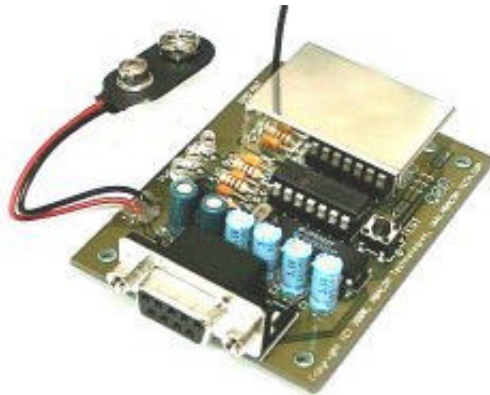


## DPC-64-RS232 Transceiver Module

### Introduction

The DPC-64-RS232 transceiver module provides a transparent serial link between two host devices, where packets of up to 64 bytes of data may be transceived. All data encoding, decoding and error checking is performed by the DPC-64-RS232 leaving nothing more for the host to do, other than sending data in x.8.N.1 serial format to the DPC. The serial data sent by the host to the DPC is automatically encoded and packetized and then transmitted over the air to the receiving DPC.

Upon receipt of the radio data transmission, the DPC will decode the data, perform an error check and output the original data to the receiving host.



### Power Supply

Although the operating supply range is from 7.5Vdc to 15Vdc, 20mA, the DPC is supplied standard with a 9V battery connector – alternative power sources within range may of course be used. Polarity should be observed. As a protective measure for the host equipment, we recommend applying power to the DPC only **after** it has been connected to the host.

### Serial interface

The DPC-64-RS232 transceiver implements a standard serial interface and is configured as a DTE. Connection to, for example, a personal computer COM port can be made using a standard DB9 connector serial extension cable having a one male and one female connector.

A four wire interface is used by implementing TxD, RxD, GND and CTS. The CTS flow control line is available for users who wish to transmit more than 64 bytes. Under this condition, when the DPC has received 64 bytes, the DPC will signal the host to pause sending data allowing it to transmit the 64 bytes of data to the receiving DPC. Once the DPC has transmitted the data, the CTS flow control line will toggle, allowing the DPC to receive the next 64 bytes of data from the host.

The host terminal should be set to 9600\*, 8, N, 1 and flow control should be set to ON (\*substitute for other data rates)

The flow control line can be ignored if the total data to be transmitted is less than 64 bytes.

No flow control is used when uploading the received data from the DPC to the receiving host. The relevant flow control lines have been looped back on the DPC.

## Test Mode

The DPC features a test mode which is very useful to quickly test the integrity of the RF link. When the test button is pressed, the DPC will transmit an internally generated test message to the receiving DPC. The received test message will be displayed on the receiving host terminal screen when running a terminal program, for example.

**Note:** For volume applications, the content of the preset message can be customized if required.

## Specifications

|                                    |                     |                                  |
|------------------------------------|---------------------|----------------------------------|
| <b>Operating Temperature</b>       | -10 to +55°C        |                                  |
| <b>Supply Voltage</b>              | 7.5V – 15Vdc        |                                  |
| <b>Supply Current</b>              | 20mA                | transmit or receive              |
| <b>Data Rates A version</b>        | 1200bps             | 2MHz crystal                     |
| <b>Data Rates B version</b>        | 2400bps             | 4MHz crystal                     |
| <b>Data Rates C version</b>        | 4800bps             | 8MHz crystal                     |
| <b>Data Rates D version</b>        | 9600bps             | 16MHz crystal                    |
| <b>RF Output Power</b>             | 0dBm                | typical                          |
| <b>Sensitivity</b>                 | -107dBm             | typical                          |
| <b>RF stability</b>                | + - 100KHz          | of centre frequency              |
| <b>Deviation</b>                   | 25KHz               | typical                          |
| <b>RS-232 interface</b>            | TxD, RxD, GND , CTS | CTS only for transmit mode       |
| <b>RS-232 protocol</b>             | x, 8,N,1            | flow control used                |
| <b>Max. bytes per transmission</b> | 64                  |                                  |
| <b>RF i/o impedance</b>            | 50Ω                 | for alternative external antenna |
| <b>Antenna</b>                     | ¼ wave wire         |                                  |
| <b>Range - open field</b>          | up to 500ft         | with ¼ wave antenna              |
| <b>Dimensions</b>                  | 83.5 x 53 x 15mm    | excluding DB9 connector          |