

V.35 Interface Converter

V35 / Data



The V35IP family of interface converters allows full bi-directional synchronous conversion between V.35 and X.21 or RS-449/530 hardware. These converters all work WITHOUT an EXTERNAL POWER SUPPLY. The V35IP interface converters are designed for synchronous V.35 operation at data rates up to and including 2048kbps. They may also be applied to asynchronous V.35 using only TD & RD signals, while ignoring TC, RC, and XTC timing signals. Asynchronous V.35 requires three times greater data throughput on the synchronous side's X.21 or RS-449/530 interface. The physical connections for all V35IP family converters are DB25 female connectors and V.35 adapter cable. The V.35 side requires the supplied DB25 to MB34 adapter cable to connect directly to V.35 equipment

Features

- Electrically converts SYNC ITU-T V.35 to RS-530 / RS-449 / X.21 (three models)
- DCE/DTE switch selectable
- Data rate up to 2.048Mbps
- Complies with ITU-T V.35, X.21 and EIA RS-449, RS-530
- Interface powered, no external DC power required for the "IP" converter family
- An external power adapter (9VDC@600mA) may be used if the application of the unit is in a poor communication environment

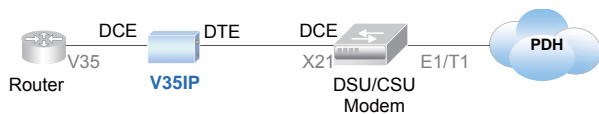
Data rate

- Connector
- Indications
- Power Input
- Power Consumption
- Dimensions
- Weight
- Temperature
- Humidity

Up to 2Mbps

DB25F with V.35, X.21, RS530, RS449 cable adapter
PWR, Signal status, DCE/DTE mode
9VDC
< 5W
140 x 80 x25mm (D x W x H)
150g
0°C ~ 50°C (Operating), -10°C ~ 70°C (Storage)
10~90% non-condensing

V35 to X21/RS449/530 Application



Ordering Information

V35/ Model Type

530IP : V35 to RS530

449IP : V35 to RS449

X21IP : V35 to X21

Example: V35/530IP

RS485 Interface Converters

V35 / 485-1



The V35/485-1 Interface Converter provides conversion between V.35 and RS-485 standard interfaces. The V.35 interface connection is via a supplied adapter cable and the unit's DB-25 female connector, while the RS-485 side's connection is via a five screw terminal block. The V35/485-1 converter's circuitry provides a high degree of electrical isolation between the V.35 and RS-485 sides. The V.35 side may operate as DTE or DCE, switch selectable, has provisions for establishing hardware flow control, and has LEDs to indicate data transmission and reception. The RS-485 side may operate in either two wire half duplex or four wire half full duplex.

Features

- Electrically converts SYNC V.35 to RS-485
- RS-485: 2 or 4 wire, Half or Full Duplex
- V.35 handshaking: DTR/DSR, RTS/CTS or Auto
- 2500V electrical isolation minimum
- DTE/DCE switch selectable
- Easy to configure
- External DC power required

Data rate

- Connector
- Indications
- Power Input
- Power Consumption
- Dimensions
- Weight
- Temperature
- Humidity

Up to 2Mbps

V.35: DB25F with adapter cable
RS485: 5 screw terminals block
LEDs (TX/RX on 485 side and TD/RD on V.35 side)
DC 9V in via AC adapter
< 6W
140 x 80 x25mm (D x W x H)
150g
0°C ~ 50°C (Operating), -10°C ~ 70°C (Storage)
10~90% non-condensing

V35 to RS485 Application



Ordering Information

V35/ Model Type

485-1 : V35 to RS422/485

Example: V35/485-1



RS232 Interface Converter RS232 / Data

The RS232IP family of interface converters allows full bi-directional synchronous conversion between RS-232C (V.24) and V.35, X.21 or RS-449/530 hardware. These converters all work WITHOUT an EXTERNAL POWER SUPPLY. The RS232IP interface converters are designed for synchronous RS-232 operation at data rates up to and including 128kbps. They may also be applied to asynchronous RS-232 using only TD & RD signals, while ignoring TC, RC, and XTC timing signals. Asynchronous RS-232 requires three times greater data throughput on the synchronous side's V.35, X.21 or RS-449/530 interface. The physical connections for all RS232IP family converters are DB25 female with standard pin out, while a cable adapter is required for V.35, X.21 or RS-449/530 side. All three models may be interchanged as long as the correct V.35, X.21 or RS-449/530 cable is applied.

