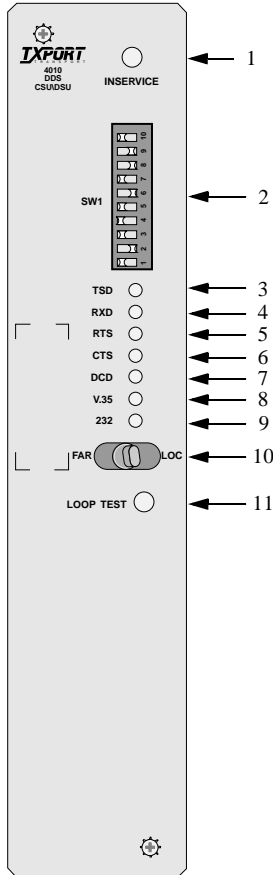


## Configuration Guide (Standalone Version)

### Front Panel Description



Pins	Description
1	In Service - This three-color IN SERVICE LED indicates the DDS loop receiver's operating status as follows. Green: Indicates DDS signal at the receiver (either customer data or zero suppression). Amber: Indicates DDS signal is still present, but received data is idle or out of service. Red: Indicates an insufficient signal for the DDS receiver to operate properly.
2	Switch SW1 - This 10-position LED switch is described below.
3	TXD - This green transmit-data LED lights when the data lead is a mark and is off when the data lead is a space. Therefore, the LED varies from full intensity to off, depending on the relative number of marks and spaces.
4	RXD - This green receive-data LED lights when the data lead is a mark and is off when the data lead is a space. Therefore, the LED varies from full intensity to off, depending on the relative number of marks and spaces.
5	RTS - This green request-to-send LED lights when circuit CA is in the ON state at the DSU interface.
6	CTS - This green clear-to-send LED lights when circuit CB is in the ON state at the DSU interface.
7	DCD - This green receive-line-signal-detector LED lights when circuit CF is in the ON state at the DSU interface.
8, 9	V.35 and 232 - The green V.35 LED is on when the DTE electrical interface is set to V.35. The green 232 LED is on when the interface is set to RS-232. If neither light is on, the configuration switches are set incorrectly.
10	Test Switch - This three-position switch operates as follows. The LOC position places the unit in a local-loop mode. Data from the DTE is looped back to the DTE. Data from the network is looped back to the network. The FAR position initiates an automated V.54 remote loop and BERT sequence of assigned data channels. The TEST LED is green if the test is successful (the far-end unit loops and returns the data error free with the V.54 code). If errors are detected, the TEST LED is red. The center position deactivates the loop codes for normal operation.
11	LOOP TEST - This LED remains amber if there is a local loop or a remote loop. The LED turns red if the V.54 BERT test fails or green if the V.54 BERT test passes.

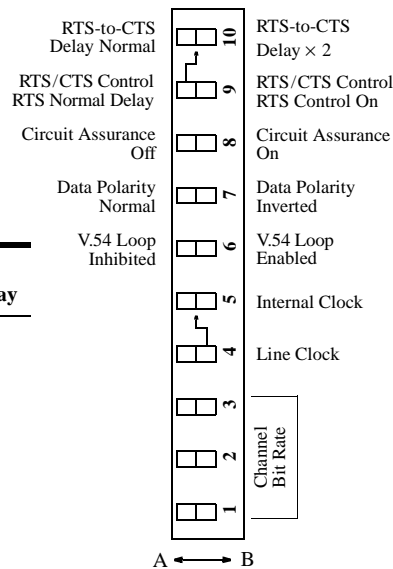


### PRISM 4010 Front Panel

### Switch SW1

Rate (kbps)	SW1-4	SW1-5
Network (slave)	A	n/a
Master	B	A
External	B	B

Rate (kbps)	SW1-1	SW1-2	SW1-3	RTS-to-CTS Delay
2.4	B	B	B	8 ms
4.8	A	B	B	4 ms
9.6	B	A	B	2 ms
19.2	A	A	B	1 ms
28	B	B	A	0.8 ms
38.4	A	B	A	0.5 ms
56	B	A	A	0.4 ms
64	A	A	A	0.3 ms



