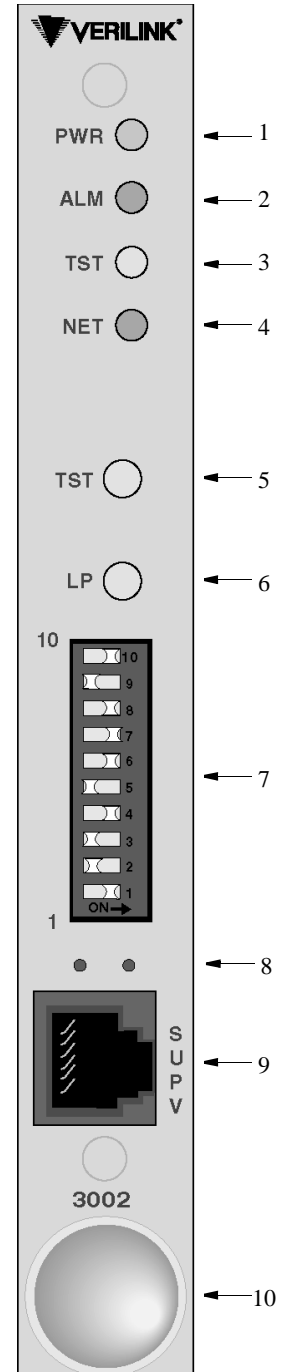


Front Panel Description

Index	Control/Indicator	Function/Description																																	
1	PWR (green)	This LED lights continuously when power is applied to the unit.																																	
2	ALM (red)	This LED lights continuously when the unit is in an active alarm condition. This LED blinks to show it has a duplicate NMS address detected by an 8100A.																																	
3	TST (3-color)	Flashing Green: The unit is transmitting loop code. Solid Green: BERT is on with no errors or the unit is in clear test. Red: BERT is on and receiving errors. Amber: The unit is looped.																																	
4	NET (3-color)	Green: The unit is in frame sync. Amber: The unit is receiving a yellow alarm from the far end. Red: The unit is out of frame sync and/or has loss of signal.																																	
5	TST	When this button is pushed once, the unit transmits five seconds of in-band LLB code out to the network and performs a T1 NET BERT. Indicator TST blinks green during transmission of the loop code. If the TST button is pushed again, the unit transmits five seconds of in-band loop down code and returns to normal operating mode. The TST indicator then turns off.																																	
6	LP	When this momentary push button is pushed once, the unit activates a line loopback, looping the network receive data back to the network, and looping the data from the DTE ports back to the DTE. The TST indicator is amber while the unit is looped. If pushed again, the unit clears the loop and turns off the TST indicator.																																	
7	10-position DIP switch	<p>Switches S1-1 through S1-8 set the NMS address for the network manager port. When using the 3002 with an 8100A Site Controller, each element must have a unique unit address (see index item 2, ALM). The 8100A Site Controller can address up to 100 units (with addresses from 1 to 100). If the unit is not connected to a site controller, the NMS unit address should remain at the factory default setting of 1 where Position 1 is Left and all other positions are Right.</p> <p>Switch positions S1-1 through S1-8 are used to create an 8-bit binary code for an address in the range of 1 to 253. Switch position S1-1 is the least significant bit (LSB) and S1-8 is the most significant bit (MSB). If a switch is Right, its value is 0. If Left, its value is that shown on the left. The values are additive. For example, to set a unit address to 5, position S1-3 (value is 4) and position S1-1 (value is 1) would be set Left for a unit address of 5 (4+1). All other positions would be set Right. If all the switches are Right, the address is 1.</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="margin-right: 10px;"> Left ← Right SUPV Rate SUPV Rate 128 64 32 16 8 4 2 1 </div> <div style="margin-right: 10px; text-align: center;"> Binary values MSB ↑ ↓ LSB </div> <div style="border: 1px solid black; padding: 5px;"> <table style="border-collapse: collapse; text-align: center;"> <tr><td style="border: 1px solid black; width: 20px; height: 20px;"></td><td style="border: 1px solid black; width: 20px; height: 20px;"></td><td style="border: 1px solid black; width: 20px; height: 20px;"></td><td style="border: 1px solid black; width: 20px; height: 20px;"></td><td style="border: 1px solid black; width: 20px; height: 20px;"></td><td style="border: 1px solid black; width: 20px; height: 20px;"></td><td style="border: 1px solid black; width: 20px; height: 20px;"></td><td style="border: 1px solid black; width: 20px; height: 20px;"></td><td style="border: 1px solid black; width: 20px; height: 20px;"></td></tr> <tr><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td></tr> <tr><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> </table> </div> </div>										10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0						
10	9	8	7	6	5	4	3	2																											
1	0	0	0	0	0	0	0	0																											
8		These small, recessed red LEDs indicate supervisory and network manager activity from the 3002.																																	
9	SUPV	<p>The supervisory port provides direct terminal access for control and gathering status and facility performance data. Tables showing the port rate and pinout are given on the right.</p> <table border="1" style="display: inline-table; margin-right: 20px;"> <thead> <tr> <th>SUPV Port Rate</th> <th>S1-9</th> <th>S1-10</th> </tr> </thead> <tbody> <tr> <td>1.2 kbps</td> <td>Left</td> <td>Left</td> </tr> <tr> <td>2.4 kbps</td> <td>Right</td> <td>Left</td> </tr> <tr> <td>9.6 kbps</td> <td>Right</td> <td>Right</td> </tr> <tr> <td>19.2 kbps</td> <td>Left</td> <td>Right</td> </tr> </tbody> </table> <table border="1" style="display: inline-table;"> <thead> <tr> <th>SUPV Port Pinout</th> <th>Pin</th> </tr> </thead> <tbody> <tr><td>Data Terminal Ready Out</td><td>1</td></tr> <tr><td>Ready to Send Out</td><td>2</td></tr> <tr><td>Frame Ground</td><td>3</td></tr> <tr><td>Data Out</td><td>4</td></tr> <tr><td>Data In</td><td>5</td></tr> <tr><td>Signal Ground</td><td>6</td></tr> <tr><td>Clear to Send In</td><td>7</td></tr> <tr><td>Data Carrier Detect In</td><td>8</td></tr> </tbody> </table>	SUPV Port Rate	S1-9	S1-10	1.2 kbps	Left	Left	2.4 kbps	Right	Left	9.6 kbps	Right	Right	19.2 kbps	Left	Right	SUPV Port Pinout	Pin	Data Terminal Ready Out	1	Ready to Send Out	2	Frame Ground	3	Data Out	4	Data In	5	Signal Ground	6	Clear to Send In	7	Data Carrier Detect In	8
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10		Extractor/cardlock																																	