Features

- Electrical SYNC RS-232 interface converter to V.35 / RS-449 / X.21 (three models)
- Interface powered, no external DC power required for the "IP" converter family
- DCE/DTE switch selectable
- Data rate up to 128Kbps
- Complies with EIA RS-232, RS-449, RS-530 and ITU-T V.35, X.21
- An external power adapter (9VDC@600mA) may be used if the application of the unit is in a poor communication environment

Data rate

Connector

Indications

Power Input

Power Consumption

Dimensions

Weight

Temperature

Humidity

Up to 128Kbps

DB25F with V.35, X.21, RS530, RS449 cable adapter
LEDs (PWR, Signal status, DCE/DTE mode)

9VDC

< 5W

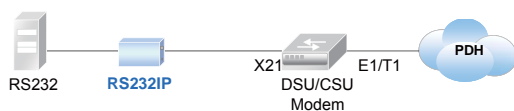
140 x 80 x25mm (D x W x H)

150g

0°C ~ 50°C (Operating), -10°C ~ 70°C (Storage)

10-90% non-condensing

RS232 to V35/X21/RS449/RS530 Application



Ordering Information

RS232/ Model Type

V35IP : RS232 to V35

RS449IP : RS232 to RS449

X21IP : RS232 to X21

Example: RS232/V35IP

RS232 Interface Converter V35IP-CAB

The V35IP-CAB interface converter allows full bi-directional synchronous conversion between RS-232C (V.24) and V.35 hardware. These converters all work WITHOUT an EXTERNAL POWER SUPPLY. The V35IP-CAB interface converter is designed for synchronous RS-232 operation at data rates up to and including 128kbps. It may also be applied to asynchronous RS-232 using only TD & RD signals, while ignoring TC, RC, and XTC timing signals. Asynchronous RS-232 requires three times greater data throughput on the synchronous side's V.35 interface. The physical connections for the V35IP-CAB converter is a DB25 female with standard pin out in DTE or DCE, while a cable is molded with MB34 connector for V.35.

Features

- Electrical SYNC RS-232 interface converter to V.35
- Interface powered, no external DC power required for the "IP" converter family
- DCE and DTE separate models
- Complies with EIA RS-232 and ITU-T V.35
- RS-232 pin 9 may be used to provide 5-9VDC external power if the application of the unit is in a poor communication environment

Data rate

Power Input

Power Source

Indications

Power Consumption

Dimensions

Weight

Temperature

Humidity

Up to 128Kbps

DC power acceptable (RS232 DB25 Pin 9)

RS232 Interface powered or external AC adapter

LEDs (TD, RD)

< 5W

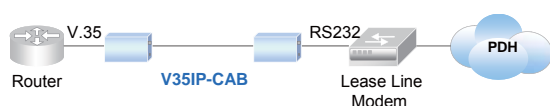
53 x 75 x 22mm (D x W x H)

500g

0°C ~ 50°C (Operating), -10°C ~ 70°C (Storage)

