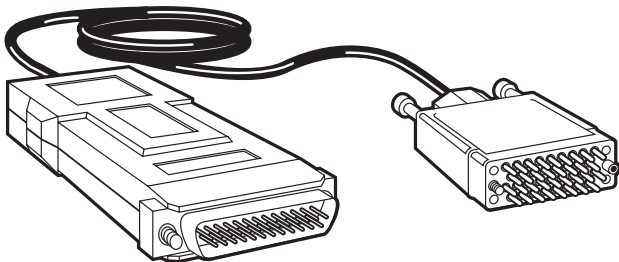


IC951A	IC960A
IC952A	IC961A
IC953A	IC963A
IC954A-M	IC964A

Mini Interface Converters



CUSTOMER SUPPORT INFORMATION

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FREE technical support 24 hours a day, 7 days a week: Call **724-746-5500** or fax **724-746-0746**

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TRADEMARKS USED IN THIS MANUAL

Any trademarks mentioned in this manual are acknowledged to be the property of the trademark owners.

1. Specifications

Data Rates —	Up to 200 kbps for all models with a V.24/RS-232 interface; Up to 2048 kbps for all other models
Transmission Format —	IC952A, IC953A: Asynchronous; All other models: Synchronous, transparent to protocol
Operating Temperature —	32 to 122°F (0 to 50°C)
Relative Humidity Tolerance —	10 to 90%, noncondensing
Power —	IC951A: Requires connection to an external power supply providing 9 VDC @ 300 mA (part numbers PS017 and PS017E); All other models: No AC power required

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Size — 0.9"H x 2.1"W x 4.3"D (2.3 x 5.3 x 10.9 cm); All models also include a built-in 6.5-foot (2-m) cable

Weight — 14 oz. (397 g), including cable and connector

Connectors — See the chart below

<u>Model</u>	<u>Connector 1 (DTE)</u>	<u>Connector 2 (DCE)</u>
IC951A	15-pin female	37-pin male
IC952A	25-pin female	Terminal block
IC953A	Terminal block	25-pin male
IC954A-M	25-pin male	37-pin male
IC960A	34-pin male	37-pin male
IC961A	34-pin male	25-pin male
IC963A	37-pin female	15-pin male
IC964A	25-pin female	34-pin male

2. Introduction

2.1 Description

These interface converters enable connection between DTE and DCE data-communications equipment with different interfaces. They operate in synchronous applications (except for the IC952A and IC953A, which operate in asynchronous applications) at data rates up to 2048 kbps with balanced interface at both ends, or at data rates up to 200 kbps with V.24/RS-232 at one end.

Mini Interface Converters perform both the physical and electrical conversion between the two interfaces. The circuitry is designed to provide short-range interface conversion.

Most models operate without AC power, using ultra-low power from the DTE and DCE equipment data and control signals.

2.2 Available Models

IC954A-M

For converting between V.24/RS-232 and V.36/RS-422 interfaces. The IC954A-M is switch-selectable and is used either for connecting a V.24/RS-232 DTE to a V.36/RS-422 DCE, or for connecting a V.24 DCE to a V.35 DTE.

Installing the Converter is simple, since it plugs directly into the DCE and DTE. Connect the Converter directly to the RS-232/V.24 device, and the cable connector to the RS-449 device. The Converter comes factory strapped for RS-232 DTE/RS-449 DCE. To alternate this configuration:

- 1) Separate the two halves of the plastic cover by pressing the marked places on the sides, starting at the cable end.
- 2) Remove the 40-pin DTE/DCE socket by gently grasping both sides and slowly moving it from side to side.
- 3) Replace the socket so that the DCE faces the RS-232 connector and the DTE faces the RS-449 device. Make sure that the pins are aligned with the socket.

NOTE

The DCE/DTE arrows on the shunt indicate the device you are connecting to, not what the converter interface is.

- 4) Close the unit by pressing the two plastic covers together.

IC952A, IC953A

For converting between V.24/RS-232 and V.11/RS-422 interfaces. These converters are switch-selectable and are used for connecting a V.24/RS-232 DTE to a V.11/RS-422 DCE, or a V.24 DCE to a V.11 DTE. These Converters convert only the data signals, not the control signals, and are suitable only for asynchronous applications.

To install the Converter:

- 1) Separate the two halves of the plastic cover by pressing the marked places on the sides, starting at the cable end.
- 2) Connect the V.11 two twisted pairs to the screw terminal block; transmit pair to "XMT" and receive pair to "RCV." A ground is provided for optional connection of the cable shield.
- 3) Set the DTE/DCE switch of the Converter to the required position (factory set to DCE).

- 4) Note that the Converter connects only the data signals. Some of the V.24 control signals are pre-set depending on the DTE/DCE switch.
- 5) To close the Converter, simply press the two halves of the cover together.
- 6) Connect the Converter directly to the 25-pin connector of the terminal or computer port, and fasten with the two screws—one on each side of the Converter.

