NuDAM-6520 RS-232 to RS-422/485 Converter

1. Introduction

NuDAM-6520 is an RS-232 to RS-422/485 converter, it converts the RS-232 communication signal to the RS-422/485 signals. The NuDAM-6520 can be considered as an extension RS-422/485 serial port for the host computer with standard RS-232 interface. A standard 9-pins D-sub connector is used to connect the host computer and the NuDAM-6520, which make the NuDAM-6520 can connect with all kinds of the desktop PC, IPC or Notebook installed with RS-232.

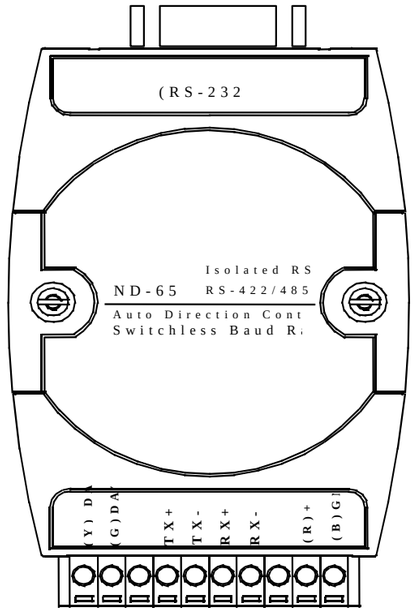
Features

- RS-422/485 transceiver
- Easily setup and installation
- Full-Duplex RS-422 support
- Half-Duplex RS-485 support
- Auto direction flow control on RS-485
- High transfer Speed up to 230Kbps
- High isolation voltage up to 2500Vrms
- Surge protection on RS-422/485 lines
- Low power consumption

Specifications

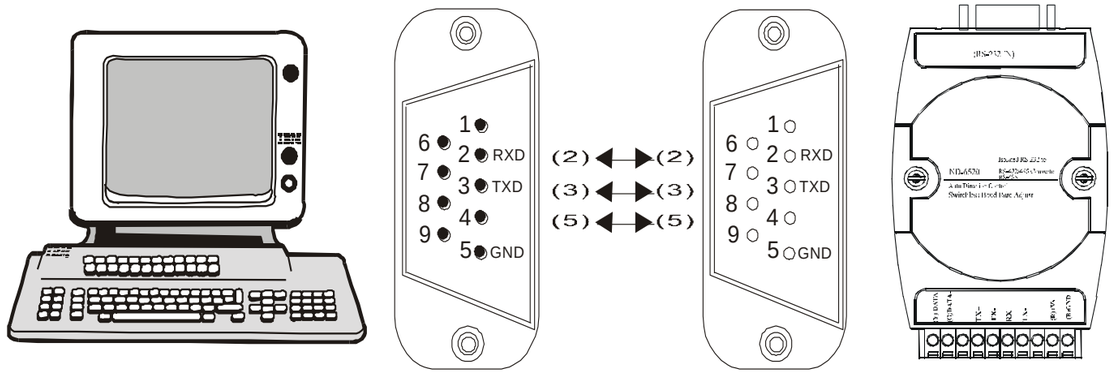
- Transmission Speed (bps): 300 ~ 230,400 (Auto Adjustment)
- Data Format:
  - ✓ Stop bits: 1, 2
  - ✓ Parity type: None, Even, Odd
  - ✓ Data bits: 5, 6, 7, 8
- RS-232:
  - ✓ 9 pin D-sub female connector
  - ✓ Support RXD, TXD signals
- RS-422:
  - ✓ Differential 4 full duplex wires
  - ✓ Support TX+, TX-, RX+, RX- signals
  - ✓ Surge protection on signal pins
- RS-485:
  - ✓ Differential 2 half duplex wires
  - ✓ Support DATA+, DATA- signals
  - ✓ Surge protection on signal pins
- Isolation Voltage: 2500 Vrms
- Storage Temperature Range: -25 to 80 °C
- Operating Temperature Range: -10 to 70 °C
- Power Requirement: +10V to +30V_{DC} Unregulated with against power reversal
- Power Consumption: 0.6W
- Case: ABS with captive mounting hardware
- CE Class A Conformity

2. Pin Assignment



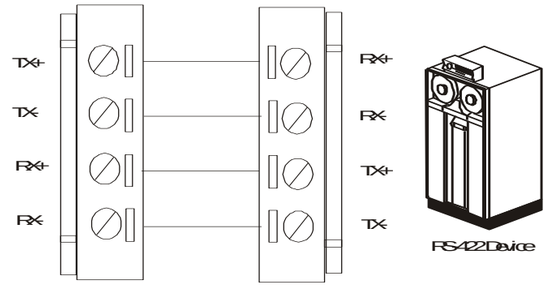
Pin Definitions

Pin #	Signal Name	Description
1	(Y)DATA+	RS-485 transmission line, positive
2	(G)DATA-	RS-485 transmission line, negative
4	TX+	RS-422 transmission line, positive
5	TX-	RS-422 transmission line, negative
6	RX+	RS-422 receiving line, positive
7	RX-	RS-422 receiving line, negative
9	(R)+VS	Power supply, +10V~+30V
10	(B)GND	Ground
	RS-232 IN	9-pin RS-232 connector