10-90% non-condensing

Convenient Cable Solution



Ordering Information

V35IP-CAB Model Type

DCE : RS232 DTE to V35 CAB-DCE

DTE : RS232 DCE to V35 CAB-DTE

Example: V35IP-CAB-DCE

V.35 to RS485 Interface Converter IC485-3



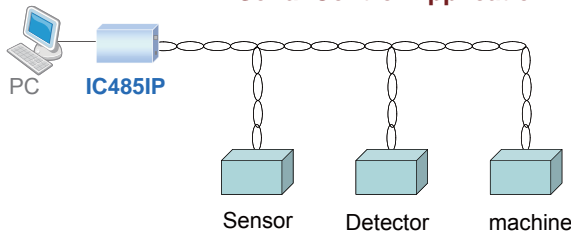
The ic485-3 Interface Converter provides asynchronous conversion between RS-232 interface and RS-485 standard interface. The RS-232 interface connection is via the unit's DB-25F female connector, while the RS-485 side's connection is via a five screw terminal block. The ic485-3 converter's circuitry provides a high degree of electrical isolation between the RS-232 and RS-485 sides. The RS-232 side may operate as DTE or DCE, has provisions for establishing hardware flow control, and has LEDs to indicate data transmission and reception. The RS-485 side may operate in either two wire half duplex or four wire half or full duplex and also has LED's to indicate data transmission and reception.

Features

- Electrically converts RS-485 to RS-232
- RS-485; 2 or 4 wire, Half or Full Duplex
- Supports optical isolation, electrical isolation of 2500V minimum
- DTE/DCE switch selectable
- Data rate up to 128Kbps
- External DC power required
- RS-232 handshaking: DTR/DSR, RTS/CTS or Auto

Data rate	1200, 2400, 4800, 9600, 19.2K, 38.4K, 57.6K, 115.2K or 128K
Connector	RS232: DB25F with adapter cable RS485: 5 screw terminals block
Indications	LEDs (TX/RX on 485 side and TD/RD on RS232 side)
Power Input	9VDC
Power Consumption	< 6W
Dimensions	140 x 80 x25mm (D x W x H)
Weight	180g
Temperature	0°C ~ 50°C (Operating), -10°C ~ 70°C (Storage)
Humidity	10~90% non-condensing

Serial Control Application



Ordering Information

ic485- Model Type
 3 : RS232 to RS422/485 Terminal block 5 wires
 Example: ic485-3

Async RS232 to RS422/ RS485, RJ-45 Interface Converter IC485IP



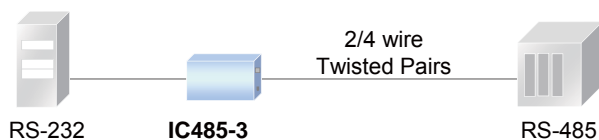
The ic485IP Interface Converters provide asynchronous conversion between RS-232 interface and RS-485 standard interface. The RS-232 interface connection is via the unit's DB-25 female connector, while the RS-485 side's connection is via either a five screw terminal block or an RJ-45. The ic485IP converter's circuitry is not electrically isolation between the RS-232 and RS-485 sides. The RS-232 side may operate as DTE or DCE, has provisions for establishing hardware flow control, and has LEDs to indicate data transmission and reception. The RS-485 side may operate in either two wire half duplex or four wire half or full duplex and also has LED's to indicate data transmission and reception.

Features

- Electrically converts ASYNC RS-232 to RS-485/422
- Baud rate up to 128kbps
- DCE/DTE switch selectable
- RTS/CTS control, full/half duplex
- Simulation/monitor select switch

Data rate	Up to 128Kbps
Connector	RS232: DB25F RS485: 4 screw terminals block (ic485IP-1) RS485: RJ-45 connector (ic485IP-2)
Indications	LEDs (TD, RD, External DC Power)
Power Input	Interface Powered or External DC 9V in
Power Consumption	< 5W
Dimensions	ic 485IP-1: 54 x 76 x20mm (D x W x H) ic 485IP-2: 54 x 56 x 20mm (D x W x H)
Weight	60g
Temperature	0~50°C (Operating) ,0~70°C (Storage)
Humidity	10~90% non-condensing

RS485 to RS232 Application



Ordering Information

ic485IP- Model Type
 1 : RS232 to RS422/485 Terminal block 4 wires
 2 : RS232 to RS422/485 RJ45
 Example: ic485-IP-1

Async RS232 short haul modem IC232IP



The ic232IP, asynchronous, Short Haul Modem, overcomes the limited distances of the RS-232 standard by converting DCE/DTE equipment to full duplex 2 twisted pair wire (Category 3 or better). This series of converters works without any external power supply. The ic232IP-SM operates up to 10 Km depending on the wire gauge and data rate.

