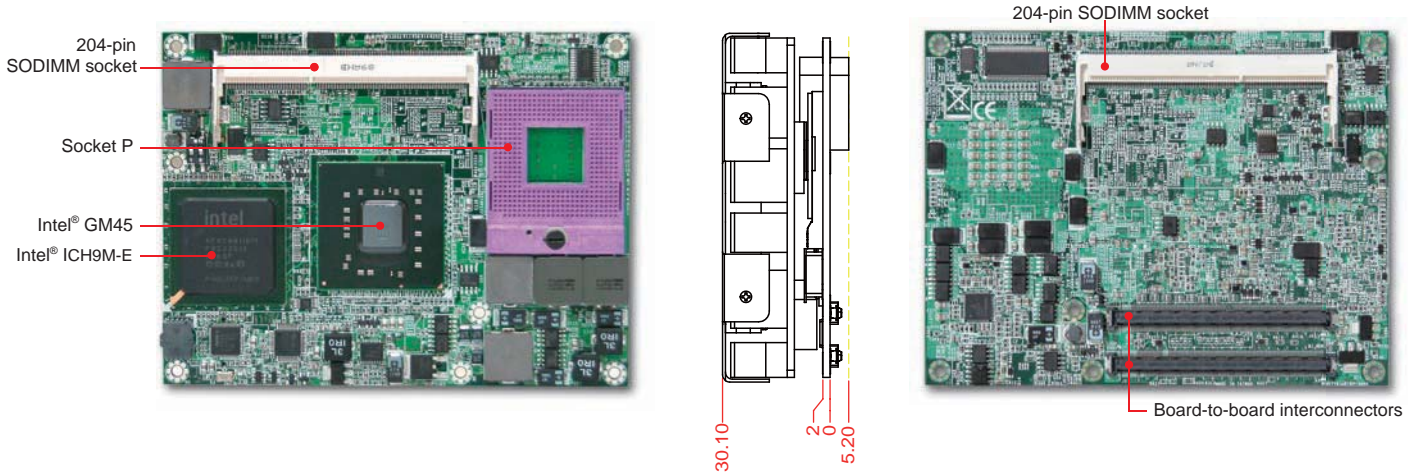


# PCOM-B213VG

Intel® GM45 platform based Type II COM Express module with DDR3 SDRAM, VGA, Gigabit Ethernet, SATA and USB



Portwell PCOM-B213VG is designed with GM45 and ICH9M chipset, with improved Intel® Gen 5 graphic engine that included advance HDMI, display port interfaces suitable for medical, media, gaming and infotainment applications, and featuring with DDR3, iAMT 4.0, and TPM for effective security for remote application like network, communication and industrial control.

## FEATURES

- The Intel® 45nm Core™ 2 Quad/Core™ 2 Duo processor features dual core/quad core technology that provides latest semiconductor technology
- Intel® GM45 integrated GMA 4500MHD graphic provides extreme 3D performance for media applications
- Intel® GM45 platform brings latest iAMT 4.0 and ITPM for powerful management and cryptal functions
- Architecture of module and carrier boards speeds up time-to-market of tailor-made equipment
- Support two SODIMM sockets and up to 8GB memory size

## ORDERING GUIDE

<b>AB1-3264</b>	PCOM-B213VG.TYPE II.GM45/ICH9M
<b>B9970890</b>	(GP).Heat sink assy. Cooler.w/FAN 95x125x17.5(mm). IP075-TEBNCG-low. Polo
<b>B8302690</b>	Heat Spreader.125x95x9.05mm Aluminum for PCOM-B213 PGA
<b>AB1-2289</b>	PCOM-C210 Type II ATX Evaluation Carrier Board

## GENERAL

Processor	- Intel® 45nm Quad/Core™ 2 or Celeron® processor up to 3.06 GHz (17~35W) and up to 6MB Cache in FC-PGA package - FSB 1066/800/667 MHz - Support Intel® 64 Architecture, Virtualization, Trusted Execution, and SpeedStep Technology
Chipset	- Intel® GM45 (12W), Intel Gen 5.0 integrated graphics engine - Intel® ICH9M-E(2.5W), Intel® Active Management, Matrix Storage Technology
BIOS	- AMI Core8 BIOS - Support Legacy Free, ACPI 3.0, SMBIOS 2.5
Memory	- Support up to 8GB DDR3 667/800/1067 MT/s SDRAM on two 204-pin SODIMM sockets
Storage Devices	- SATA 3.0 Gb/s x 4 - JMB368 EIDE x 1 with Ultra DMA 100/66/33
Watchdog Timer	- Programmable via S/W from 1sec to 255min
Ethernet	Intel® 82567LM Gigabit LAN x 1 (supported vPro, Jumbo Frames, sync protocol indicator)
Audio	Intel® High Definition Audio (2x channels delivering 192-kHz 32-bit, and 8x channels delivering 96-kHz 32-bit)
Expansion Interface	- 1x PCI Expressx16 Gen1 up to 2.5 GT/s;per lane 16 GB/s (128 Gbit/s) (base on PCI-SIG PCI Express 3.0 specification) - 4x PCI Expressx1 Gen1 (2.5 GT/s) - 4x PCI devices at 33 MHz - LPC Interface (4-bit-wide bus operating at 4 times the clock speed, 33.3 MHz) - 8x Universal Serial Bus 2.0 (480 Mb/s bus comprehends the high-speed / full-speed / low-speed data ranges) - SPI Interface up to 33 MHz
Hardware Monitors	- LM87 CPU, Voltage and Temperature
Power Requirement	- Typical: 12V, 5VSB, VBAT - Support AT and ATX mode
Dimension	125mm(L) x 95mm(W), 4.9"(L) x 3.7"(W), PCB: 10 layers
Environment	- Operation Temperature: 0~60 °C - Storage Temperature: -20~80 °C - Relative Humidity: 5~90%*
MTBF	Over 120,000 hours at 40 Degree Celsius

## DISPLAY

Graphic Controller	Intel® GM45 integrated Graphics Media Accelerator 4500HD (Intel® GMA 4500MHD)
Graphic Memory	Intel® Dynamic Video Memory Technology (Intel DVMT 5.0)
Display Interface	CRT: resolution up to 2048x1536 (QXGA) LVDS: 2x 18bpp/24bpp (compatible with the ANSI/TIA/EIA-644 specification) SDVO: supports two SDVO ports and DVI1.0 for eternal digital monitor. TV: Three integrated 10-bit DACs. (Supports SDTV 480i /EDTV 480p / HDTV 720p and 1080i support)