Front Panel

Specifications

Network Interface

Line Rate: 1.544 Mbps (± 50 ppm)
 Line Framing: D4 or ESF
 Line Code: AMI or B8ZS
 Input Signal: 0 to -27 dB ALBO
 Connection: RJ-48C jack, 100 Ω (± 5%)
 Output Signal: 3.0 V (± 10%) base-peak into 100 Ω with protection
 Line Build Out: 0, -7.5, -15, -22.5 dB attenuation
 Transient Voltage: 1000 V protection, fused input/output
 Jitter Control: per TR62411 and T1.403
 Timing Source: Internal, recovered line clock, external DTE
 Ones Density: B8ZS, N×56 bit stuffing, alternate fill; complies with TR62411

Equipment Interface

DTE Ports: single port
 Compatibility: Subminiature-D 26-pin, female ITU V.35
 Data Rate: Synchronous, N×56 kbps or N×64 kbps (where N = 1 to 24)
 Clocking: Internal, External, Oversample
 Data Invert: May be enabled or disabled

Supervisory Port

Connection: 8-pin modular (RS-232)
 Data Rates: 1.2, 2.4, 9.6, and 19.2 kbps

Diagnostics

Performance: Monitoring per TR54016 and T1.403
 Network Loops: Line loopback, payload loopback, or maintenance loopback in the network direction
 Fractional Loop: Responds to in-band V.54 loop code
 DTE Port Loops: Bidirectional loop toward DTE and Net
 BERT: Multiple test patterns toward network or DTE port

Alarms

Activation: Programmable thresholds
 Reporting: Front panel LEDs, call out on alarm (COA), and SNMP TRAPs

Power

DC: 48 VDC, 0.25 A, 12 W maximum, 41 BTU maximum

Mechanical

Mounting: Horizontal rack
 Dimensions: Width 0.69 inches (1.75 cm)
 Height 5.50 inches (14.0 cm)
 Depth 11.0 inches (27.9 cm)
 Weight: 0.66 pounds (0.30 kg)

Environmental

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

Standards

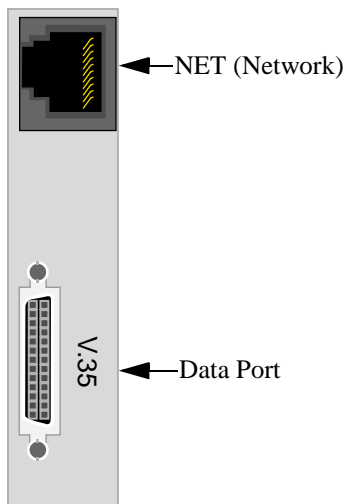
TR62411: December 1990
 TR54016: September 1989
 ANSI T1.403: 1989
 TR54019A: April 1988

Industry Listings

FCC Compliance: Part 15 Class A, Subpart B, Part 68
 U.S. Safety: UL 1950, 3rd Edition
 Canadian Safety: CSA C22.2 No. 950-95
 Industry Canada: CS-03, Issue 8

Accessory Cables

Cable type	Part Number
26-pin male-to-V.35 female	9-1001-113-010
26-pin male-to-V.35 male	9-1001-114-010



Rear Panel

NET Pinout

NET Interface	Pin
Data In (Tip)	1
Data In (Ring)	2
Not used	3, 6
Data Out (Tip)	4
Data Out (Ring)	5
Chassis Ground	7, 8

Data Port Pinout

Signal	EIA-530 Backplane	EIA-530 DB-25	V.35 34-pin
Frame Ground	1	1	A
Transmit Data	2, 14	2, 14	P, S
Receive Data	3, 16	3, 16	R, T
Request to Send	4	4, 19	C
Clear to Send	5	5, 13	D
Data Set Ready	6	6, 22	E
Signal Ground	7	7	B
Data Carrier Detect	8	8, 10	F
Transmit Clock	15, 12	15, 12	Y, AA
Receive Clock	17, 9	17, 9	V, X
Local Loopback	18	18	J
Data Term Ready	20	20, 23	H
Remote Loopback	21	21	BB
Terminal Timing	24, 11	24, 11	U, W



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