Features

- Extend ASYNC RS-232 up to 10km depending on wire gauge and data rate
- Interface powered, no external DC power required for the "IP" converter family
- Full Duplex over 2 twisted pairs (Cat. 3 or better)
- Baud rate up to 128Kbps
- DCE/DTE switch selectable

Data rate
Connector

Up to 128Kbps
ic232IP-SM: Async RS232: DB25F, modem side:RJ45
ic232IP-2: Async RS232: DB25F, modem side:

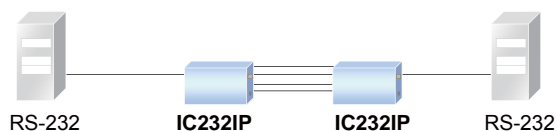
Indications
Power Input
Power Consumption
Dimensions

4 screw terminal with Ground pin
LEDs (TD, RD)
Interface Powered

Weight
Temperature
Humidity

< 5W
ic 232IP-SM: 54 x 56 x 20mm (D x W x H)
ic 232IP-2: 54 x 76 x 20mm (D x W x H)
50g
0°C ~ 50°C (Operating), -10°C ~ 70°C (Storage)
10-90% non-condensing

RS232 Short Haul Modem Application



Ordering Information

ic232IP-□□□□□□ Model Type

SM : RS232 short haul modem, RJ45

2 : RS232 short haul modem, Terminal block 4 wires

Example: ic232IP-SM

RS232, Current Loop Converter icCL-2



Current loop devices use current on or current off to transmit binary digits. The icCL converter interfaces RS-232 systems to 20mA or 60mA current loop ports with open circuit voltages up to 30 V. All the units are very easy to implement. Simply connect the appropriate interface cable and select the DCE/DTE type.

Features

- Electrically converts ASYNC RS-232 to Current Loop
- Full duplex, 19.2kbps to 400ft
- Baud rate up to 128kbps
- Current Loop connection by 4 screw terminal
- DCE/DTE switch selectable
- 20/60mA switch selectable
- External DC power required

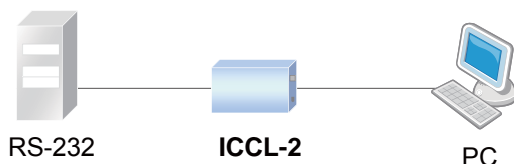
Data rate
Connector

Up to 128Kbps
RS232: DB25F or DB25M
Current loop: 4 screw terminal block

Indications
Power Input
Power Consumption
Dimensions
Weight
Temperature
Humidity

LEDs (TD, RD)
9VDC
< 6W
54 x 76 x 20mm (D x W x H)
60g
0°C ~ 50°C (Operating), -10°C ~ 70°C (Storage)
10-90% non-condensing

RS232 Current Loop Application



Ordering Information

icCL-□□□□□□ Model Type

2 : RS232 Current loop, Terminal block 4 wires

Example: icCL-2

RS232 to TTL/CMOS Interface Converter ic232TTL



The ic232TTL converts RS-232 to TTL/CMOS compatible level. Two channels are used to convert from RS-232 to 0/+5 VDC signals, and two channels are used to convert from 0/+5 VDC signals to RS-232. Therefore, this converter supports TD, RD, RTS, and CTS. The RS-232 side is a DB9 female connector while the TTL/CMOS side is a DB9 male connector. This unit is powered from the RS-232 data and handshake lines whether the lines are high or low and may work at baud rates up to 115.2kbps. The handshaking lines (pins 7[RTS] and 4[DTR]) may be in either a high or low condition, but must be present to power the converter. It is important that TTL/CMOS logic, and only TTL/CMOS logic (0 to +5 VDC) be used for the TTL/CMOS side of the converter. The maximum sinking current for one TTL/CMOS output is 3.2 mA. The maximum source current for one TTL/CMOS is 1 mA. Signal levels are inverted by the converter.

