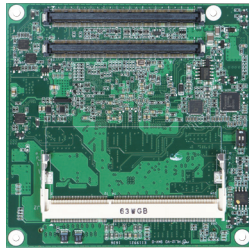
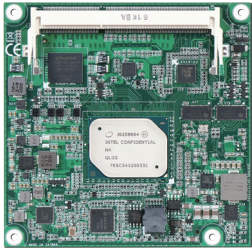


PCOM-B641VG

Intel® Atom® E3900 series SoC based on Type 6 COM-Express® module with DDR3L 2 x SD-DIMM Socket, VGA, HDMI, DP, eDP/LVDS, SATAIII, TPM



FEATURES

- Intel® Atom® Processor E3900 Series (Apollo Lake)
- Supports 2 x DDR3L SO-DIMM up to 16GB 1866 MT/s, TPM 2.0
- Low Power Consumption (6 to 12W)
- Supports Wide Operating Temperature and Wide Voltage
- Support VGA, LVDS, eDP, DP, HDMI and Turbo mode up to 2.5GHz



PCOM-B641VG, a Type 6 compact COM Express® (95 x 95 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 three independent displays. And it also provides turbo mode up to 2.5GHz, with extending 4 x PCIe 2.0 x 1, 3 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-B641VG as vertical solution to aim in the different versatile applications.

General

PCOM-B641VG					
Product	PCOM-B641VG				
Form Factor	Type 6, Compact Form Factor COM-Express® (95 x 95 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, JPEG/MJPEG				
HW Decoding	HEVC/H.265, H.264, MVC, VPS, MPEG2, VC-1, WMV9, JPEG/MJPEG				
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	Supports 2 x DDR3L SO-DIMM up to 16GB 1866 MT/s				

I/O Interface

SATA	2 x SATA III				
USB	3 x USB 3.0, 8 x USB 2.0, (Option 1 x OTG)				
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	4 x PCIe 2.0 x 1, or 1 x PCIe 2.0 x 4				
Display	Default		Options		Resolution
	VGA	VGA		up to 1920x 1200 @ 60Hz	
		DP		up to 3840x 2160 @ 30Hz	
	eDP	LVDS(24bit, dual channel)		up to 1920x 1200 @ 60Hz	
		eDP		up to 4096x 2160 @ 60Hz	
	DP	DP		up to 4096x 2160 @ 60Hz	
HDMI		up to 3840x 2160 @ 30Hz			
Security	TPM 2.0 (Infineon SLB9670) , 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 80°C
Operation Temperature	-40°C to 80°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 (E-sku)	B8308491	Available
Heat Sink (N-sku)	B9971521	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 +12VDC -40° C ~ +80° C (E series only)

