DS1206 BASIC-programmable Controller

Tibbo TECHNOLOGY

Features

- 10/100BaseT Ethernet port

- Compact (60x47x30mm)

- Up to 3.5 serial channels

- Superior upgrade to DS203/1202

- Power input/output through RS232 port

- Free serial-over-IP Tibbo BASIC application available
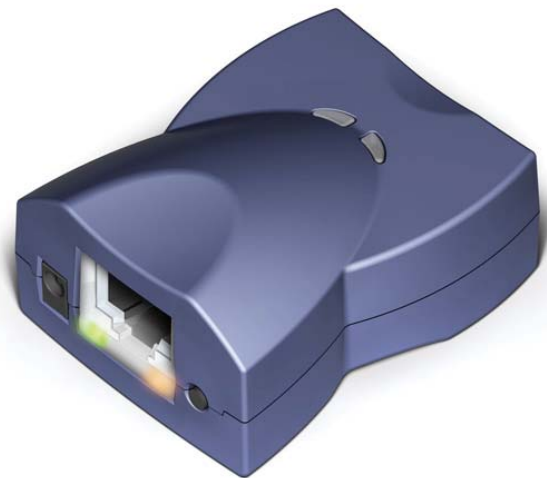
About

The DS1206 is a miniature BASIC-programmable controller designed primarily for serial-over-IP and serial control applications. It comes preloaded with a fully functional serial-over-IP application.

The unique feature of the DS1206 is its multi-channel serial port. The device has a single DB9M connector and is priced as a single-port device, yet packs four independent serial channels. Have no use for those DSR and DTR lines? Turn them into RX and TX of an additional serial channel. Don't want CTS and RTS either? That's one more channel! In total, there are 15 different configurations to choose from.

Another feature of the DS1206 is software-controlled power output on pin 9 of the RS232 port, so you can power an attached serial device directly through the DS1206. Alternatively, the DS1206 itself can be powered through this pin.

Specifications

- Superior upgrade to the DS203 and DS1202 devices.
- Based on high-performance purpose-built 88MHz T1000 IC.
- 10/100BaseT, auto-MDIX Ethernet port.
- 2KB EEPROM for data storage.
- Up to 1024KB flash memory for firmware, application, and data.
- Four LEDs:
  - Green and red status LEDs on top of the device;
  - Link and speed Ethernet status LEDs on the RJ45 jack.
- Firmware is upgradeable through the serial port or network.

- Software-controlled onboard PLL.
- Power: 10-24V (12V nominal).
- Dimensions: 60x47x30mm.
- Up to 3.5 serial channels on a single RS232 connector:
  - Baudrates of up to 921,600bps;
  - None/even/odd/mark/space parity modes;
  - 7/8 bits/character modes;
  - Optional flow control;
  - Optional "12V" power output on pin 9 of the DB9M connector;
  - Pin 9 can also be used for "12V" power input.

Specifications (continued)

- Up to 3.5 serial channels on a single RS232 connector (continued):
  - Flexible mapping with 15 different options, such as:
    - A single channel: RX, TX, CTS, RTS, DSR, and DTR lines;
    - 3.5 channels: RX, TX, RX2, TX2, RX3, TX3, and RX4 lines;
- Optional Accessories:
  - DMK1000 DIN rail mounting kit.
  - 12V/0.5A adaptor: APR-P0011 (US), APR-P0012 (EU), APR-P0013 (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.
- Ser — up to 4 serial channels (UART, Wiegand, and clock/data modes).
- Io — handles I/O lines, ports, and interrupts.
- 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 device LEDs.
- Button — monitors the 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