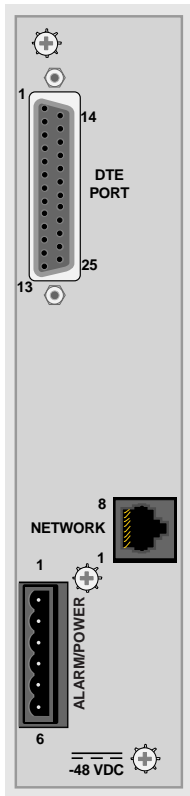
Pins	Description
1 - 3	Channel Bit Rate Select - These three positions select the channel bit rate (refer to the table on the right). The RTS-to-CTS delays are multiplied by two when SW1-10 is in the B position.
4	Line Clock - This position selects either an internal clocking source or a loop timing source from the received data.
5	Internal Clock - This position selects either the DSU external clock input or the crystal oscillator as the clocking source. It is applicable only if SW1-4 is in the B position.
6	V.54 Loop Operation - This position enables or inhibits V.54 loop operation.
7	Data Polarity - This position determines whether data bits are inverted. In the A position, marks equals pulses. In the B position, spaces equal pulses. Receipt of OOF, OOS, idle, or loop codes forces the DSU data to all marks (A position) or spaces (B position).
8	Circuit Assurance - On allows the status of CF (receive line signal detector) and CA (request to send) to control the output CB (clear to send). If either CA or CF is Off (A position), CB is Off. If CA and CF are On (B position), CB is On.
9	RTS/CTS Control - In the B position, CTS is forced On regardless of the RTS input status. In the A position, delays are determined by SW1-10.
10	RTS-to-CTS Delay - In the A position, the RTS-to-CTS delay is as shown in the bit rate table of the diagram. In the B position, the delays shown are multiplied by two.



The symbol  $\square$  indicates that the switch pointed to does not function unless the opposite end of the arrow is in the position shown. For example, SW1-5 does not function unless SW1-4 is in the B position.

## Rear Panel Pinout

Pin	NETWORK (rear panel)	NETWORK (9-1001-075-1)	ALARM/POWER
1	Data In (T)	Data Out (R1)	48 V Return
2	Data In (R)	Data Out (T1)	Signal Ground
3	not connected	not used	-48 VDC
4	Data Out (T1)	not used	Frame Ground
5	Data Out (R1)	not used	not applicable
6	not connected	not used	not applicable
7	Frame Ground	Data In (T)	not applicable
8	Frame Ground	Data In (R)	not applicable



**PRISM 4010  
Rear Panel**

### Switch S1 and S2 Access Procedure

1. Open the door.
2. Using both thumbs, gently spread the plastic front panel bezel near the LEDs until it detaches from the front panel.
3. Remove the screws from the front panel.
4. Grasp the sides of the front panel and remove the unit from the housing.
5. Refer to Figure Side View of the 4010 to set S1 and S2.

### Switch S1 and S2

- V.35:** Set both switches Up.  
**RS-232:** Set both switches Down.

## Specifications

### Network Interface

Line Rate: 2.4, 4.8, 9.6, 19.2, 28, 38.4, 56, and 64 kbps  
 Line Code: AMI  
 Line Impedance: balanced 135 Ω  
 Input Signal: +1 to -40 dB (ALBO)  
 Output Signal: 3.0 V (±15%) base-peak into 135 Ω  
 1.5 V (±15%) at the 9.6 kbps line rate  
 Line Protection: 1000 V lightning, input and output

### Power

Power: -48 VDC (±10%), 50 mA max, 3 watts, 10 BTU max  
 Connection: Terminal strip