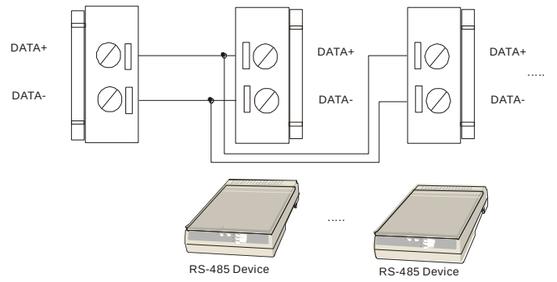


3. Connection Diagram

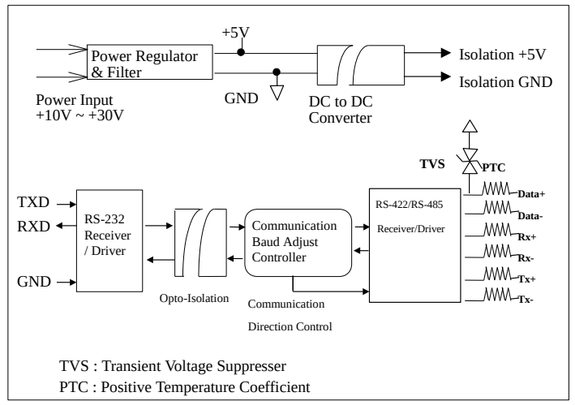
RS-422 Application Wiring



RS-485 Application Wiring



4. Functional Block Diagram



5. Installation

Equipment for Installation

A host computer with RS-232 port

RS-232 cable (DB-9 female to DB-9 male)

DC Power supply (+10V~+30V)

Wires (shielded and grounded is recommended)

Installation Procedure

1. Make sure the host computer is power off.
2. Use RS-232 cable to connect NuDAM-6520 with host computer.
3. Wire the power supply to NuDAM. Note that the power supply should meet the specification.
4. Wire other Devices.

6. ADLINK on the Internet

The full version manual can be download from website
http://www.adlink.com.tw/download/manual/index.htm#6000

Homepage: http://www.adlink.com.tw
Service: service@adlink.com.tw
Technical Assistance: NuDAM@adlink.com.tw

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NuDAM -6510 RS-422/485 Repeater

1. Introduction

NuDAM-6510 is an RS-422/485 repeater, which is used to extend or to lengthen the network distance. For example, a NuDAM 6000 series RS-485 bus can connect up to 128 IO modules. The repeater should be used when the numbers of the modules excess 128. In addition, the repeater should also be used when the length of a signal bus is more than 4000 feet.

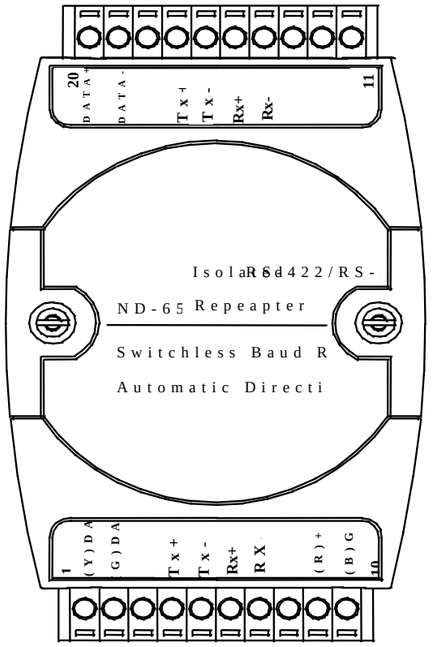
Features

- RS-422/485 signal transceiver & repeater
- Bi-directions signal transmission for both RS-422/485 ports
- Automatic baud rate adjust
- Automatic transmission direction control
- Easily setup and installation
- High transfer speed up to 230Kbps
- High isolation voltage up to 2500Vrms
- Surge protection on transmission lines
- Lower power consumption

Specifications

- Interface :
  - ✓ RS-485, differential 2 half-duplex wires
  - ✓ RS-422, differential, 4 full-duplex wires
- Transmission Speed (bps): 300 ~ 230,400 (Auto Adjustment)
- Data Format:
  - ✓ Stop bits: 1, 2
  - ✓ Parity type: None, Even, Odd
- Max RS-485 network bus distance : 4000 ft. (1200m)
- Isolation Voltage: 2500 Vrms
- Storage Temperature Range: -25 to 80 °C
- Operating Temperature Range: -10 to 70 °C
- Power Requirement: +10V to +30V_{DC} Unregulated with against power reversal
- Power Consumption: 0.7W
- Case: ABS with captive mounting hardware
- CE Class A Conformity

