CON-422-PIE  
Industrial RS-232 To RS-422 Converter with Optional 5V External Power

GENERAL FEATURES:
- Plug-and-Play (hot-pluggable)
- Port powered - no external power needed
- Optional 5V external power can be applied
- Rugged industrial grade design
- Data direction auto-turnaround - no flow control necessary
- Built-in surge and static protection
- 5-year replacement manufacturer’s warranty
- CE, FCC, RoHS and REACH certified

DESCRIPTION:
The SerialComm CON-422-PIE is an industrial grade bi-directional port powered or external powered RS-232 to RS-485 converter which converts a full-duplex RS-232 port to a full-duplex four-wire RS-422 port. A built-in data direction auto-turnaround feature automatically enables the RS-422 driver when data is present from the RS-232 port eliminating the need for software drivers making the device fully plug-and-play. The CON-422-PIE has a DB9 female connector on the RS-232 serial port, and DB9 male connector on the RS-422 port. A separate terminal block is included with the product. The terminal blocks plug into the RS-422 port, providing screw-lug wire termination for the port. The unit is enclosed in a rugged ABS housing and is powered from the RS-232 data lines; no external power is required.

PORT POWERED WITH OPTIONAL EXTERNAL POWER:
The SerialComm CON-422-PIE has an optional 5V DC external power input. The CON-422-PIE is normally port-powered from the RS-232 data lines while using a capacitor charge pump built into the converter to provide necessary power. There are rare instances where the RS-232 host device is not capable of port-powering the converter due to signal incompatibilities or low voltage levels. If this should occur, you can add a 5V DC external power to the terminal block or DB9 connector. Because the CON-422-PIE is industrial grade and port-powered with an optional 5V power input it makes this converter one of the most versatile RS-232 to RS-422 converters on the market.

CERTIFICATIONS:

PORT POWERED WITH OPTIONAL EXTERNAL POWER:
- CE, FCC, RoHS and REACH

SPECIFICATIONS:

COMMUNICATION:
- STANDARDS: EIA/TIA RS-232C Standard and RS-422 Standard
- BAUD RATES: From 300 bps To 115,200 bps

ELECTRICAL:
- POWER SOURCE: Port Powered From RS-232 Data Lines with Optional 5V External Power
- CURRENT CONSUMPTION: Less Than 10 mA
- STATIC PROTECTION: 15KV Electric Static Discharge (ESD) Protection
- SURGE PROTECTION: 600W Surge Protection

MECHANICAL:
- HOUSING: Rugged ABS
- WEIGHT: With Terminal Block: 1.2oz (36 grams)
- With Terminal Block: 0.8oz (24 grams)
- DIMENSIONS: With Terminal Block: 3.15" X 1.33" X 0.73" (80.0 mm X 33.8 mm X 18.6 mm)
- Without Terminal Block: 2.47" X 1.33" X 0.70" (62.8 mm X 33.8 mm X 17.8 mm)

ENVIRONMENTAL:
- OPERATING TEMP.: -40° F to 185° F (-40°C to 85° C)
- STORAGE TEMP.: -40° F to 185° F (-40°C to 85° C)
- OPERATING HUMIDITY: 5% To 95% - No Condensation

QUALITY:
- PRODUCT SAFETY: CE, FCC, RoHS and REACH Third-party Certified
- QUALITY MANAGEMENT: Manufactured and Distributed to ISO 9001:2015 QMS
- RELIABILITY: Low Failure Rate – 99+% Reliability Since Inception
- WARRANTY: 5 Year Replacement Warranty
APPLICATIONS:
PORT POWER MODE:

FIGURE 1: EXTENDING RS-232 DATA DISTANCE - PORT POWER MODE

FIGURE 2: MASTER/SLAVE MULTIPLE DROP CONFIGURATION - PORT POWER MODE

TROUBLESHOOTING INSTRUCTIONS:
Using one CON-422-PIE unit:
1. Check that all connections comply with the connection diagrams.
2. Perform a loop back test on one unit:
   a) Connect the T/R+ to RXD+ and T/R- to RXD- on the RS-422 port.
   b) Connect the RS-232 port to the PC RS-232 port.
   c) Running a hyper terminal program on the PC, send ASCII characters to the CON-422-PIE converter from one PC port, and check that the characters are received at the same PC port. This tests that the transmit and receive functions of the CON-422-PIE unit is working properly.

Using two CON-422-PIE units:
1. Check that all connections comply with the connection diagrams.
2. Perform a loop back test on two units:
   a) Connect the two RS-422 ports.
   b) Connect the two RS-232 ports to two PC RS-232 ports.
   c) Running hyper terminal programs on both PCs, send ASCII characters to the CON-422-PIE converter from one PC port, and check that the characters are received at the 2nd PC port. Repeat the test in the opposite direction. This tests that the transmit and receive functions of both CON-422-PIE units are working properly.

5V EXTERNAL POWER MODE:

FIGURE 3: EXTENDING RS-232 DATA DISTANCE - 5V POWER MODE

FIGURE 4: MASTER/SLAVE MULTIPLE DROP CONFIGURATION - 5V POWER MODE