



## Introduction

Most industrial computer systems come with standard RS-232 serial ports. Though widely accepted, RS-232 has limited transmission speed, range, and networking capabilities. CAN (Controller Area Network) is a serial bus system with multimaster and realtime capability. It is a cost effective fieldbus for device networking in manufacturing plants. The ADAM-4525 isolated converter lets you take advantage of CAN on systems equipped with RS-232. It transparently converts RS-232 signals into isolated CAN signals. You don't need to change your PC's hardware or your software. The ADAM-4525 lets you easily build a real-time communication system with standard PC hardware.

The ADAM-4515 repeater simply amplifies, or boosts, existing CAN signals to enable them to cover longer distances. It extends the network communication distance by anywhere from 40 m to 1,000 m, depending on the data transfer rate, and increases the maximum number of connected nodes by 64 for DeviceNet.

## Built-in Intelligence

ADAM-4525 is equipped with a built-in microprocessor, which uses two UARTs and automatically processes data before transmitting it to the RS-232 connected device. This enables ADAM-4525 to utilize different baud rates between RS-232 and the CAN network. The microprocessor also handles the setting of communication rates for both RS-232 and CAN.

## Specifications

### Common

- **Power requirement:** Unregulated +10 to +30 V<sub>DC</sub>  
Module is protected from power reversals
- **Case:** ABS with captive mounting hardware
- **Accessories (supplied):** Nylon DIN-rail mounting adapter, SECC panel mounting bracket

## Features

- Built-in microprocessor
- Software configurable communication speed for both RS-232 and CAN
- Minimum 3000 V<sub>DC</sub> isolation protection
- Transient suppression on CAN data lines
- Speeds to 115.2 Kbps for RS-232 and 1 Mbps for CAN
- Networking up to 1000 m
- Reserved space for termination resistors
- Power and data flow indicator for trouble shooting
- Power requirement: +10 to +30 V<sub>DC</sub> (unregulated)
- Mounts easily on DIN-rail or panel

- **Plug-in screw terminal wiring:** Accepts AWG 1-#12 or 2-#14 ~ #22 (0.5 to 2.5 mm) wires
- **Operating temperature:** -10 ~ 70° C (14 ~ 158° F)
- **Dimensions:** 60 mm x 120 mm (2.36" x 4.41")

### ADAM-4515 Specifications

- **Input:** CAN\_H, CAN\_L
- **Output:** CAN\_H, CAN\_L
- **Transmission speed (bps):** Up to 1 Mbps
- **CAN interface connector:** Plug-in screw terminal
- **Isolation voltage:** 3000 V<sub>DC</sub>
- **Power consumption:** 1 W

### ADAM-4525 Specifications

- **Input:** RS-232
- **RS-232 Transmission speed:** Up to 115.2 Kbps
- **RS-232 interface connector:** Female DB-9
- **Output:** CAN\_H, CAN\_L
- **Transmission speed of CAN:** Up to 1 Mbps
- **CAN interface connector:** Plug-in screw terminal
- **Isolation voltage:** 3000 V<sub>DC</sub>
- **Power consumption:** 2 W

## Ordering Information

- ADAM-4515: Isolated CAN repeater
- ADAM-4525: Isolated RS-232 to CAN converter