





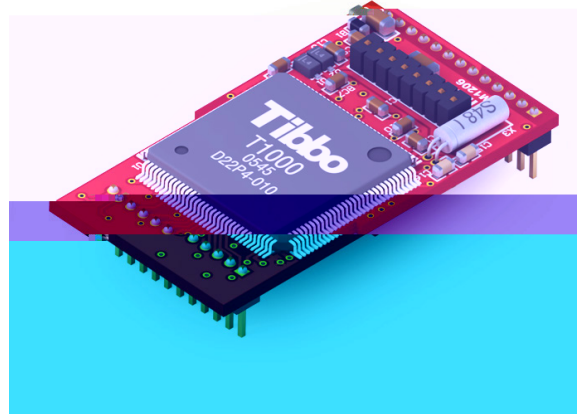




## Features

-  10/100BaseT Ethernet port
-  Flash disk and RTC onboard
-  Four serial ports; up to 17 I/O lines
-  Supports Wi-Fi, LCD, keypad, buzzer
-  Mates with RJ203 jack/magnetics
-  Very compact (33.2x18.1x5.5mm)



## About

The EM1206 is a miniature BASIC-programmable embedded module. In combination with the RJ203 jack/magnetics, the EM1206 occupies only 34.5x19 mm of board space. Alternatively, the EM1206 can be used with any suitable magnetics and jack.

The module's hardware mix, which includes 100Base/T Ethernet, four serial ports, flash disk, EEPROM, and RTC, has been carefully tailored to address the typical needs of network-enabled control applications.

This makes the EM1206 especially suitable for "connected" edge products such as sensors, network-enabled card readers, actuators, and other lightweight devices.

The EM1206 can also support Wi-Fi communications (this requires GA1000 add-on board), as well as external LCD, keypad, and buzzer.

The EM1206 can be ordered standalone or in combination with the RJ203 module.

*Not available in the U.S.*

## Specifications

Based on a high-performance purpose-built 88-MHz ASIC (T1000).

10/100BaseT auto-MDIX Ethernet port (no magnetics).

Four high-speed serial ports (CMOS-level):

- Baudrates of up to 921,600bps;
- None/even/odd/mark/space parity modes;
- 7/8 bits/character modes;
- Full-duplex mode with optional flow control;
- Half-duplex mode with direction control;
- Encoding and decoding of Wiegand and clock/data streams.

Up to 1024KB flash memory for firmware, application, and data.

2KB EEPROM for data storage.

RTC with backup power input.

Supports external LCD and keypad.

Programmable square-wave output for external buzzer.

Up to 17 general-purpose I/O lines (including 8 interrupt lines).

Control lines for two external status LEDs.

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## Specifications (continued)

Four status LEDs onboard:  
Green and red status LEDs;  
Green and yellow Ethernet status LEDs.  
Optional Wi-Fi interface (requires GA1000 add-on module).  
Software-controlled onboard PLL.  
Reliable power-on/brown-out reset circuit.  
Power: 230mA @ 3.3V (100BaseT mode, PLL on).  
Dimensions: 33.2x18.1x5.5mm.  
Firmware is upgradeable through the serial port or network.

## Programming

### Platform Objects

Sock — socket comms (up to 16 UDP, TCP, and HTTP sessions).  
Net — controls Ethernet port.  
Wln — handles Wi-Fi interface (requires GA1000 add-on module)  
Ser — up to 4 serial channels (UART, Wiegand, and clock/data modes).  
IO — handles I/O lines, ports, and interrupts.  
Kp — scans keypads of matrix and “binary” types.  
Rtc — keeps track of date and time.

Fd — manages flash memory file system and direct sector access.  
Stor — provides access to the EEPROM  
Romfile — facilitates access to resource files (fixed data).  
Pat — “plays” patterns on up to five LED pairs.  
Beep — generates buzzer patterns.  
Button — monitors MD line (setup button).  
Sys — in charge of general device functionality.

### Function Groups

String functions (21 in total!), date/time conversion functions, and hash calculation functions (md5 and sha1).

### Variable Types

Byte, char, integer (word), short, dword, long, real, string, plus user-defined arrays and structures.

## Tibbo Integrated Development Environment (TIDE)

All BASIC-programmable Tibbo devices are provided with free TIDE software.

### Code in Comfort

Enjoy a modern code editor supporting syntax highlighting, context help, code hinting, and auto-completion.

### Debug with Ease

Set breakpoints, watch variables, inspect the stack, step through your code... the built-in debugger in Tibbo IDE provides all the tools for fast and convenient debugging.

Our debugger does not rely on any special hardware like an ICE machine or a JTAG board. Simply connect your Tibbo device to the Ethernet, select it in the IDE, and you are all set!

For more information on TIDE, see <http://basic.tibbo.com/product/tide.html>