

## The DS110X Basic-Programmable Serial Controllers

### Programmable

Feature-rich, easy-to-learn [Tibbo BASIC](#) language opens up a world of programming possibilities. Control serial devices. Collect, store, and manipulate data. Communicate with the [AggreGate Server](#). Create!



### Ready to Go

Custom coding is not your thing? Use the preloaded [serial-over-IP application](#) or download one of our free ready-to-use [apps](#). Our experts can also code your very own Tibbo BASIC app. You spec it, we do it.

### Value

The entry-level [DS1100](#) provides all the necessary basics and is still BASIC-programmable. The DS1100 features a single-channel RS232 port and can be ordered with a power-over-Ethernet option.



### Performance

The [DS1101](#) and [DS1102](#) devices are powerful and versatile. Available options include the 802.11b/g Wi-Fi interface, OLED display, power-over-Ethernet, and a choice of serial port configurations.



### Serial Choices

The DS110x family has it all: simple RS232 of the DS1100, [3.5-channel](#) RS232 of the DS1101, and the universal RS232/422/485 port of the DS1102 device.

Additionally, the serial port of the DS110x offers a power input feature, while the serial port of the DS1101 has a programmable power [input/output](#) functionality.



### Wi-Fi

Looking to improve your system's reliability by providing an additional communication path?

Equip your DS1101 or DS1102 with the [GA1000](#) Wi-Fi add-on module.

The GA1000 supports 802.11b/g standards, as well as modern WPA and WPA2 security.



### Display

Our 96x32 OLED display is perfect for simple text and graphics.

Show messages, icons, status info, user prompts, and what not! This is a very useful enhancement for your programmable device.

To get inspired, see how we use the display in our [serial-over-IP](#) application.



### PoE

Cut the cord and power your DS110x directly through the Ethernet cable!

Being a "true" 802.3af device, our PoE module is compatible with a wide range of PoE-enabled hubs and "power inserters".

*Note: PoE and Wi-Fi options are mutually exclusive.*

## DS1100 BASIC-Programmable Serial Controller (RS232)

The DS1100 is a compact BASIC-programmable controller targeting cost-sensitive serial-over-IP and serial control applications.

Built around the same T2000 ASIC as our [EM500](#) "MiniMo" module, the DS1100 offers a single-channel RS232 port. Device power can be supplied via its power jack, pin9 of the DB9 (serial port) connector, or the optional power-over-Ethernet board.

There are three LEDs on the device's front: green and red main status LEDs, and a yellow Ethernet link LED.

Each DS1100 is supplied with the DIN rail and wall mounting plates.

The device comes preloaded with a fully functional [serial-over-IP](#) application.

### Specifications:

- Superior upgrade to the [DS203](#) device.
- Based on the second-generation ASIC (T2000).
- 10/100BaseT auto-MDIX Ethernet port.
- Optional power-over-Ethernet.
- Single-channel RS232 port on DB9M connector:
  - TX, RX, RTS, CTS, DTR, and DSR lines;
  - Baudrates of up to 115200bps;
  - None/even/odd/mark/space parity modes;
  - 7/8 bits/character modes;
  - Optional RTS/CTS flow control;
  - "12V" power input on pin 9 of the DB9.
- 512KB flash memory for firmware and application.
- 200 bytes of EEPROM space for data storage.
- Three LEDs:
  - Green and red main status LEDs;
  - Yellow Ethernet link LED.
- Power: 12VDC nominal (min. 9V, max. 18V).
- Dimensions: 90x48x25mm.
- Operating temperature range: -5 ~ 70 C.
- Firmware is upgradeable through the serial port or network (including [cold upgrade](#) firmware uploads through the network).
- [CE](#)- and [FCC](#)-certified.

### Included Accessories:

DIN rail mounting plate

Wall mounting plate and two screws

### Optional Accessories:

[12V/0.5A adaptor](#): APR-P0011 (US), APR-P0012 (EU), APR-P0013 (UK)

[WAS-1499](#) straight Ethernet cable\*

[WAS-P0004\(B\)](#) DB9M-to-DB9F serial cable (device-to-PC)

[WAS-P0005\(B\)](#) DB9F-to-DB9F serial cable (device-to-device)

## DS1101 BASIC-Programmable Serial Controller (RS232)

The DS1101 is a compact BASIC-programmable controller targeting serial-over-IP and serial control applications.

The DS1101 features a multi-channel RS232 port. The device has a single DB9M connector and is priced as a single-port product, yet packs 3.5 independent [serial channels](#).

Another feature of the DS1101 is its software-controlled power output on pin 9 of the DB9 connector — you can power an attached serial device directly through the DS1101. Alternatively, the DS1101 itself can be powered through the pin 9. The device power can also be supplied via its power jack or the optional power-over-Ethernet board\*.

The DS1101 can be equipped with a 96x32 monochrome OLED display and Wi-Fi interface\*.

There are eight LEDs on the device's front: green and red main status LEDs, a yellow Ethernet link LED, and five blue LEDs, which can be used for Wi-Fi signal strength indication. A buzzer is provided as well.

Each DS1101 is supplied with the DIN rail and wall mounting plates.

The device comes preloaded with a fully functional [serial-over-IP](#) application.

