DS1000 BASIC-Programmable Multi-port Controller

Tibbo TECHNOLOGY

Features

- 10/100BaseT Ethernet port
- IP68-compliant, -30C to +80C range
- Free serial-over-IP Tibbo BASIC application available
- DS1000: Four RS232 ports
- DS1002: Four RS232/422/485 ports
- DS1003: Four isolated RS232/422/485 ports

About

Featuring four RS232 ports, the DS1000 is the first member of Tibbo's new family of BASIC-programmable Industrial Controllers.

The DS1000 is a winning combination of substance and style. Rugged yet streamlined, its IP68-compliant housing combines mechanical strength with an elegant appearance that will set the DS1000 apart from other devices on your DIN rail.

As for what the DS1000 actually does – this is all up to you. Device operation is wholly determined by whatever Tibbo BASIC application is currently loaded.

The product comes preloaded with a fully functional serial-over-IP application. DS1002 and DS1003 versions of the device will be available soon.

Specifications

- Based on the EM1000 BASIC-programmable embedded module.
- 10/100BaseT, auto-MDIX Ethernet port.
- Serial ports:
    - DS1000: four RS232 serial ports;
    - DS1002: four non-isolated RS232/422/485 serial ports;
    - DS1003: four optically isolated RS232/422/485 serial ports.
- 1024KB flash memory for firmware, application, and data storage.
- 2KB EEPROM for data storage.
- RTC with backup supercapacitor.
- Built-in buzzer.

- Numerous status LEDs (16 in total!).
- Power: 10-24V.
- Dimensions: 91x104x99mm (excluding secondary cover).
- Extruded profile aluminum body.
- IP68 compliant (when used with secondary cover).
- Firmware is upgradeable through the serial port or network.
- Included accessories:
    - DS1000 waterproof kit with secondary cover, cable glands, screws.
    - DS1000 DIN rail mounting kit.

Specifications (continued)

- Optional Accessories:
  - TB1000 terminal block adaptor.
  - 12V/1A adaptor: APR-P0008 (US), APR-P0009 (EU), APR-P0010 (UK).
  - WAS-1499 straight Ethernet cable (for this device can be used as crossover cable too).
  - WAS-P0004(B) DB9M-to-DB9F serial cable (device-to-PC).
  - WAS-P0005(B) DB9F-to-DB9F serial cable (device-to-device).

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 ports (UART, Wiegand, and clock/data modes).
- Io — handles I/O lines, ports, and interrupts.
- Lcd — controls graphical display panels (several types supported).
- 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