

# PCE-5020

LGA775 Intel® Core™ 2 Duo SHB  
with VGA/Dual GbE

**NEW**



## Features

- Compliant with PICMG 1.3
- Supports LGA 775 Intel Core™ 2 Duo processors with 1066 MHz FSB
- Supports Dual Channel DDR2 667 MHz SDRAM up to 4 GB
- One PCIe x16 and Four x1 to backplane
- Dual GbE LANs via PCIe x1 Lanes
- Supports 4 SATA2 Ports with S/W RAID 0, 1, 5, 10
- Supports Up To 4 Onboard COM ports

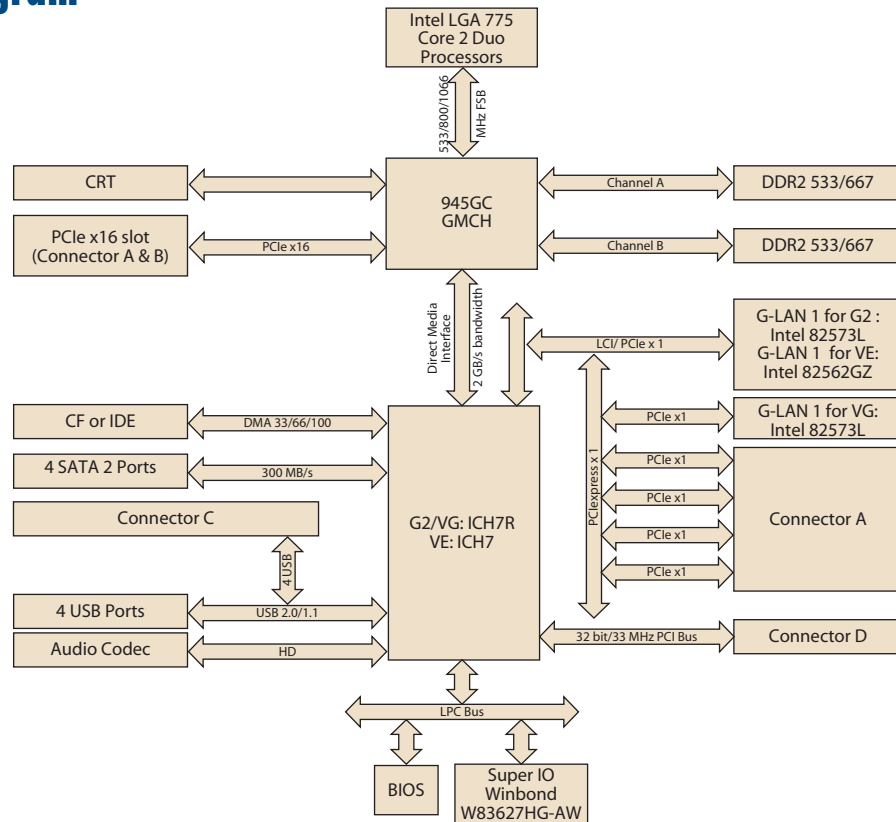
Note: Purchasing PCE-5020's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with PCE-5020.