IC951A

For converting between RS-449/422 (V.36/V.11) and X.21 interfaces. The Converter is used for connecting a V.36 DCE to an X.21 DTE, and has a built-in buffer to accommodate phase differences between the receive and transmit clocks of the DCE. Once the connectors are plugged into the DTE and DCE, connect the DC jack to the DC socket on the side of the Converter and insert the wall-mount transformer into the AC mains. Note that an internal elastic buffer is provided to solve clock phase problems. This Converter requires an external power supply.

IC964A, IC961A

For converting between RS-530 and V.35 interfaces. The Converter is used for connecting an RS-530 DTE to a V.35 DCE, or an RS-530 DCE to a V.35 DTE. To install the Converter, simply plug it directly into the DTE or DCE. No strapping adjustments are required. Just connect the 25-pin connector to the RS-530 device and the other connector to the V.35 device, and it's ready to operate.

IC960A

The Converter is used for connecting a V.35 DTE to a 422 (V.36) DCE. To install the Converter, simply connect the Converter to the RS-422/V.36 device and the cable connector to the V.35 device.

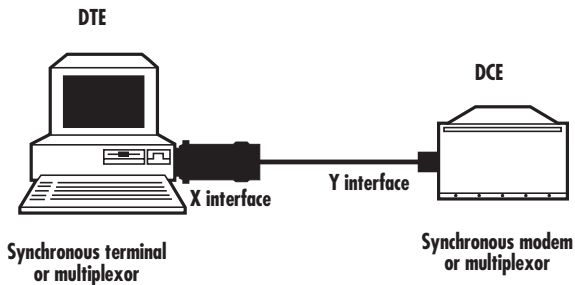
IC963A

For converting between X.21 and RS-422. The Converter is used to connect an X.21 DCE to an RS-422 DTE.

2.3 Features

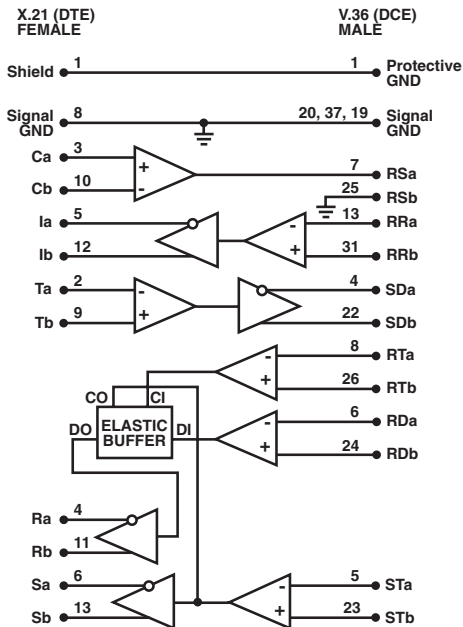
- Conversion between V.24/RS-232, V.35, V.36, RS-449/422, RS-530/422, and X.21 interfaces.
- Equipped with cable and connectors.
- Transparent to protocol.
- High speed, up to 2 Mbps (for most models).
- Immediate installation.
- No AC power required (for most models).
- Compact and lightweight.

3. Application



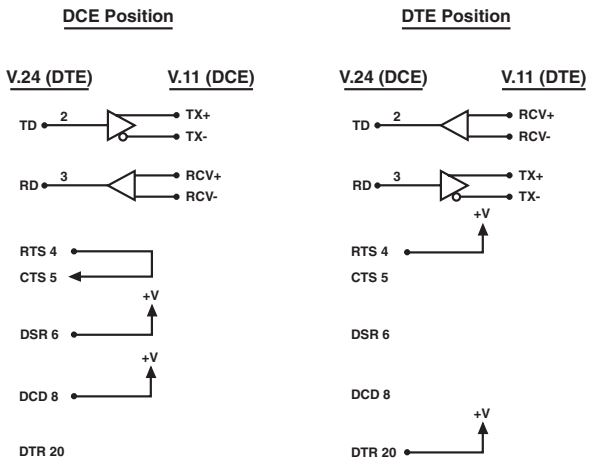
X and Y interfaces can be V.24 (RS-232), V.35, V.36 (RS-422), X.21, or RS-530.

4. Schematic Diagrams

Figure 4-1. IC951A.


* Wall-mount transformer should be 9V/300 mA DC.

Figure 4-2. IC952A and IC953A.



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Figure 4-3. IC954A-M.

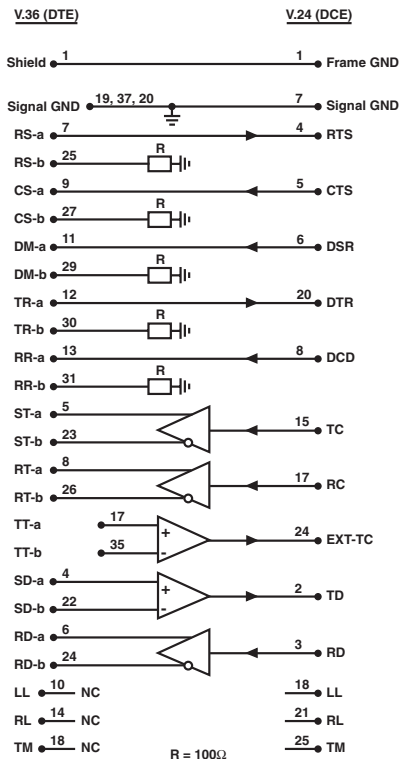


Figure 4-4. IC954A-M.

