

# ADAM-4521

## Addressable RS-422/485 to RS-232 Converter



### Features

- Built-in microprocessor
- Transmission speed up to 115.2 Kbps
- 1000 V<sub>DC</sub> isolation
- Surge protection on RS-485 line
- RS-232 and RS-485 can be set to different baud rates
- Automatic RS-485 data flow control
- Watchdog timer function included
- Power and data flow indicator for troubleshooting
- Software configurable to either addressable or non-addressable mode
- Easily mounted on DIN rail, panel or piggyback
- All communication setups stored in EEPROM

### Introduction

ADAM-4521 is an intelligent RS-422/485 to RS-232 converter specifically designed to connect RS-422/485 devices to an RS-232 network. RS-232 is the most common transmission standard. Although widely available on most computer systems, measurement equipment, PLCs, and industrial devices, its transmission speed, communication distance, and especially networking capability are limited due to unbalanced transmission. The ADAM-4521 addressable converter solves this problem and lets you easily build up an RS-485 network with your RS-232 devices by assigning each one an address for easier communication.

#### Built-in Intelligence

ADAM-4521 is equipped with a built-in microprocessor, which uses two UARTs and automatically processes data before transmitting it to the RS-232 device. This allows ADAM-4521 to handle different baud rates between RS-232 devices and the RS-485 network. The microprocessor also verifies whether the data is transmitted with the appropriate address, which enables each RS-232 device on the RS-485 network to communicate with your PC over long distances.

#### RS-485 network with Automatic Data Flow Control

The RS-485 standard supports half-duplex communication, meaning a single pair of wires is used to both transmit and receive data. Handshaking signals such as RTS (Request To Send) are normally used to control the direction of the data flow, but a special I/O circuit in the ADAM-4521 automatically senses the direction of the data flow and switches the transmission direction. No handshaking signals are necessary.

### Specifications

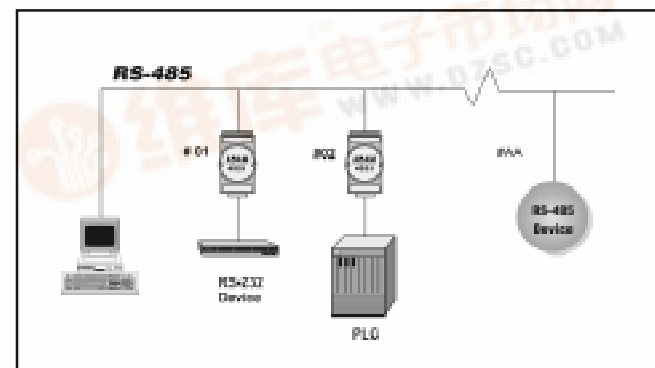
- **Transmission speed (bps):** 300, 600, 1200, 2400, 4800, 9600, 19.2 K, 38.4 K, 57.6 K, 115.2 K (software configurable)

**Power requirement:** Unregulated +10 to +30 V<sub>DC</sub>. Module is protected from power reversals.

- **Case:** ABS with captive mounting hardware
- **Accessories (included):** Nylon DIN-rail mounting adapter, SECC panel mounting bracket
- **RS-232 interface connector:** Female DB-9
- **RS-422/RS-485 interface connector:** Plug-in screw terminal (accepts AWG 1-#12 or 2-#14-#22 (0.5 to 2.5mm<sup>2</sup>) wires)
- **Operating temperature:** -10 to 70° C (14 to 158° F)
- **Dimensions:** 60 mm x 120 mm (2.36" x 4.41")
- **Power consumption:** 1 W

### Ordering Information

- **ADAM-4521:** Addressable RS-422/485 to RS-232 Converter with 1000 V<sub>DC</sub> Isolation



System Configuration