

AC-MIO-RS232 TRANSCEIVER

QUICK START GUIDE

With the AC-MIO-RS232 transceiver, the user is free to design his own application code. However, a quick way to start evaluating the AC-MIO-RS232 is to use the HyperTerminal communication software available in Windows.

When using HyperTerminal, the AC-MIO-RS232 transmits every character that is typed in. Actually, every character is converted in an Ariane Controls one-byte packet and transmitted on the power lines. If more than one character is entered at one time, for instance when using the "Send Text File" option or when pasting text in, the AC-MIO-RS232 converts the text in a multi-byte packet, which can be at most 62 bytes long.

The device support communication with and without hardware flow controls. However, it is recommended using the hardware flow control in environments in which many transmitters are subject to transmit frequently.

HyperTerminal Configuration

- Connect the AC-MIO-RS232 to your computer using the DB-9 connector and a standard serial cable.
- Connect the AC-MIO-RS232 to the power line using the black and white flying leads: Black to Line, White to Neutral.
- A green LED lights up. The device is now ready to transmit on the power line.
- Start HyperTerminal program from Windows: *Start/Programs/Accessories/Communications* menu.
- Create a new session, using the appropriate COM port.
- The connection must have the following properties:
 - Bits per second: 9600
 - Data bits: 8
 - Parity: None
 - Stop Bits: 1
 - Flow Control: Hardware
- From HyperTerminal menu, choose *File/Properties* and click on the *Settings* tab. Select ANSI in the Emulation drop down menu and press OK.
- Choose *File/Save* to save the settings.
- Back in the main window, you can connect. You are now ready to transmit with the AC-MIO-RS232.

Modifying the communication parameters

The AC-MIO-RS232 Transceiver allows the user to modify the serial communication parameters. These are selected with AT commands. The table below shows examples of how to use these commands.

It should be noted that these commands does not modify the powerline communication parameters. By modifying the baud rate with an AT command, only the communication baud rate between the host and the AC-MIO-RS232 are changed. The powerline communication between the two AC-MIO-RS232 devices remains unchanged.

Also, the changes are not permanent. Once the device is powered off, its configuration loses all changes and returns to default.

Command	Usage	Example	
		Command	Effect
BD	Modifies the baud rate of the serial communication.	ATBD2400	The baud rate is changed to 2400.
ST	Modifies the number of stop bits.	ATST2	The number of stop bits is set to 2.
DB	Modifies the number of data bits.	ATDB7	The number of data bits is set to 7.
PA	Modifies the parity. 0 = no parity 1 = odd parity 2 = even parity	ATPA2	The parity is set to Even.

The commands can be typed in with Hyper Terminal and must be followed by a carriage return or a line feed character.

Example: modifying the RS-232 baud rate with Hyper Terminal

This section briefly shows how to modify the baud rate. When Hyper Terminal is opened and ready to transmit over the powerline, do the following:

- Write ATBD2400 and press Enter.
- Disconnect and open the Properties dialog box.
- Press the Configure button.
- Select 2400 in the Bits Per Second field.
- Return to the main window. The computer and the AC-MIO-RS232 device are now communicating at 2400 baud.

The same procedure applies for the other configuration parameters.

Configuration Restrictions

The table below shows the ranges of configuration values supported by the AC-MIO-RS232 Transceiver

Parameter	Supported Values
Baud rate	Hyper Terminal Baud Rates from 300 to 38400 baud.
Stop Bits	1 or 2
Data Bits	5 – 8
Parity	Odd, Even, None