### Mechanical

Mounting: Standalone  
 Dimensions: 6.8" H, 1.75" W, 10.5" D  
 Weight: 2 lbs

### Industry Standards

FCC Compliance: Part 15 Subpart B, Class A, Part 68 Reg  
 Industry Canada: CS03  
 US Safety: UL 1459  
 Canadian Safety: CSA22.2, No. 225-M90  
 AT&T TR 62310  
 AT&T TR 41450

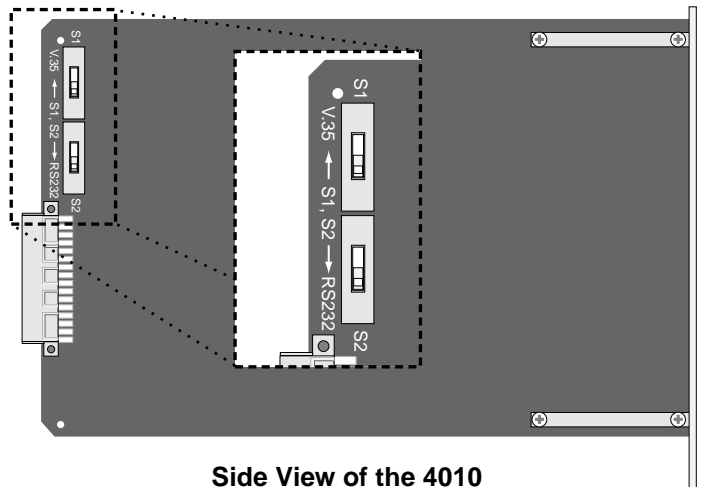
### Environmental

Operating Temp: 0° to 50°C (32° to 122°F)  
 Storage Temp: -20° to 85°C (-4° to 185°F)  
 Humidity: 95% max (non-condensing)

## V.35 and RS-232 Interface

Ckt.	RS-232	Signal Name - Function	DCE
101	1	Frame Ground - This circuit is used to terminate shields.	Gnd
102	7	Signal Ground - This circuit is used as the return reference for unbalanced signals.	Gnd
103	2/14	Transmit Data - This input is used for synchronous TD from the DTE. It is transmitted on the DDS side.	In
104	3/16	Receive Data - This output is the data decoded from the incoming DDS receive data.	Out
105	4	Request To Send - This input is a control line from the DTE, indicating data is to be transmitted. When RTS is ON (space), the data transmitter, the zero suppression circuitry, and the CTS are enabled. When RTS is OFF, the transmitter sends idle code and the CTS is forced OFF.	In
106	5	Clear To Send - This output is a DCE response, indicating that either RTS is ON or SW1-9, position B, is forcing RTS ON. When SW1-8 is in position B, RTS and RLSD must be ON for CTS to be ON.	Out
107	6	Data Set Ready - This output is ON when the unit is not in a test mode (other than a V.54 test).	Out
109	8	Data Carrier Detect - This output is ON when the correct data or zero suppression code is being received and DSR is ON. It is OFF when either DSR is OFF, the DDS receiver has lost sufficient signal to operate for at least one second, or the receiver has received OOS, OOF, idle, or loop codes for about 20 U.I.	Out
113	24/11	External Transmit Clock - This is the synchronous transmit clock input from the DTE. When both SW1-4 and SW1-5 are in the B position, this clock controls the frequency of the DDS transmit clock and clocks circuit 103 (TD). When either SW1-4 or SW1-5 is in the A position, this input has no effect on DDS operation.	In
114	15/12	Transmit Clock - This output is supplied by the DCE as an external DTE timing source. It is generated from the internal data clock or the far-end transmit data. Not available if SW1-4 and S1-5 are in the B position.	Out
115	17/9	Receive Clock - This clock output is the timing for the RD and is always used to time the receive data. This clock is always derived from the DDS receive data.	Out

Note: When two pins are listed, RS-232 only uses the first pin; V.35 uses both. All pins not specified are open.



**Side View of the 4010**

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