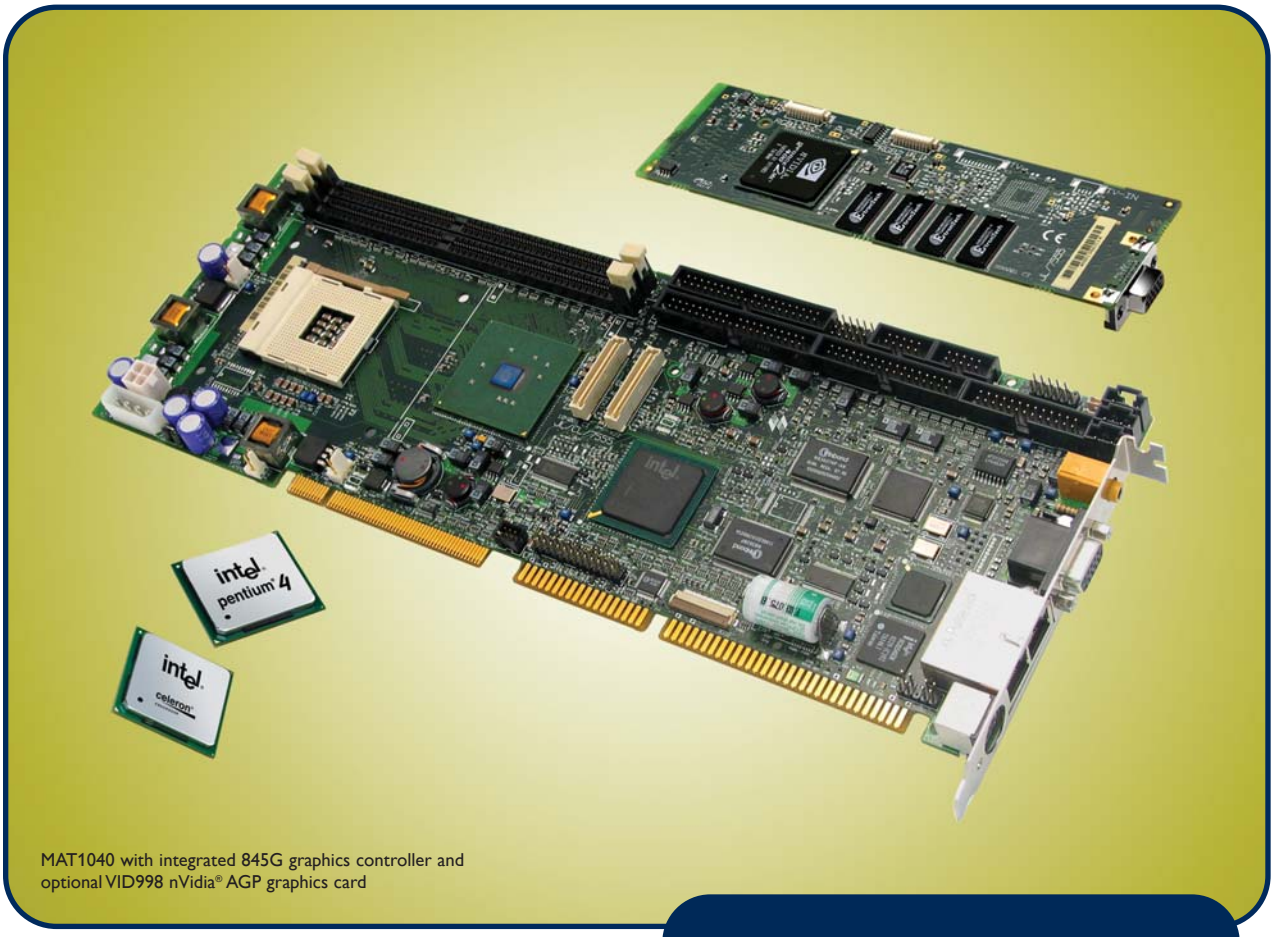
MAT 1040

• Pentium® 4 3GHz • Dual 1G Ethernet • AGP



MAT1040 with integrated 845G graphics controller and optional VID998 nVidia® AGP graphics card

- Intel® Pentium® 4 up to 3GHz
- Intel® 845G Chipset
- Twin 10/100 / 1Gbit Intel® Ethernet
- CompactFlash™ (Type I and Type II)
- 2GB DDR (PC266 for 845G chipset)
- Video options including nVidia® & ATI
- 4 USB ports & audio

The feature-rich MAT 1040 PICMG® single board computer combines powerful Pentium® 4 processor technology with the Intel 845G chipset. Video support, provided by the on-board integrated 845G graphics controller, can be further enhanced via the optional VID998 and VID1080 AGP daughter cards. Both offer high performance video options and support the nVidia® Geforce2 and ATI 7500 and 9000 controllers respectively. Features include dual display architecture, DFP/LVDS support and video capture.

