



### Introduction

ADAM-4530 is an extremely cost-effective RS-232 to RS-485 converter specifically designed to interface any bidirectional RS-485 device with a leased modem. Leased modems are used in data acquisition applications where the sensor data is inaccessible to the host computer due to large distances. The ADAM-4530 provides a low-cost intelligent interface between the radio modem and RS-485 data acquisition devices.

#### *Built-in Intelligence*

The ADAM-4530, equipped with an on-board microprocessor, can be used to interface a leased modem to an RS-485 network with many devices. Most RS-485 devices have response turn around times that are much faster than the transmitter turn-on delays required by many leased modems. In addition, leased modems also require an RS-232 signal to activate the transmitter. The ADAM-4530 provides user-programmable delay times between the modem's transmitter key signal (RTS) and the transmitted data. This cost-effectively replaces the need for a local computer at the remote site.

#### *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-4530 automatically senses the direction of the data flow and switches the transmission direction. No handshaking signals are necessary.

### Features

- Built-in microprocessor
- Transmission speed up to 115.2 Kbps
- 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
- Reserved space for termination resistor
- Software configurable to either addressable or non-addressable mode
- Easily mounted on DIN rail, panel or piggyback
- All communication setups stored in EEPROM

### 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 2.5 mm<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-4530:** Leased modem interface module