

MAT 1100

Pentium® M 0.6 to 2.1GHz •
Dual 1G Ethernet • AGP • SAS



The feature-rich MAT 1100 PICMG® single board computer combines powerful Pentium® M processor technology with the Intel 855GME chipset. Video support, provided by the on-board integrated 855GME 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 479 Pentium® M processors up to 2.1GHz and Socket 479 Celeron® M 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.

- Intel® Pentium® M up to 2.1GHz
- Intel® 855GME Chipset
- Dual 10/100 / 1Gbit Intel® Ethernet
- CompactFlash™ (Type I and Type II)
- 4 USB ports & audio • 2GB DDR
- Video options including nVidia® & ATI
- SAS (Serial Attached SCSI), SATA

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.

This is a preliminary specification only and hence is subject to change without notice.



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Designed and manufactured in the UK



Microbus
Better by design

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Technical Specifications

Processor(s)	Socket 479 Pentium® M up to 2.1GHz and Socket 479 Celeron® M processors	Parallel port	AT bi-directional, EPP & ECP
Chipset	Intel 855GME	Serial ports	1 RS232 16C550 compatible 1 RS232/RS485/Infra red, BIOS setup-selectable
Memory/RAM	Up to 2G in two 64-bit SDRAM DDR and DRAM sites	Keyboard & mouse	Combined into a single AT & PS/2 compatible mini-DIN & header, 500mA self-healing fuse
Pentium® M cache	32KB level 1 & 2MB level 2	Bus speeds	PCI 33MHz, ISA 8.33MHz, Processor: 400MHz
Celeron® cache	32KB level 1 & 512KB level 2	Battery	3.6V on- or off-board
BIOS	Award®, stored in Flash memory	Speaker	15 Ohm off board
EIDE	PCI bus master ATA100 to 4 ATA devices	Thermometer	Measures processor temperature
SAS/SATA	4 SAS/SATA devices	Software watchdog	Programmable via BIOS call
Sound system	Line In, Line Out, Mic In (with preamp), Speaker Out	Voltage watchdog	Monitors 1.25, 2.5, 3.3, 5 & CPU core voltages
CompactFlash™	Type I or Type II	Dimensions	340 x 120mm (13.3 x 4.8 inches)
Dual Ethernet	10/100 or 10/100/1G	Environment	0 to 70°C operating -20 to 100°C storage RH 0 to 95% non condensing
Onboard video	Intel 855GME Extreme Graphics 2	Power required	+5V
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	PSU support	ATX power on/off
Diskette interface	2 devices, each up to 2.88MB	CE Mark	EMC Class B
USB	4 ports, USB 1 or USB 2		

* Please refer to the 'Advanced Graphic Options' datasheet

OEM features

The MAT 1100 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 1100 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 855GME 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.



Microbus plc
Treadaway Hill, Loudwater,
High Wycombe, Bucks HP10 9QL UK
Tel: +44 (0) 1628 537333
Fax: +44 (0) 1628 537334
email: sales@microbus.com
www.embedded-pc.com

Microbus Inc
10849 Kinghurst Suite 105,
Houston, Texas 77099 USA
Tel: +1 (800) 688-4405 or (281) 568-4744
Fax: +1 (281) 568-4604
email: sales@microbus-usa.com
www.embedded-pc.com



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