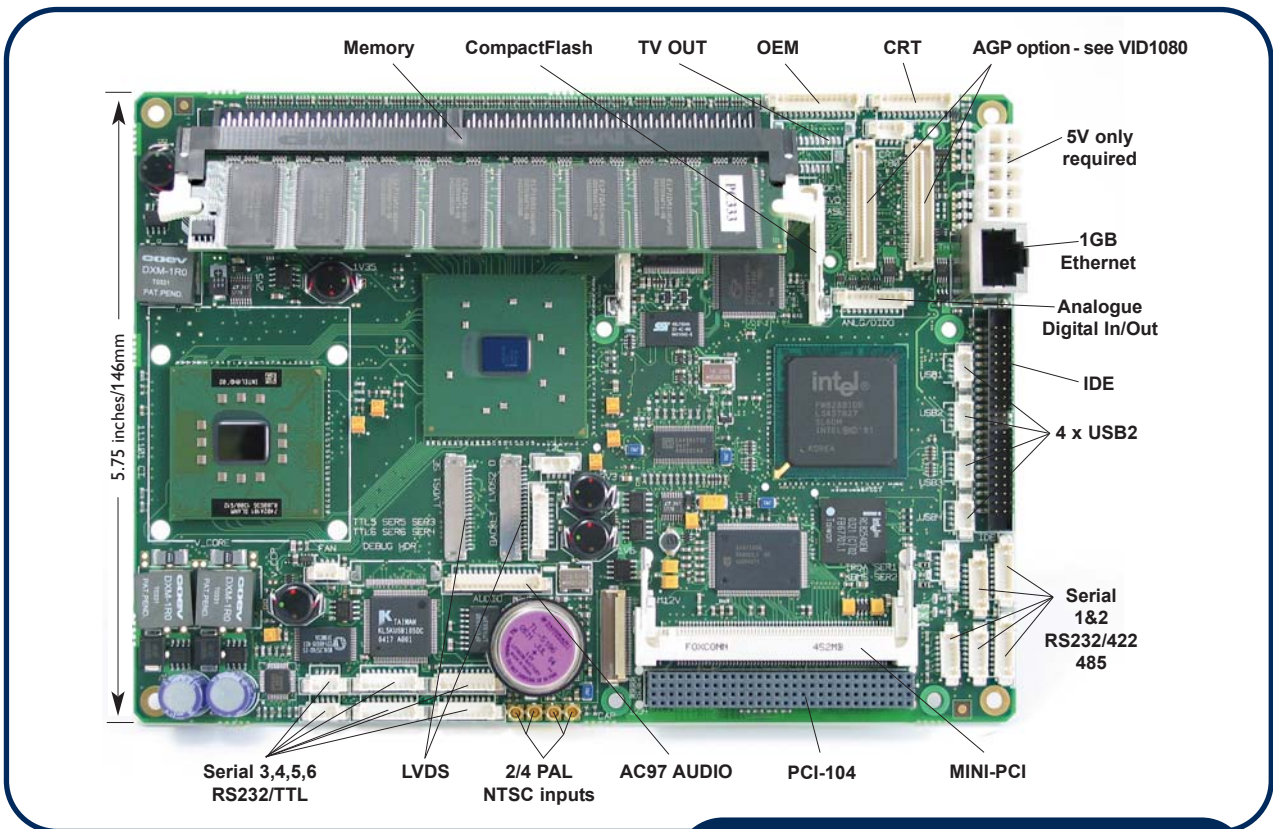


MAT 1111

- Pentium M® 1.1 to 2.1GHz
- 1G Ethernet
- Video capture



The MAT 1111 Intel® Pentium® M EBX-sized single board computer from Microbus offers the highest performance and levels of integration available combined with low power consumption. Based on the Intel® 855GME chipset, the MAT 1111 features on board graphics, LVDS, DFP/DVI, 4 video inputs on 2 channels, 6 serial channels, 4 USB, 1Gbit Ethernet, AC97 sound, disk and CompactFlash. Expansion can be simply achieved via Mini PCI or PCI-104 connection on the board.

AGP graphics performance can be enhanced using Microbus graphics solutions that use the ATI 7500 or the ATI 9000. Converter boards to standard connectors are available for the ports on the MAT 1111.