2. Pin Assignment

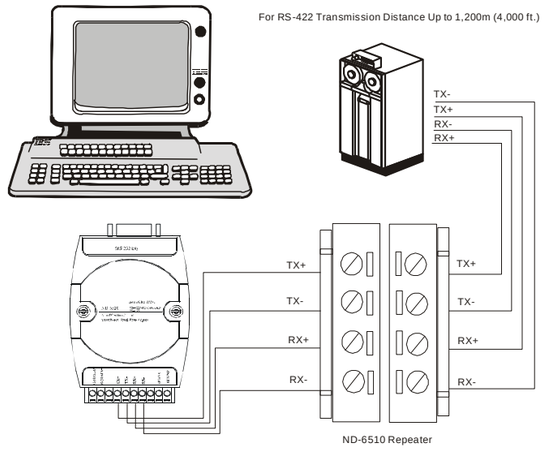


Pin Definitions

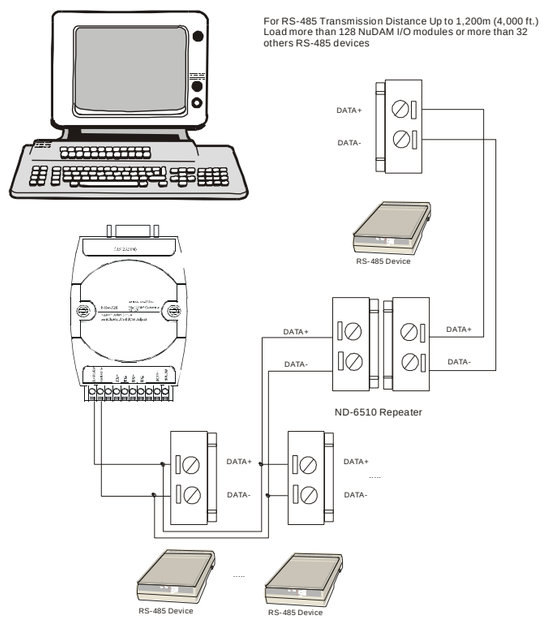
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2	(G)DATA-	RS-485 transmission line, negative
4	TX+	RS-422 transmission line, positive
5	TX-	RS-422 transmission line, negative
6	RX+	RS-422 receiving line, positive
7	RX-	RS-422 receiving line, negative
9	(R)+VS	Power supply, +10V~+30V
10	(B)GND	Ground
14	RX-	RS-422 receiving line, negative
15	RX+	RS-422 receiving line, positive
16	TX-	RS-422 transmission line, negative
17	TX+	RS-422 transmission line, positive
19	(G)DATA-	RS-485 transmission line, negative
20	(Y)DATA+	RS-485 transmission line, positive

3. Connection Diagram

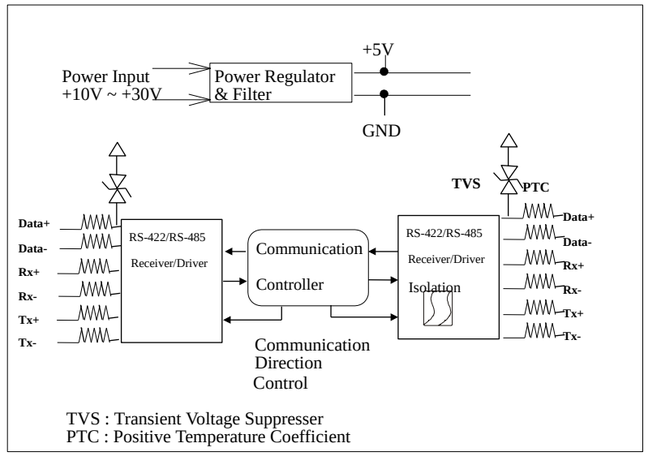
RS-422 Application Wiring



RS-485 Application Wiring



4. Functional Block Diagram



5. Installation

Equipment for Installation

2-wire RS-485 network or 4-wire RS-422 network

DC Power supply (+10V~+30V)

Wires (shielded and grounded is recommended)

Installation Procedure

1. Make sure the original RS-422/RS-485 network is power off.
2. Wire the power supply to NuDAM-6510. Note that the power supply should meet the specification.
3. Wire other NuDAM 6000 series IO modules or devices to the extended RS-422/485 bus.

6. ADLINK on the Internet

The full version manual can be download from website
http://www.adlink.com.tw/download/manual/index.htm#6000

Homepage: http://www.adlink.com.tw
Service: service@adlink.com.tw
Technical Assistance: NuDAM@adlink.com.tw

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