

EM1000 Ethernet Module

Introduction

The EM1000 is a third-generation Tibbo Ethernet module built exclusively for use with TAIKO -- Tibbo's rapid programming solution that includes [Tibbo BASIC](#) language, [Tibbo IDE](#) software, and [TiOS](#) operating system.

The hardware of the EM1000 offers all necessary components to build a full-featured data collection/ control/ automation system equipped with serial ports, card reader inputs, digital I/O, keypad, LCD, buzzer, and real-time clock.

50 MIPS of processing power, 100BaseT Ethernet, and high-speed UARTs deliver the performance suitable for demanding real-time applications, while multi-process TiOS operating system ensures operational stability and responsiveness not always found even on larger and much more expensive systems.

Powerful Hardware...

- Compact dimensions (38.4x28.4x5.5mm).
- 50 MIPS purpose-built CPU.
- One 100BaseT Ethernet port.
- x4 high-speed TTL serial ports:
 - Baudrates up to 1.8Mbps;
 - Full- and half-duplex comms*;
 - Support for Wiegand, clock/data i/f;
 - Optional automatic flow control.
- 512/1024K onboard flash disk.
- Real-time clock with backup power**.
- SPI port for future extensions.
- x49 general-purpose I/O lines.
- x4 status LED control lines.
- Variable-frequency buzzer control pin.
- Low-power (230mA@3.3V).
- Internal firmware is upgradeable through the serial port or network.
- [EM1000-SK Starter Kit](#) available.

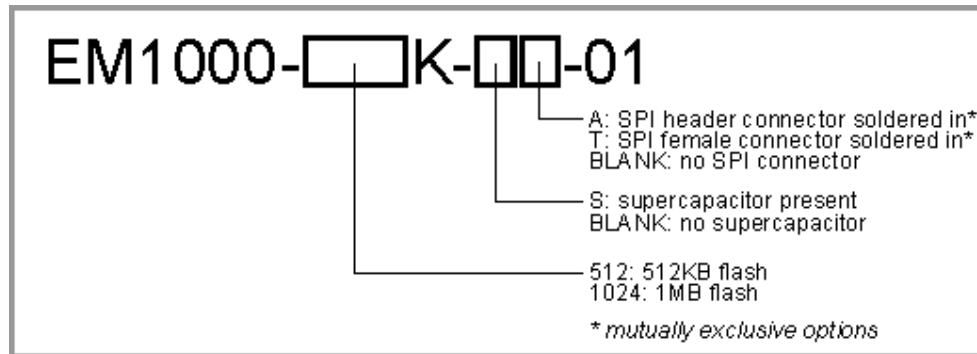


Programmable in Tibbo BASIC

- Executes **your** application written in Tibbo BASIC.
- **Absolute flexibility** - think of the EM1000 as a miniature computing platform.
- Supplied with [TIDE](#) -- a comprehensive development environment featuring seamless cross-debugging.
- Integrated web server (HTTP) with dynamic content generation.
- Numerous high-level objects speed up and simplify coding. Available objects include:
 - **Sock**- up to 16 simultaneous TCP or UDP connections;
 - **Ser**- UART communications;
 - **Io**- control serial port lines;
 - **Stor**- read to and write from the EEPROM;
 - **Romfile**- add static (ROM) data to your project;
 - And [more](#)...
- Learn about programming with Tibbo BASIC [here](#).

Ordering Info and Specifications

The EM1000 has several versions available. Device numbering scheme is as follows:



Examples of valid model numbers

Model number	Description
EM1000-512K-01	EM1000 module with 512KBytes of flash memory
EM1000-1024K-S-01	EM1000 module with 1024KBytes of flash memory and the supercapacitor (backup power source for the RTC)
EM1000-512K-SA-01	EM1000 module with 512KBytes of flash memory, supercapacitor, and SPI port header soldered in

* Full-duplex mode is suitable for RS232 and RS422 comms., half-duplex mode- for RS485 comms. RS232/422/485 transceivers are **not** built in.

** '-S' modification of the EM1000 features onboard backup supercapacitor.

* Earlier EM1000 modification -- EM1000-...-00 -- is no longer in production and have been superseded by newer "-01" devices.

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