- Intel® Pentium® M 1.1 to 2.1GHz
- Intel® 855GME Chipset, 1GB DDR
- 10/100/1Gbit Intel® Ethernet
- CompactFlash™ (Type I and Type II)
- Two video capture channels, 4 inputs
- Video options including ATI
- Mini-PCI or PCI104 expansion



Power management

The MAT 1111 uses the Intel® Pentium® M and Celeron® processor range from 0.6 to 2.1GHz, and combined with ACPI power management and ATX power control, supports the development of low power, high performance Embedded-PC solutions. With an I2C header there is a suitable interface to use Texas Instruments' Gas Gauge technology.

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



www.embedded-pc.com

Designed and manufactured in the UK



Microbus
Better by design

MAT 1111

Pentium M® 0.6 to 1.8GHz 1G Ethernet • Video capture

Technical Specifications

Processor(s)	Intel® Centrino-compatible Pentium® M 1.1GHz (12W), 1.4GHz (10W), 1.8GHz (21W), 2.1GHz (26W) Celeron 600MHz (5W)	Serial ports (6)	COM 1/2 - RS232 or RS422/485 COM 3/4 - RS232 COM 5/6 - RS232 or TTL
Chipset	Intel 855GME	Expansion	Mini PCI, PCI-104
Memory/RAM	Up to 1GB in one 64-bit SDRAM DDR	Keyboard & mouse	Combined into a single 8-way molex header, 500mA self-healing fuse
BIOS	Phoenix/Award®	Bus speed	400MHz FSB
EIDE	PCI bus master ATA100 to 2 ATA devices • 44 pin notebook style	CMOS Battery	3.6V
Sound system	Sound AC97 supporting Line In, Line Out, Mic In & Speaker Out	Speaker	Sound AC97
CompactFlash™	Type I or Type II	Thermometer	Measures processor temperature
Ethernet	Intel 10/100/1Gbit	Software watchdog	Programmable via BIOS call
Onboard graphics	Intel® Extreme Graphics 2 - CRT, LVDS	Voltage watchdog	Monitors 1.25, 2.5, 3.3, 5 & CPU core voltages
AGP options*	1) ATI 9000 - Dual CRT, LVDS, DFP 2) ATI 7500 - Dual CRT, LVDS, DFP	Dimensions	204 x 146mm (8 x 5.75 inches)
USB	4 USB 2/1.1	Environment	0 to 70°C operating -30 to 80°C option -40 to 100°C storage RH 0 to 95% non condensing
Frame grabbers	2 Philips 7130 (4 inputs)	Power required	+5V only
Digital I/O	4 inputs/outputs	PSU support	ATX power on/off
Analogue I/O	4 inputs	CE Mark	EMC Class B

* Please refer to the 'Advanced Graphic Options' datasheet

Mechanical size

Using the EBX footprint, the card is compact and compatible with EBX mounting holes. The low profile memory uses a single sloping DIMM.

Graphics

The integrated Intel® Extreme Graphics 2 on the 855GME chipset supports RGB output, TV Out and LVDS. For more demanding applications, Microbus has developed high performance graphics cards based on the ATI 9000 and ATI 7500. As well as high performance and dedicated video memory, these cards include video output flexibility by supporting dual RGB displays, DFP/DVI output and one and two channel LVDS.

Serial channels

The six serial channels are split into two groups. COM1 and COM2 are hardware compatible with the PC/AT serial channel architecture using discrete interrupts and I/O addresses. These channels may be software selected to support RS232 or RS422/485. COM3, 4, 5 and 6 are based on a USB channel. As standard they are configured to support RS232.

COM5 and 6 may be software selected to support TTL or TTL inverted. There is no filtering on the board; this is placed on the remote connector boards. This allows customers to meet demanding EMC specifications with external filtering.

Video

The Philips 7130 video input chips on the PCI bus support two full speed input channels (25/30 fps), each of which may be multiplexed to two. The use of high quality micro headers helps to maintain signal quality to the board.

Disk and Compact Flash

The 2mm header on the board supports direct interface to one or two compact 2.5 inch drives and/or CDs. A CompactFlash connector for Flash IDE drives and MicroDrives is provided on the secondary channel and can be used as a boot device. Type I or type II cards can be used.

Ethernet

10/100/1Gb Ethernet is supported by an onboard RJ45 connector. Remote activity LEDs can be taken off a header for external indication.

USB and PXE boot

The system supports USB and PXE boot with controllable options which can be enabled in the BIOS settings. Both options support boot from external drives, for example from a PXE network device or external FLASH devices. These features can be disabled to ensure security.



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