

# EM100 Ethernet Module

## Introduction

The EM100 is an **Ethernet Module** for onboard installation. Measuring only 46x28x13 mm, the EM100 adds a 10BaseT Ethernet port to any serial device and is compact enough to fit practically on any PCB. The Module is highly integrated and requires only one external component- a RJ45 connector. The EM100 features a TTL serial port and interfaces directly to the serial port pins of UARTs, microprocessors, and microcontrollers.



## Hardware Features

- Board-level component, installs on the internal board (PCB) of your serial device
- Very compact, dimensions only 46x28x13mm
- Can be used as a communications coprocessor or as a main building block of a standalone device, similar to the [DS100](#)
- One 10BaseT Ethernet port (standard magnetics included)
- One serial (TTL) port with full-duplex and half-duplex modes, baudrates of up to 115200bps. Available lines: TX, RX, RTS, CTS, DTR, DSR
- Internal EEPROM to store functioning parameters (Settings)
- Internal firmware can be upgraded through the serial and Ethernet ports
- Low power consumption: 40mA at 5V DC
- Supplied with [Device Server Toolkit \(R3\)](#) software for *Windows*
- [EM100SK Starter Kit](#) available
- CE and FCC-approved

## Firmware Features\*

- Supports UDP, TCP, APR, ICMP (ping), and DHCP protocols
- Transparently routes the data between Ethernet and serial ports
- Numerous user-definable parameters (Settings) to fine-tune Device operation
- Settings can be edited through the serial port or via the network
- Over-the-network configuration of IP-address
- Plus many other new features introduced in the [Release3 firmware...](#)

\*These features are actually delivered by the [application firmware](#) loaded into the EM100

## Applications

The EM100 can be used to network-enable practically any serial device, such as...

- Data collection & security terminals:
  - Access Control Terminals
  - Security Devices
  - Time Recorders
  - Warehouse Terminals
  - Shop floor automation Terminals
- Remote Sensors & Meters:
  - Power monitors
  - Power meters
  - Environmental monitors
  - Temperature monitors
  - Data loggers
- Auto-ID Scanners:
  - Barcode Scanners
  - Magnetic Card Readers
  - RFID Readers
- Electronic Signboards
- PC-less entry systems
- Low-cost educational systems
- Vending Machines
- POS Systems
- Laboratory instruments
- Serial printers
- PBX Stations
- and many, many others...

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