DRS23201 : RS-232 interface

Overview

DRS23201 module allows to connect a RS-232 device like alarm, audio device to the Domintell system

Specifications

- Send and receive strings over RS-232 protocol.
- Supported baudrates : 1200, 2400, 4800, 9600, 19200, 38400, 57600(*), 76800, 115200(*)
- Supported data bits : 8 bits
- Supported parity : none, odd or even
- Supported stop bits : 1 bit only

* Firmware v6 is required to use these baudrates. Note that these baudrates may not work properly as baudrate error varies between 2% and 3.5% for these two baudrates !

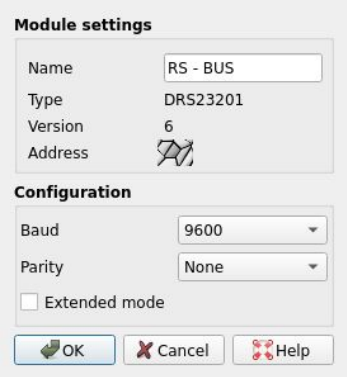
Limitations

- Data format is only 8 bits
- Stop bits is only 1 bit
- Only ASCII strings are allowed as of CR (0x0D), LF (0x0A) and TAB (0x09) characters. To use other control characters between 0 (0x00/NUL) and 31 (0x1F/US), "extended mode" must be used (from firmware version 5 and higher). All characters from (and including) 127 (0x7F/DEL) are not supported.
- Binary frames are not handled.

Wiring

- DRS23201 acts as a computer (DTE - data terminal equipment) and is generally used to be connected to a third-party (DCE - data communication equipment) like a beamer, an alarm system, an audio amplifier, ...
- Pin 2 = TX signal
- Pin 3 = RX signal
- Pin 5 = Ground
- A straight cable must be used to connect the DRS23201 to the third party device.
- A cross cable (null-modem) must be used to connect the DRS23201 to a computer.

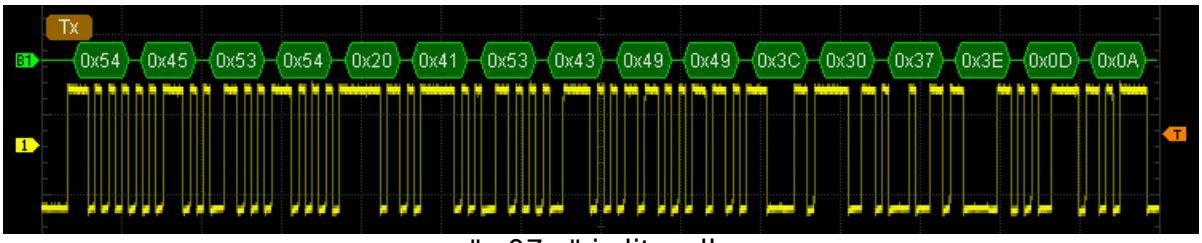
Setup



- Baud
  - Versions of GoldenGate earlier than 20.1 will display the baudrate of 57600 bps whatever the version of DRS23201 is but this baudrate is not handled ! **The baudrate 57600 bps is only working with the DRS23201 with a firmware version 6 or higher**.
- Parity
  - Parity can be None, Odd or Even
- Extended mode
  - Before version 5 of the firmware of the DRS23201, only ACSII characters and CR, LF and TAB control characters were allowed in input and output strings. For example : "SET VOLUME 50<CR><LF>"
  - Since version 5 of the firmware of the DRS23201, all control characters between 0 (0x00/NUL) and 31 (0x1F/US) included are also handled. To use these characters, *Extended mode* must be checked. To include such characters, their decimal value from ASCII table must be placed between "Less than" ('<') and "Greater than" ('>')tags and **must be 2 characters wide**. To add ENQ (enquiry) character (5 in decimal and 0x05 in hexadecimal) and RS (record separator) character (30 in decimal and 0x1E in hexadecimal), frame will look like : "<05>GET VOLUME<30>GET INPUT<CR><LF>"

Examples

- "TEST ASCII<07><CR><LF>" ☐ Extended mode



"<07>" is literally

- "TEST EXTEND<07><CR><LF>" ☑ Extended mode