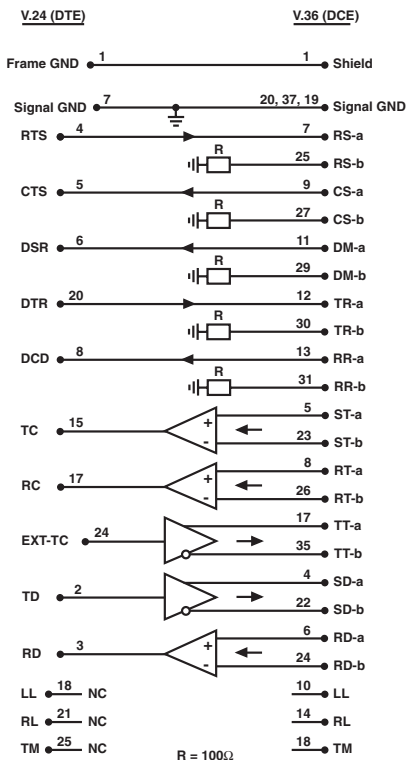
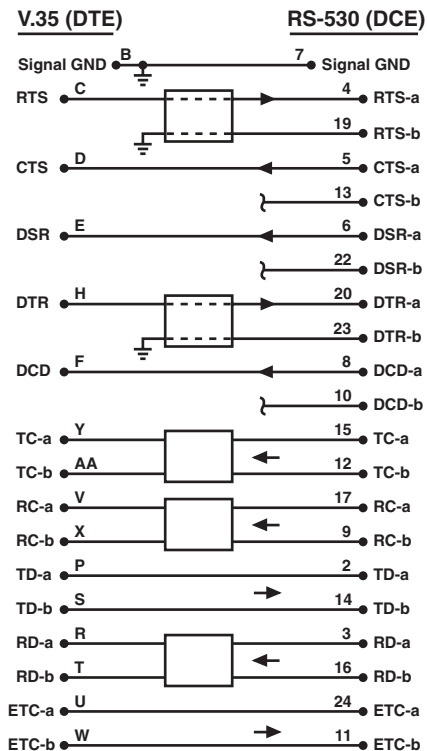


Figure 4-6. IC961A.



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Figure 4-7. IC963A.

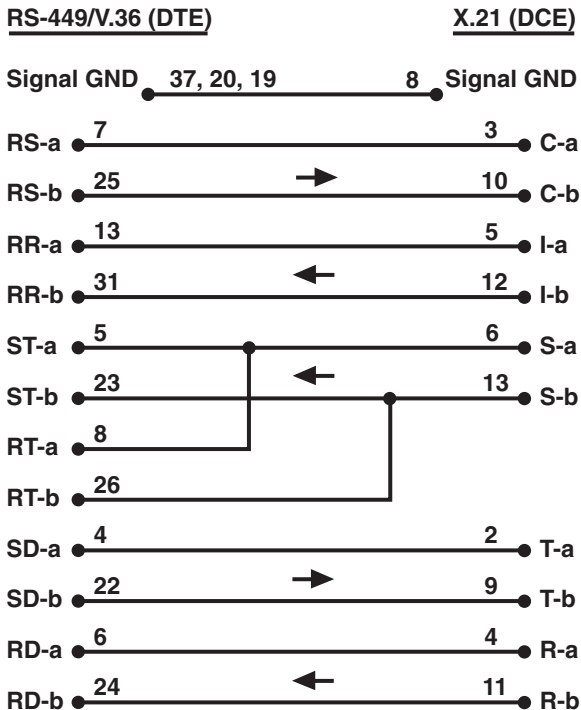
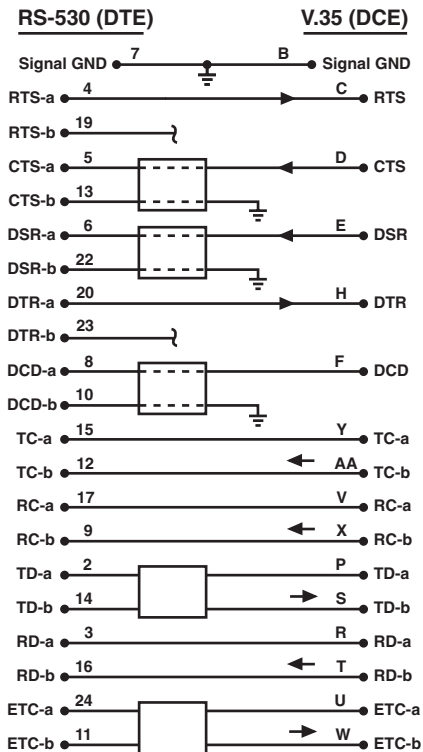


Figure 4-8. IC964A.



NOTES



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