Socket 478 Pentium® 4 processors up to 3GHz and Socket 478 Celeron® processors are supported.

The board also provides two DDR DIMM sockets for up to 2GB of memory.

Dual PCI Ethernet

The board's two Ethernet ports can be populated with either Intel 82551QM/82551ER PCI 10/100Mbit or Intel 82540EM 10/100/1G Ethernet controllers.

CompactFlash™

Supporting CompactFlash™ Type I and II allows use of IBM® 1Gbyte Microdrive™ or CompactFlash™ cards from 16MB through to 6GB or more. The CompactFlash™ card is configured as an EIDE device and therefore is transparent to the operating system.

NIB ISO9001 UKAS 015 CE PICMG

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Designed and manufactured in the UK

Microbus
Better by design

MAT 1040

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Technical Specifications

Processor(s)	Socket 478 Pentium® 4 up to 3GHz and Socket 478 Celeron® processors
Chipset	Intel 845G
Memory/RAM	Up to 2G in two 64-bit SDRAM DDR and DRAM sites
Pentium® 4 cache	20KB level 1 & 512KB level 2
Celeron® cache	20KB level 1 & 128KB level 2
BIOS	Award®, stored in Flash memory
EIDE	PCI bus master ATA100 to 4 ATA devices
Sound system	Line In, Line Out, Mic In (with preamp), Speaker Out
CompactFlash™	Type I or Type II
Dual Ethernet	10/100 or 10/100/1G
Onboard video	Intel 845G
AGP video options	1. VID998 - nVidia® GeForce2 MX 400, 2. VID1060 - ADD card for DFP/LVDS panel support. 3. VID1080 - ATI Mobility Radeon™ flat panel controller
Diskette interface	2 devices, each up to 2.88MB
USB	4 ports, USB 1 or USB 2
Parallel port	AT bi-directional, EPP & ECP
Serial ports	1 RS232 16C550 compatible 1 RS232/RS485/Infra red, BIOS setup-selectable
Keyboard & mouse	Combined into a single AT & PS/2 compatible mini-DIN & header, 500mA self-healing fuse
Bus speeds	PCI 33MHz, ISA 8.33MHz, Processor: 400MHz or 533MHz
Battery	3.6V on- or off-board
Speaker	15 Ohm off board
Thermometer	Measures processor temperature
Software watchdog	Programmable via BIOS call
Voltage watchdog	Monitors 1.25, 2.5, 3.3, 5 & CPU core voltages
Dimensions	340 x 120mm (13.3 x 4.8 inches)
Environment	0 to 70°C operating -20 to 100°C storage RH 0 to 95% non condensing
Power required	+5V and +12V supplies
PSU support	ATX power on/off
CE Mark	EMC Class B

OEM features

The MAT 1040 integrates Microbus OEM features for automatic recovery, best effort boot, software readable serial number and automatic revision control. Self protection mechanisms include self healing fuses and static discharge protection. Thermal management includes monitoring of CPU temperature and fan speed, and automatic CPU clock throttling.

Operating system support

By using industry standard hardware, the MAT 1040 is compatible with PC operating systems.

AGP Video

While there is an integrated AGP/DVD header to support the VID998 and VID1080 AGP daughter cards, the graphics functionality of the 845G chipset can also be used for on-board video. Other AGP video modules add 2D/3D acceleration and flat panel support featuring either direct digital or external DFP/DVI (Digital Flat Panel based on PanelLink™) interfaces.

PCI EIDE & other standard features

The PCI bus master ATA100 EIDE controller supports four devices, including hard disk, CD-ROM, LS and Zip drives. Two serial, parallel, 4 USB, IrDA, keyboard and mouse ports are supported as standard.

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