**\* Wi-Fi and power-over-Ethernet options are mutually exclusive**

### Specifications:

- Superior upgrade to the [DS203](#) device.
- Based on the second-generation ASIC (T2000).
- 10/100BaseT auto-MDIX Ethernet port.
- Optional power-over-Ethernet.
- Single-channel RS232 port on DB9M connector:
  - TX, RX, RTS, CTS, DTR, and DSR lines;
  - Baudrates of up to 115200bps;
  - None/even/odd/mark/space parity modes;
  - 7/8 bits/character modes;
  - Optional RTS/CTS flow control;
  - "12V" power input on pin 9 of the DB9.
- 512KB flash memory for firmware and application.
- 200 bytes of EEPROM space for data storage.
- Three LEDs:
  - Green and red main status LEDs;
  - Yellow Ethernet link LED.
- Power: 12VDC nominal (min. 9V, max. 18V).
- Dimensions: 90x48x25mm.
- Operating temperature range: -5 ~ 70 C.
- Firmware is upgradeable through the serial port or network (including [cold upgrade](#) firmware uploads through the network).
- [CE](#)- and [FCC](#)-certified.

### Included Accessories:

DIN rail mounting plate

Wall mounting plate and two screws

### Optional Accessories:

[12V/0.5A adaptor](#): APR-P0011 (US), APR-P0012 (EU), APR-P0013 (UK)

[WAS-1499](#) straight Ethernet cable\*

[WAS-P0004\(B\)](#) DB9M-to-DB9F serial cable (device-to-PC)

[WAS-P0005\(B\)](#) DB9F-to-DB9F serial cable (device-to-device)

## DS1102 BASIC-Programmable Serial Controller (RS232/422/485)

The DS1102 is a compact BASIC-programmable controller targeting serial-over-IP and serial control applications.

The DS1102 features a universal RS232/422/485 serial port. The device has a single DB9M connector and is priced as a single-port product, yet provides 3 independent [serial channels](#) (when in the RS232 mode).

Device power can be supplied via its power jack or the optional power-over-Ethernet board\*.

The DS1102 can also be equipped with a 96x32 monochrome OLED display and Wi-Fi interface\*.

There are eight LEDs on the device's front: green and red main status LEDs, a yellow Ethernet link LED, and five blue LEDs, which can be used for Wi-Fi signal strength indication. A buzzer is provided as well.

Each DS1102 is supplied with the DIN rail and wall mounting plates.

The device comes preloaded with a fully functional serial-over-IP [application](#).

**\* Wi-Fi and power-over-Ethernet options are mutually exclusive**

### Specifications:

- Superior upgrade to the [DS1206](#) and [DS100B](#) devices.
  - Based on the high-performance T1000 IC.
  - 10/100BaseT, auto-MDIX Ethernet port.
  - Optional 802.11b/g Wi-Fi interface.
  - Optional 96x32 monochrome OLED display.
  - Optional power-over-Ethernet.
  - Software-selectable RS232, RS422, and RS485 modes:
    - Baudrates of up to 921,600bps;
    - None/even/odd/mark/space parity modes;
    - 7/8 bits/character modes;
    - Optional RTS/CTS flow control (RS232 and RS422 modes);
    - Direction control (RS485 mode).
  - Up to 3 [serial channels](#) in the RS232 mode; flexible mapping, such as:
    - A single channel: RX, TX, CTS, RTS, DSR, and DTR lines;
    - 3 channels: RX, TX, RX2, TX2, RX3, and TX3.
  - 1024KB flash memory for firmware, application, and data.
  - 2KB EEPROM for data storage.
  - Eight LEDs:
    - Green and red main status LEDs;
    - Yellow Ethernet link LED;
    - Five blue LEDs (can be used for Wi-Fi signal strength indication).
  - Built-in buzzer.
  - Software-controlled onboard PLL.
  - Power: 12VDC nominal (min. 9V, max. 18V).
  - Dimensions: 90x48x25mm.
  - Operating temperature range: -5 ~ 70 C.
- Firmware is upgradeable through the serial port or network.
  - [CE-](#) and [FCC-](#)certified.

### Included Accessories:

DIN rail mounting plate  
Wall mounting plate and two screws

### Optional Accessories:

[12V/0.5A adaptor](#): APR-P0011 (US), APR-P0012 (EU), APR-P0013 (UK)  
[WAS-1499](#) straight Ethernet cable\*  
[WAS-P0004\(B\)](#) DB9M-to-DB9F serial cable (device-to-PC)  
[WAS-P0005\(B\)](#) DB9F-to-DB9F serial cable (device-to-device)

## The Device Comparison Chart

BASIC-PROGRAMMABLE SERIAL CONTROLLERS			
<p><b>DS1102</b></p> 	<p><b>DS1101</b></p> 	<p><b>DS1100</b></p> 	

DEVICE FEATURES			
Serial Port	3 channels RS232, RS422/485	3.5 channels RS232	RS232
PoE	✓	✓	✓
DIN Rail & Wall Mount	✓	✓	✓
Status LED	✓	✓	✓
LED Signal Bar	✓	✓	
Wi-Fi	✓	✓	
OLED Display	✓	✓	

\* Wi-Fi and PoE options are mutually exclusive and cannot be installed simultaneously.

\*\* RS232, RS422, and RS485 modes are mutually exclusive. Three serial channels are available in the RS232 mode. There is only one channel in the RS422 and RS485 modes.