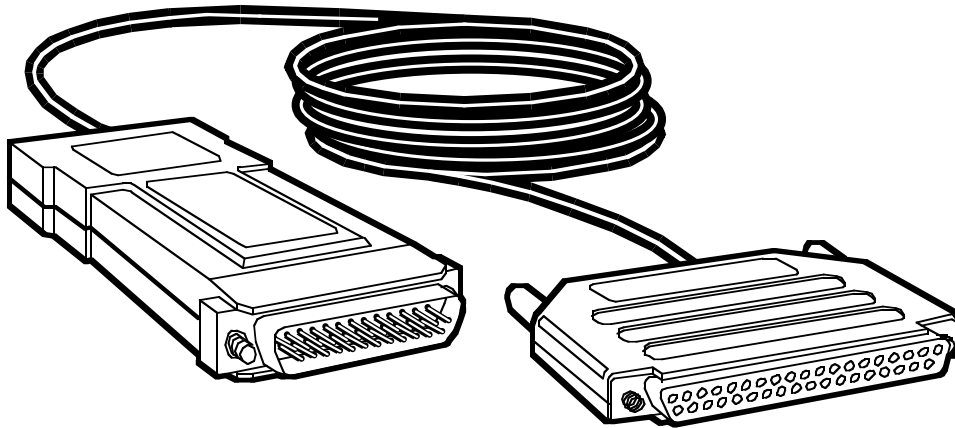# Non-Powered Interface Converters

Connect equipment with different interfaces—V.24, V.35, V.36, and RS-530. It's as easy as plugging in a cable.

The Non-Powered Interface Converters let you connect equipment with different interfaces. (The RS-232 to RS-422/RS-449 Non-Powered Interface Converter, IC487A-F, is pictured above.)

Key Features

▶ *Support speeds up to 200 Kbps (IC237A), 2.048 Mbps (IC482A), 38.4 Kbps (IC486A), or 200 Kbps (IC487A).*

▶ *Transparent to protocol.*

▶ *No AC power needed.*

▶ *Built-in cable and connectors included.*

▶ *Models available for V.24, V.35, V.36, and RS-530.*

▶ *Easy installation— just plug and go.*

Overview

The Non-Powered Interface Converters let you connect your DTE or DCE device to a DCE or DTE device with a different interface.

The Converters perform both the physical and electrical conversion between the two interfaces.

The two devices can be located up to 1.9 m apart.

The Converters operate without AC power, using ultra-low power from the DTE or DCE devices' data and control signals.

You get everything you need for installation—the Converters have built-in cables and connectors.

You can use the Converters in both sync and async applications. The IC237A operates at speeds up to 200 Kbps, the IC482A operates at speeds up to 2.048 Mbps, the

IC486A operates at speeds up to 38.4 Kbps, and the IC487A operates at speeds up to 200 Kbps.

The Converters are easy to install: Simply plug the connectors directly into your devices.

Configuration's a breeze, too—you can configure some models via switches, and others via jumper straps.

Models are available to convert the following interfaces:

• RS-232/V.24 to
  RS-530/RS-422

• RS-232 to RS-485/RS-422

• RS-232/V.24 to
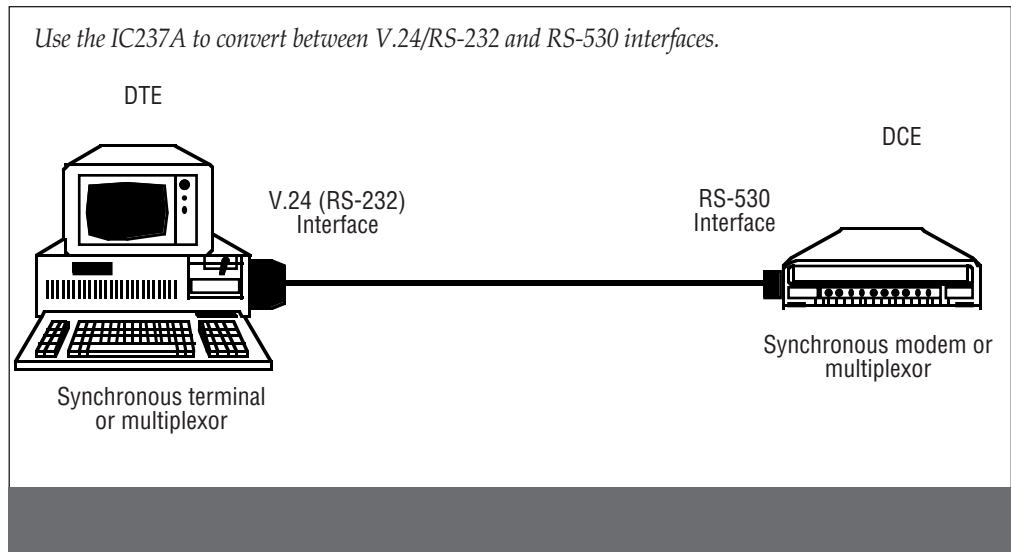 RS-422/RS-449/V.36

• RS-422/RS-449/V.36 to V.35

Typical Applications

Connect a synchronous terminal with a V.24/RS-232 interface to a sync modem with an RS-530 interface.

