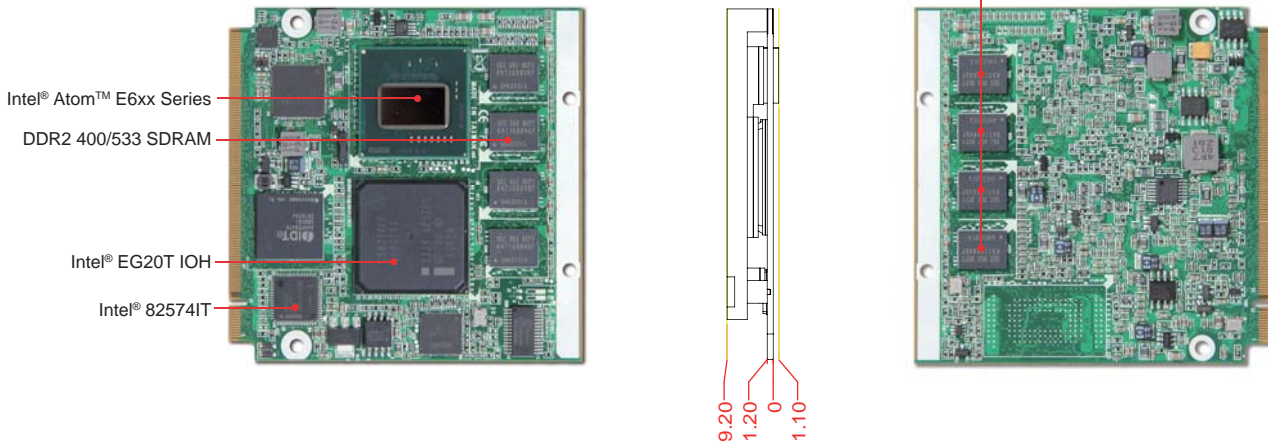


# PQ7-M105IT

Qseven module based on Intel® Atom™ E620T/ E640T/ E660T/E680T platform with DDR2 SDRAM, four PCI Express lanes, 24bit LVDS, SDVO,CAN bus, NANDrive



Portwell PQ7-M105IT is designed with Intel's ultra low power E600 series CPU and EG20T IOH. With less than 5W power consumption and -40~85 extended temperature support, it can cover the critical concern of Aerospace application which require extended temperature capability and flexible communication I/O interfaces.

## FEATURES

- Atom™ ultra low power CPU (E620T E640T/ E660T/E680T) and IOH (EG20T) total TDP is under 5W fan-less application
- Full Hardware acceleration of H.264, MPEG2/4, VC1 and WMV9 supported
- On board 512MB DDR2 supported up to 2GB
- Four PCI Express lanes supported
- CAN Bus interface supported
- SATA 4GB Solid State Drive, onboard (optional)
- Trusted Platform Module 1.2, onboard (optional)

## ORDERING GUIDE

<b>AB1-3547Z</b>	PQ7-M105IT-C1300-1024
<b>AB1-3628Z</b>	PQ7-M105IT-0600-0512
<b>AB1-3629Z</b>	PQ7-M105IT-1000-1024
<b>AB1-3630Z</b>	PQ7-M105IT-1600-1024
<b>AB1-3720Z</b>	PQ7-M105IT-0600-0512-IOH
<b>AB1-3721Z</b>	PQ7-M105IT-1300-1024
<b>AB1-3722Z</b>	PQ7-M105IT-1600-2048
<b>B8304300</b>	(GP).Heat Spreader. 70x62x8mm for PQ7-M105IT

## GENERAL

Processor	- Intel® 45nm Atom™ E680T/E660T/E640T/E620T up to 1.6 GHz (2.7 ~ 3.9W) with 512KB Cache in FC-BGA package - Integrate 400Mhz 2D/3D graphic engine - Support Intel® Hyper-Threading, Virtualization, Execute Disable Bit, and SpeedStep Technology
Chipset	- Intel® EG20T (1.55W) - Support CAN Protocol version 2.0B Active
BIOS	- AMI Aptio BIOS - Support UEFI 2.0, ACPI 3.0, SMBIOS 2.7 Compatibility Support Module
Memory	- Memory down, up to 2GB DDR2 800MT/s SDRAM
Storage Devices	- SATA 3.0 Gb/s x2 with AHCI support - Onboard SATA Solid State Drive, Up to 32 GB(Optional) - Secure Digital I/O(SDIO) x1 with Revision 1.1
Watchdog Timer	- Programmable via S/W from 1sec to 255min
Ethernet	Intel® 82574IT 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 SDVO Port up to 160 MHz pixel clock - 4x PCI Express x1 Gen1 (2.5 GT/s), - LPC Interface (4-bit-wide bus operating at 4 times the clock speed , 33.3 MHz) - 6x Host/ 1x Client Universal Serial Bus 2.0 (480 Mb/s bus comprehends the high-speed / full-speed / low-speed data ranges) - SPI Interface up to 50 MHz
Hardware Monitoring	- EMC1402 CPU and System Temperature
Power Requirement	- Typical: 5VCC, 5VSB, VBAT - Support AT and ATX mode
Dimension	70mm(L) x 70mm(W), 2.7"(L) x 2.7"(W), PCB: 10 layers
Environment	- Operation Temperature: -40~85 °C - Storage Temperature: -40~85 °C - Relative Humidity: 5~90%
MTBF	Over 120,000 hours at 40 Degree Celsius

## DISPLAY

Graphic Controller	Intel® Atom™ Processor E6xx integrated Graphic Media Accelerator 600, up to 400Mhz
Graphic Memory	Intel® Dynamic Video Memory Technology (Max 8MB UMA / Max 256MB DVMT)
Display Interface	SDVO : Resolution up to 1280x1024@85Hz LVDS : 1x 18bpp/24bpp, Resolution up to 1280x768@60Hz

