHz, 7.7 grms, 10min in each of 3 axes
OS	Windows 10 Linux CentOS 6

## 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 for E3900 Series	B8308491	Available
Heat Sink for N Series	B9971521	Available
PCOM-C605 (MINI-ITX Carrier Board)	AB1-3998	Available
PCOM-C640 (NANO-ITX Carrier Board)	AB1-3D18	Available
PCOM-C600 (uATX ATX Carrier Board)	AB1-3761	Available

## BLOCK DIAGRAM

### PCOM-B641VG

COM Express® Type 6  
Compact Module 95x95mm

AT / ATX Mode

+12VDC

-40° C ~ +80° C  
(E series only)

