

DATA SHEET

AirWAVE WiFi™ Serial Terminal

OEM RS232 serial channel to WIFI 802.11b adapter

Part Number - AW_ST_CB_EA_RS232



Overview

The AirWAVE PCB Serial Terminal provides a fully compliant WiFi (Wireless Lan) 802.11b function via a simple TTL or RS232 interface.

AirWAVE PCB Serial Terminal is aimed at OEM's and systems integrators planning to deploy a point-to-point or point-to-multipoint Wireless LAN solution into their product range. By choosing the AirWAVE PCB Serial Terminal, we offer the opportunity to remove R&D costs, reduce time to market and eliminate development risk.

The AirWAVE PCB Serial Terminal will provide instant wireless connectivity to any device supporting either a TTL or RS232 interface. The AirWAVE PCB Serial is compatible with all other devices supporting WiFi or Wireless LAN 802.11b such as Laptops or Desktop PCs with integrated Wireless LAN, WiFi USB adaptors, WiFi PC Cards, WiFi routers etc.

AirWAVE Serial Interface

The AirWAVE product range uses a TCP port to receive and transmit serial data. Supplied with the product is a Serial IP package that provides a virtual serial port on a PC running over the Wireless network. Therefore, existing applications can connect to the AirWAVE devices from a PC with minimal changes (i.e. changing COM port number).

The AirWAVE device supports a standard RS232 port and requires little or no configuration. Therefore, there is very rapid time to market and minimal R & D overheads required for deployment of the solution.

Features

- Fully compliant WiFi™ 802.11b at 11 Mbit/s
- Sustained data rates up to 250kbps
- 300m nominal range
- Standard RS232 Interface
- Fully configurable



How it works

The AirWAVE PCB Serial Terminal encapsulates all of the WiFi 802.11b protocols on a single PCB, providing a simple serial interface to the host, therefore removing any need for software drivers or experience in developing wireless technology

General Specification

| | |
|----------------------|--|
| Data format: | 7 or 8 data bits 1 stop bit none / even / odd / mark or space parity bit |
| Supply Voltage (VCC) | 5VDC or 3.3VDC on HE10 connector (3 W max) |
| Ambient temperature | -10°C to 60°C |
| Storage temperature | -40°C to 80°C |
| Size | 76 x 50 x 23 mm (2.9 x 1.9 x 0.8 in) |
| Weight | 60g (0.13 lbs) |
| WLAN interface | IEEE 802.11b (2,4 GHz – 2,4835 GHz) at 11 Mbit/s 300 m nominal range (open space) from access point, 60 m in other cases. 4 WEP key 64/128 bits. |
| IP Protocols | IPv4, ICMP, TCP, UDP, Telnet, RFC 2217, MODBUS TCP TCP port 23 for TELNET administration, configurable TCP port for data exchange |
| Serial Interface | RS232 EIA/TIA 574 Serial interface DB9 male connector with DTE pinout, 15 kV ESD protection Sustained serial rate up to 250 Kbps |

HE10 Interface

| Pin | Characteristic | Signal |
|-----|---|--|
| 2 | 3.3V (3W Max) | 3.3V |
| 15 | 5V (3Wmax) | 5V |
| 16 | GND | 0V |
| 3 | Inputs (3.3v) | RI (active 0) |
| 7 | Vih = 1.8Vmin | RX (active 0) |
| 8 | Vil = 1.0 Vmax | DCD (active 0) |
| 9 | | DSR (active 0) |
| 13 | | CTS (active 0) |
| 14 | | Enable the administration mode through serial port. (active 0) |
| 6 | Output (3.3V) Voh = 2.4Vmin Vol = 0.4Vmax 24mA | TX (active 0) |
| 5 | Output (2.5V) Voh = 1.8Vmin | RTS (active 0) |
| 12 | Vol = 0.4Vmax 4mA | DTR (active 0) |
| 1 | Output (3.3V) Voh = 3.1Vmin | Turnaround for RS485 (active 1) |
| 4 | Vol = 0.2Vmax | WLAN Activity LED (active 0) |
| 10 | 32mA | Serial Activity LED (active 1) |
| 11 | | DIAG Activity LED (active 1) |

Mechanical Drawing

TBA

RS232 DB9 Male Interface

| Pin | RS232 Signal | Direction |
|-----|--------------|-----------|
| 1 | DCD | Input |
| 2 | RXD | Input |
| 3 | TXD | Output |
| 4 | DTR | Output |
| 5 | GND | |
| 6 | DSR | Input |
| 7 | RTS | Output |
| 8 | CTS | Input |
| 9 | RI | Input |



How do I evaluate this module?

Wireless Futures offer a AirWAVE Evaluation Kit for this product.



What does the Evaluation Kit contain?

The AirWAVE™ Evaluation Kit is a full resource that allows an engineer to evaluate the benefits and features of the WiFi 802.11b technology, quickly, simply and safe in the knowledge that it is backed by world-class support from Wireless Futures.

The aim of the AirWAVE Evaluation kit is to provide the engineer with a one-stop development platform required to deploy WiFi 802.11b UART or RS232 technology. Each kit contains the following:-

- AirWAVE Serial Terminal Module
- Technical Integration Guide
- Technical Support from Wireless Futures



Why do I need an Evaluation Kit ?

- The easiest route to WiFi™ 802.11b UART/RS232 connectivity.
- Benefit from complete technical support from the experts throughout the development.
- Flexible design and easy to integrate to existing hardware/software.
- Remove all risk and technical uncertainty.
- Designed and built by one of the leading Wireless Technology organisations



Customer Promise

We are so confident that you will be delighted with our evaluation kits and technical support that we will offer a **money back guarantee** should you not be happy with the product.



About Wireless Futures

Wireless Futures design, manufacture and integrate innovative, practical and easy to implement wireless solutions. These solutions provide our customers a fast track to either incorporate wireless technology within their current products, or to simply design a new product range with built-in wireless technology.

By leveraging our expertise in wireless technologies we are able to offer products and services to our customers to enable cost effective, rapid time to market wireless solutions.



Wireless Futures have OEM customers across the world from the UK, Europe, North America and the Far East.

The AirWAVE solution has been successfully deployed across the globe in the following vertical markets:-

- Medical
- Telco
- Defence
- Automotive
- Utility
- Marine
- Many more...

More Information...

For more information on our products and evaluation kits, please use the following contacts

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