Connect a computer with a V.24 interface to several terminals with RS-485 interfaces.

Use your RS-232 PC with an RS-485 printer.

Connect devices with dissimilar interfaces using the Non-Powered Interface Converters. All models come complete with cables and connectors, and derive ultra-low power from the device interface.

Use the IC237A to convert between V.24/RS-232 and RS-530 interfaces.

DTE

DCE

V.24 (RS-232) Interface

RS-530 Interface

Synchronous terminal or multiplexor

Synchronous modem or multiplexor

Technically Speaking

The Non-Powered Interface Converters contain circuitry designed to provide short-range interface conversion. The devices you will connect must be within 1.8 m of each other. If greater distances are required, use one of our active powered converters.

• The Converters operate without AC power, by using ultra-low power from the DTE or DCE devices' data and control signals.

Four models are available.
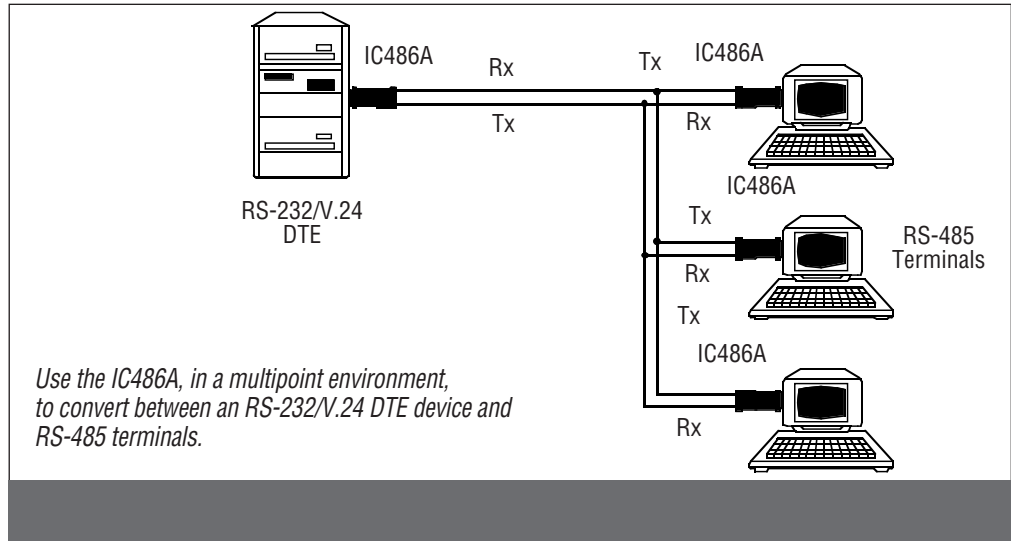
IC237A
Converts between
V.24/RS-232 and RS-530.

• Either interface can be configured as DTE or DCE. Simply open the Converter's case and move a jumper.

NOTE: This jumper sets DCE or DTE for the device the Converter is connected to,
not what the Converter appears as.

• Input voltage is ±12 volts; ultra-low power is derived from pins 2 and 3 of the RS-232 interface.

• The IC237A operates at speeds up to 200 Kbps.

IC482A
Converts between V.35 DCE and RS-422/449/V.36 DTE interfaces.

IC486A

Rx

Tx

IC486A

Tx

Rx

IC486A

RS-232/V.24 DTE

Tx

Rx

RS-485 Terminals

Tx

IC486A

Rx

Use the IC486A, in a multipoint environment, to convert between an RS-232/V.24 DTE device and RS-485 terminals.

• No strapping adjustments or setting switches are required for this model. DTE/DCE configuration is fixed.

• Ultra-low power is derived from the V.35 interface, and the RS-449 interface.

• The IC482A operates at speeds up to 2.048 Mbps.

IC486A
Async only, converts between RS-232/V.24 DTE and RS-485.

• Create a multipoint environment. Connect an RS-232 computer and several RS-485 terminals.

• Input voltage is 6- to 12-VDC, 50 mA, from an external power supply, or derived from the DTE device, which must provide TD (pin 2), RTS (pin 4), and DTR (pin 20) signals.

