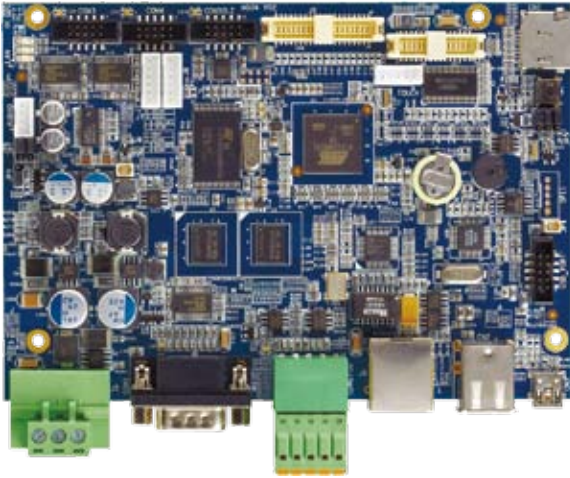


# M-606 Industrial ARM9 WinCE 6.0 Single Board Computer



- ▶ Windows CE 6.0 with file system
- ▶ Support .NET Compact Framework 2.0

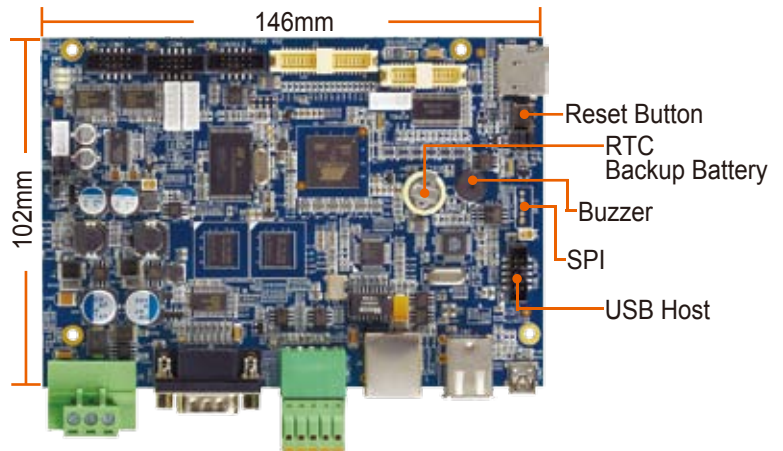
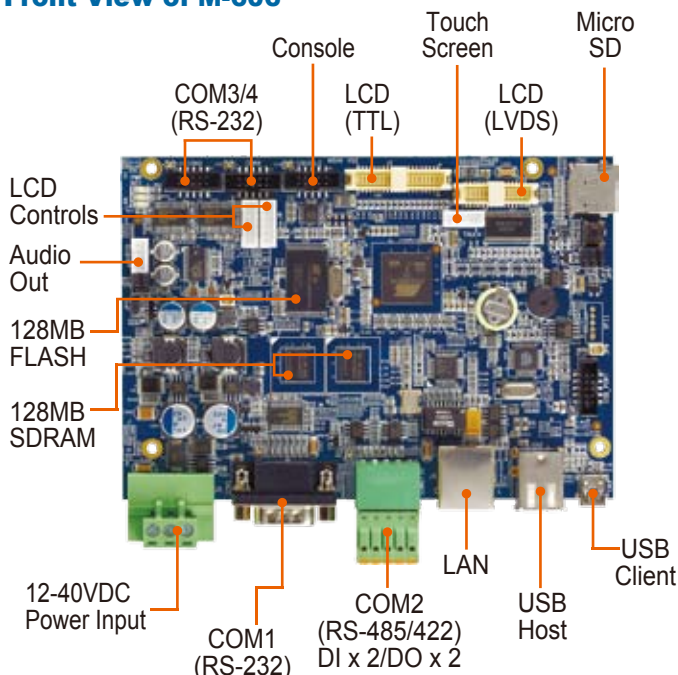
- ▶ ATMEL 400MHz AT91SAM9G45 CPU w/ MMU
- ▶ 128MB SDRAM/128MB NAND Flash
- ▶ 2MB DataFlash for system recovery
- ▶ On-board real-time clock w/ backup battery
- ▶ Supports up to 1280 x 860 LCD and touch screen
- ▶ Supports LVDS
- ▶ 1 x 10/100Mbps Ethernet
- ▶ 3 x RS-232 ports, 1 x RS-422/485 port
- ▶ 4 x USB Hosts supporting high speed of 480Mbps
- ▶ 1 x micro SD socket
- ▶ 4 x GPIOs
- ▶ Low power consumption of 200mA
- ▶ Standard 3.5" form factor (LxW): 146 x 102mm