## Specifications

|                   |                |                                                                                                                                                                            |                         |                     |                                                  |            |
|-------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------|--------------------------------------------------|------------|
| Processor System  | CPU            | Intel Core 2 Duo                                                                                                                                                           | Pentium Dual-Core       | Intel Celeron D 440 | Pentium 4                                        | Celeron D  |
|                   | FSB            | 1066 MHz                                                                                                                                                                   | 800 MHz                 | 800 MHz             | 800 MHz                                          | 533 MHz    |
|                   | Max Speed      | 2.93 GHz                                                                                                                                                                   | 2.7 GHz                 | 2 GHz               | 3.4 GHz                                          | 3.6 GHz    |
|                   | L2 Cache       | 4 MB                                                                                                                                                                       | 2 MB                    | 512 KB              | 2 MB                                             | 512 KB     |
|                   | Chipset        | VG Sku: Intel 945GC + ICH7R<br>VE Sku: Intel 945GC + ICH7                                                                                                                  |                         |                     |                                                  |            |
|                   | BIOS           | AWARD 4 Mbit FWH                                                                                                                                                           |                         |                     |                                                  |            |
| Bus               | PCIe           | One x16 and Four x1 to backplane                                                                                                                                           |                         |                     |                                                  |            |
|                   | PCI            | Four 32-bit/33 MHz PCI Masters to backplane                                                                                                                                |                         |                     |                                                  |            |
| Memory            | Technology     | Dual-channel DDR2 400/533/667 MHz DIMMs                                                                                                                                    |                         |                     |                                                  |            |
|                   | Max. Cap.      | 4 GB                                                                                                                                                                       |                         |                     |                                                  |            |
|                   | Socket         | 240-pin DIMM x 2                                                                                                                                                           |                         |                     |                                                  |            |
| Graphics          | Discrete       | PCIe x16 Graphics Card                                                                                                                                                     |                         |                     |                                                  |            |
|                   | Integrated     | Intel Graphics Media Accelerator 950                                                                                                                                       |                         |                     |                                                  |            |
|                   | VRAM           | Shared with 224 MB system memory                                                                                                                                           |                         |                     |                                                  |            |
|                   | Video Output   | 15-pin D-sub Connector x1                                                                                                                                                  |                         |                     |                                                  |            |
| Ethernet          | Interface      | 10/100/1000 Mbps                                                                                                                                                           |                         |                     |                                                  |            |
|                   | Controller     | G2 Sku: 82573L x 2<br>VG Sku: 82573L x 1<br>VE Sku: 82562GZ x 1                                                                                                            |                         |                     |                                                  |            |
|                   | Connector      | RJ-45 with LED Connector x 1                                                                                                                                               |                         |                     |                                                  |            |
| SATA              | Bandwidth      | 300 MB                                                                                                                                                                     |                         |                     |                                                  |            |
|                   | Channel        | 4 on SHB, G2/VG Sku supports S/W RAID 0, 1, 5, 10, VE Sku has NO S/W RAID                                                                                                  |                         |                     |                                                  |            |
| EIDE              | Mode           | ATA 100/66/33                                                                                                                                                              |                         |                     |                                                  |            |
|                   | Channel        | 1 (Supports up to 2 IDE devices including 1 optional CF socket)                                                                                                            |                         |                     |                                                  |            |
| I/O Interface     | USB 2.0        | 4 ports on the SHB, 4 ports on the BP                                                                                                                                      |                         |                     |                                                  |            |
|                   | Serial         | G2 Sku: 1 RS-232/422/485 and 3 RS-232 with pin headers<br>VG Sku: 1 RS-232/422/485 and 3 RS-232 with pin headers<br>VE Sku: 1 RS-232/422/485 and 1 RS-232 with pin headers |                         |                     |                                                  |            |
|                   | Parallel       | 1 (EPP/ECP)                                                                                                                                                                |                         |                     |                                                  |            |
|                   | FDD            | 1                                                                                                                                                                          |                         |                     |                                                  |            |
|                   | PS/2           | 1 (for mouse and keyboard, and Y-cable is included in the package)                                                                                                         |                         |                     |                                                  |            |
|                   | Watchdog Timer | Output                                                                                                                                                                     | Interrupt, system reset |                     |                                                  |            |
| Miscellaneous     | Interval       | Programmable 1, 2, 4, 8, ..., 256 sec                                                                                                                                      |                         |                     |                                                  |            |
|                   | Audio Output   | Intel High Definition audio interface (requires an audio extension module P/N: PCA-AUDIO-HDA1E)                                                                            |                         |                     |                                                  |            |
| Power Requirement | CPU            | Pentium D 3.2 GHz / 2 MB L2/ 800 MHz FSB / 130 W TDP                                                                                                                       |                         |                     |                                                  |            |
|                   | Memory         | DDR2 667 MHz 1 GB x 2                                                                                                                                                      |                         |                     |                                                  |            |
|                   | Voltage        | +12 V                                                                                                                                                                      | +5 V                    | +3.3 V              | +5 VSB                                           | -12 V -5 V |
|                   | Current        | 15 A                                                                                                                                                                       | 2 A                     | 20 A                | 0.7 A                                            | 0 A 0 A    |
| Environment       | Temperature    | Operating                                                                                                                                                                  |                         |                     | Non-Operating (Storage)                          |            |
|                   |                | 0 ~ 60° C (32 ~ 140° F) (operation humidity: 40° C @ 85% RH Non-Condensing)                                                                                                |                         |                     | -40° C ~ 85° C and 60° C @ 95% RH Non-Condensing |            |
| Physical          | Dimensions     | 338.58 mm (L) x 126.39 mm (W) (13.3" x 4.98")                                                                                                                              |                         |                     |                                                  |            |

## Board Diagram



## Ordering Information

| Part Number      | LAN        | S/W RAID | VGA | COM |
|------------------|------------|----------|-----|-----|
| PCE-5020G2-00A1E | Dual GbE   | Yes      | Yes | 4   |
| PCE-5020VG-00A1E | Single GbE | Yes      | Yes | 4   |
| PCE-5020VE-00A1E | Single FE  | -        | Yes | 2   |

## Bracket View



PCE-5020VG-00A1E  
PCE-5020VE-00A1E



PCE-5020G2-00A1E

## Packing List

| Part Number | Description                            | Quantity |
|-------------|----------------------------------------|----------|
| 1700340640  | FDD cable                              | x 1      |
| 1700003194  | Serial ATA HDD data cable              | x 2      |
| 1703150102  | Serial ATA HDD power cable             | x 2      |
| 1701260305  | COM + printer ports cable kit          | x 1      |
| 1701092300  | Dual COM Cable Kit (For G2 and VG Sku) | x 1      |
| 1700060202  | Keyboard and mouse Y-cable             | x 1      |
| 1700008461  | 4-port USB cable kit                   | x 1      |
| 1701400452  | Ultra ATA 66/100 flat cable            | x 1      |
| 9689000068  | Jumper package                         | x 1      |
| 2002721020  | User Note for Full-Sized CPU Card      | x 1      |
| -           | Warranty Card                          | x 1      |
| -           | Startup manual                         | x 1      |
| -           | Utility CD                             | x 1      |

## Accessories

| Part Number     | Description                                                                                  |
|-----------------|----------------------------------------------------------------------------------------------|
| 1701092300      | Single COM Cable Kit                                                                         |
| PCA-AUDIO-HDA1E | Audio extension module                                                                       |
| 1960021193T000  | PCE-5020 Proprietary CPU Cooler for Core 2 Duo/Pentium Dual-Core/Celeron 400 CPUs (TDP=<65W) |
| 1750000400      | PCE-5020 Proprietary CPU Cooler for Pentium 4 CPUs (TDP=<115W)                               |

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