• For 2-wire operation, install two small jumper wires to connect TA to RA (this will connect the minus line) and TB to RB (this will connect the plus line).

• The IC486A operates at speeds up to 200 Kbps.

IC487A-F

Converts between
V.24/RS-232 and V.36/RS-422.

• Position the 40-pin DTE/DCE socket on the board to connect a V.24/RS-232 DTE to a V.36/RS-449 DCE (this is the factory default setting). Or connect a V.24 DCE to a V.36 DTE.

NOTE: This jumper sets DCE or DTE for the device the Converter is connected to,
not what the converter appears as.

• Input voltage is ±12 volts, derived from RS-232 interface.

Specifications

IC237A

Interface A — RS-232/V.24/V.28, DTE/DCE selectable

Connectors — DB25 male

Distance — Direct connection to RS-232/V.24 device

Interface B — RS-530 (RS-422), DTE/DCE selectable

Connectors — DB25 female

Distance — Direct connection to RS-530 device

Transmission Format — Sync/async, transparent to protocol

Data Rates — Up to 200 Kbps

Cable — 1.9 m

Input Voltage — Standard RS-232/V.24 driver ± 12 volts

Operating Temperature — 0° to 50°C

Humidity — Up to 90%, noncondensing

Power — No AC power required

Size — 2.3H x 5.3W x 10.9D cm

Weight — 397 g, including cable and connector

IC482A

Interface A — V.35, DTE only (connects to DCE)

Connectors — V.35 (M-block) male

Distance — Direct connection to V.35 device

Interface B — RS-449/V.36/V.11 (RS-422), DCE only (connects to DTE)

Connectors — DB37 female

Distance — Direct connection to RS-449/V.36 device

Transmission Format — Sync, transparent to protocol

Data Rates — Up to 2.048 Mbps

Cable — 1.9 m

Input Voltage — Standard RS-422 and V.35 drivers

Operating Temperature — 0° to 50°C

Humidity — Up to 90%, noncondensing

Power — No AC power required

Size — 2.3H x 5.3W x 10.9D cm

Weight — 397 g, including cable and connector

IC486A

Interface A — RS-232, DCE

Connectors — DB25 female

Distance — Direct connection to RS-232 device

Interface B — RS-422/485

Connectors — (5) screw terminals

Distance — Up to 6.1 km

Transmission Format — Async only (transparent to data)

Transmission Mode — Full-duplex on 4-wire, half-duplex on 2- or 4-wire

Control Signals — Request to Send (pin 4): Controls transmit carrier, only if Carrier switch is in the CNTRL switch position); Clear to Send (pin 5): Set by CTS switches to be either open, high or delayed, after RTS; Data Set Ready (pin 6) and Data Carrier Detect (pin 8): Both are set by the DCD+DSR switch to be either high or open; Data Terminal Ready (pin 20): Should be connected for power considerations only, to remain constantly on (high)

Carrier Control — The Carrier is strap-selectable to be either continuously on or switched by RTS.

Data Rates — Up to 38.4 Kbps

Input Voltage — Derived from data and control (pins 2, 4, 20) or external 6- to 12-VDC, 50 mA

Operating Temperature — 0° to 50°C

Humidity — Up to 90%, noncondensing

Power — Derived from data and control signals; if signal power is insufficient, a 6- to 12-VDC, 50-mA external power supply is required (call your supplier for more information)

Size — 2.3H x 5.3W x 10.9D cm

Weight — 85 g

IC487A-F

Interface A — RS-232/V.24, DTE/DCE selectable

Connectors — DB25 male

Distance — Direct connection to RS-232/V.24 device

Interface B — RS-449/V.36 (RS-422), DTE/DCE selectable

Connectors — DB37 female

Distance — Direct connection to RS-449/V.36 device

Transmission Format — Sync, transparent to protocol

Data Rates — Up to 200 Kbps

Cable — 1.9 m

Input Voltage — Standard RS-232/V.24 driver ± 12 volts

Operating Temperature— 0° to 50°C

Humidity — Up to 90%, noncondensing

Power — No AC power required

Size — 2.3H x 5.3W x 10.9D cm

Weight — 397 g, including cable and connector

The complete package

- Non-Powered Interface Converter (includes built-in cable and connectors)
- User's manual

Ordering Information

This information will help you place your order quickly.

PRODUCT NAME	ORDER CODE
Non-Powered Interface Converters	
RS-232 to RS-530	IC237A
RS-232 to RS-485	IC486A
RS-232 to RS-422/RS-449	IC487A-F
V.35 to RS-422/RS-449	IC482A