## Overview

The M-606 is a standard 3.5" form factor ready-to-use WinCE 6.0 Single Board Computer, which is powered by a 400MHz ARM9 CPU (ATMEL AT91SAM9G45) and equipped with 128MB SDRAM, 128MB NAND Flash, and 2MB DATAFlash. The M-606 comes with on-board TTL/LVDS LCD interface, which can drive 5V or 12V-powered LCD panels, up to 1280 x 860 resolution. The M-606 is an ideal choice for mission-critical industrial applications where HMI (Human Machine Interface) is necessary. The M-606 also provides some enhanced command-line utilities, which can help users manage user accounts, configure network interface, or update kernel and file system. The M-606 supports .NET Compact Framework 2.0, users application can be developed by VB.Net, C# or C/C++ programming languages.

## Front View of M-606



## Hardware Specifications

### CPU/Memory

CPU: ATMEL 400MHz AT91SAM9G45 w/MMU  
SDRAM: 128MB  
NAND Flash: 128MB  
DataFlash@: 2MB, for system backup

### Network Interface

Type: 10/100Mbps Ethernet, RJ-45 connector  
Protection: 1.5KV magnetic isolation

### COM Ports

3 x RS-232 (Port 1, 3, 4)  
1 x RS-422/485 (Port 2)  
Connector: One DB9 and two 10 pins header (male) for RS-232  
Terminal Block for RS-422/485

### COM Port Parameters

Baud Rate: up to 921.6Kbps  
Parity: None, Even, Odd, Mark, Space  
Data Bits: 5, 6, 7, 8  
Stop Bit: 1, 1.5, 2  
Flow Control: RTS/CTS, XON/XOFF, None  
RS-485 Direction Control: auto, by hardware

### USB Ports

Hosts: Four, USB 2.0 compliant  
Speed: low speed (1.5Mbps), full speed (12Mbps) and high speed (480Mbps)  
Client Port: One USB 2.0  
Speed: high speed (480Mbps)

### Display Interface

LCD Resolution: Up to 1280x860 TFT  
Interface Signal: 24-bit TTL/CMOS and LVDS  
Touch Screen: 4-wire touch screen

### General-Purpose IOs (GPIO)

No. of Pins: 4  
Signal Level: CMOS/TTL compatible  
Each pin can be programmed as input or output

### General

Watch Dog Timer: Yes  
Real Time Clock: Yes, with backup battery  
Buzzer: Yes  
Power Input: 12-40VDC  
Power Consumption: 200mA@12VDC  
Dimensions: 146 x 102mm  
Operating Temperature: 0 to 70°C (32 to 158°F)

## Software Specifications

### General

OS: Windows CE 6.0  
RAM-based File System: >30MB free space available  
NAND-based File System: >90MB free space available

### Ready-to-use Network Services

Web Server: supports ASP  
Telnet Server  
FTP Server

### Artila Enhanced Command Mode Utility

ifconfig: to modify the network interface settings  
usrmgr: to create and manage user accounts  
update: to update the kernel image and file system  
init: to organize the application programs which runs automatically after system boot-up.  
gpioctrl: to control the M-606's GPIOs

### Application Development & Deployment

Development: It is recommended to use Microsoft Visual Studio 2005 for application development. The M-606 comes with its own SDK for C/C++ programming language.

Deployment: The application program can be transferred to the M-606 either by ActiveSync or USB pen drive locally or by FTP remotely.

### USB Host Drivers

Generic Flash drive  
RS-232 adaptors (for Prolific PL-2303 compatibles)  
WiFi dongles (by custom request)

## Ordering Information

**M-606**

Industrial WinCE 6.0 ARM9 Single Board  
Computer

## Pin Assignments

### DB9 Male RS-232

PIN	RS-232
1	DCD
2	Rx
3	Tx
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	---