Features

- Electrically converts ASYNC RS-232 to TTL/CMOS level
- Interface powered, no external DC power required for this converter
- RS-232 DB9F connects directly to PC COM port
- TTL/CMOS level connects directly to embedded system's UART
- Baud rate up to 115.2k

TTL / CMOS Input

Low (< +0.8V)
High (> +2V)

TRS232 Input

Low < +0.8V & > -15V
High > +2V & < +15V
Weight
Dimension

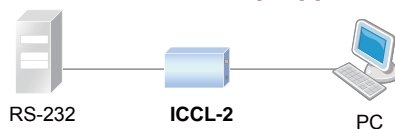
RS232 Output

+5V minimum, +9V typical
-5V minimum, -9V typical

TTL / CMOS Output

+3.5V minimum, +4.6V typical
+0.4V minimum, +0.1V typical
20g
60 x 31 x 15mm (D x W x H)

RS232 Current Loop Application



Ordering Information

ic232TTL : RS232 to TTL/CMONS

Asynchronous RS232 to Synchronous (HDLC) icAS/IP



The icAS/IP, interface converter allows full conversion between a computer / terminal RS-232 asynchronous port and a synchronous modem. The icAS/IP conforms to the ITU-T V.22 standard and accommodates the difference in frequency between the asynchronous port and synchronous modem. This unit derives its baud rate automatically from the transmit clock of the modem and operates at data rates from 300 to 19200bps.

Features

- Convert ASYNC RS-232 to SYNC (HDLC) V.22 protocol
- Automatically adjusts baud rate
- Baud rate up to 19.2kbps
- Fully transparent to signals
- Function set by dip switch
- Interface powered, no external DC power required for the "IP" converter family
- An external power adapter (9VDC@600mA) may be used if the application of the unit is in a poor communication environment

Data rate

Connector

Standard

Indications

Power Input

Power Consumption

Dimensions

Weight

Temperature

Humidity

300 ~ 19200bps

RS232: DB25F or DB25M with adapter cable

ITU-T V.22

LEDs (Power, link)

9VDC

< 5W

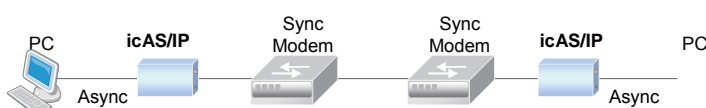
54 x 73 x 20mm (D x W x H)

150g

0°C ~ 50°C (Operating), -10°C ~ 70°C (Storage)

10~90% non-condensing

Async to Sync Application



Ordering Information

icAS/IP : Async to Sync converter V.22 protocol

DTMF to Pulse Converter

DTMF



The DTMF to PULSE Dialing Converter is an electronic device used to convert the DTMF tones from telephone, modem, or fax equipment to standard telephone pulses. Connecting the device is very easy. Simply connect between the tone source device and the phone line. Received tones are held in buffer and output as pulses after 3 seconds of not receiving any more tones.

Features

- Receives DTMF tones from POTS and outputs pulses
- Powered from the telephone line
- Detects DTMF tones
- 32 character buffer
- 20 second time-out will cease any conversion
- Pulse dialing rate factory settable for 10pps or 20pps
- Make/break ratio factory settable for 40/60 or 33.3/66.6

Connector

Indications

Pulse dialing rate

Make/Break ratio

Dimensions

Weight

Temperature

Humidity

2 x RJ11

LEDs (Wake-Up)

10pps (default) or 20pps

40:60 (default) or 33.3:66.6

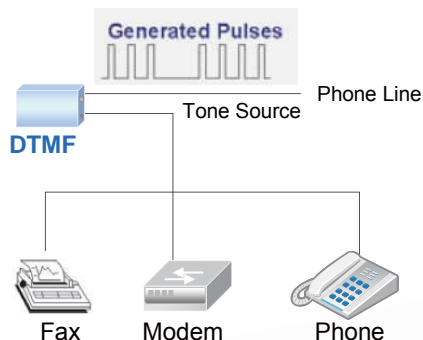
135 x 79 x 25mm (D x W x H)

150g

0°C ~ 50°C (Operating), -10°C ~ 70°C (Storage)

10-90% non-condensing

DTMF to Pulse Dialing Application



Ordering Information

DTMF : DTMF to Pulse dialup converter

