

Note: For more information about the DDS Lite, see the reference manual, part number 34-00295, on the User Documentation CD or at www.verilink.com.

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/output

Mechanical

Mounting:	desktop or wallmount
Dimensions:	1.25" H, 3.50" W, 5.75" D
Weight:	1 pound

Power Source

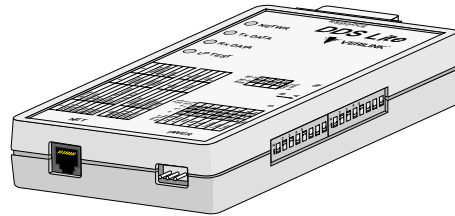
External:	Input: 115 VAC Output: 9 VAC, 400 mA, min.
-----------	---

Industry Standards

FCC Compliance:	Part 15 Class A Subpart B, Part 28
U.S. Safety:	UL 1950
Canadian Safety:	CSA C22.2 No. 950-95
Industry Canada:	CS-03, Issue 8
Bellcore	GR-1089-CORE

Environmental

Operating Temp:	0° to 50°C (32° to 122°F)
Storage Temp:	-20° to 70°C (-4° to 158°F)
Humidity:	95% max (non-condensing)



Pre-Installation Information

All direct connections to DDS lines must be made using standard plugs and jacks.

Before connecting the unit, inform the local telephone company of the following information.

Port	ID	REN/ SOC	kbps	FIC	USOC
2.4	6.0	N	2.4	04DU5-24	RJ-48S
4.8			4.8	04DU5-48	jack
9.6			9.6	04DU5-96	
38.4			38.4	04DU5-38	
56			56	04DU5-56	
64			64	04DU5-64	

Wallmount Installation Using Screws

- Select a place close to a 115 VAC outlet with clearance for the signal and power cables. The indicators and switches should be easily accessible.
- Vertically place two #6 screws 3-13/32 inches apart at the selected place. Leave the screws out about an eighth of an inch.
- Place the upright unit over the screws until the holes engage and slide the unit down until it locks.

Connections

DDS Network Connection

The network DDS facility interface is an RJ-48C (8-pin) modular jack with the following pinout.

Pin	Assignment
1	Network Transmit Out
2	Network Transmit Out
3-6	Not Used
7	Network Data In
8	Network Data In

RS-232 Port Connection

The RS-232 connector is a standard DB-25 female, configured as a DCE port.

The RS-232 pin assignments are shown below. Only circuits used by the unit are listed. All unbalanced bipolar inputs and outputs meet RS-232C physical and electrical specifications. The asynchronous mode is ITU V.22 compliant.

Circuit	RS-232	Signal Function (Note: All other pins are open.)	DCE
101	1	Frame Ground	Gnd
102	7	Signal Ground	Gnd
103	2	Transmit Data	In
104	3	Receive Data	Out
105	4	Request To Send	In
106	5	Clear To Send	Out
107	6	Data Set Ready	Out
109	8	Data Carrier Detect	Out
114	15	Transmit Clock	Out
115	17	Receive Clock	Out

Power

Plug the connector from the power supply into the unit. Plug the transformer into an appropriate outlet. This applies power to the unit.

Indicators

Network

This three-color indicator shows the receiver's operating status. Green indicates a signal at the receiver (either customer data or zero suppression). Amber indicates signal is present, but received data is idle or out of service. Red indicates an insufficient signal for the receiver to operate properly.

Tx Data

This three-color indicator shows the status of the transmitted data. Green indicates marks. Red indicates spaces. Amber indicates alternate marks and spaces.

Rx Data

This three-color indicator shows the status of the received data. Green indicates marks. Red

indicates spaces. Amber indicates alternate marks and spaces.

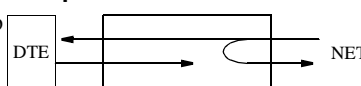
Loop Test

This indicator shows the loop status of the unit. Amber indicates the unit is in loop mode. When the indicator is Off, the unit is not in loopback.

Loopbacks

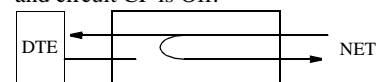
Channel Loop

This loop is activated by the reversal of the simplex, 20 mA sealing current. This is a unidirectional loop that ignores the DSU transmit data and retransmits the received DDS data. Receive data is unaffected and circuit CF is forced Off.



Data Set Loop (Non-latching)

This loop is activated by the receipt of at least four consecutive loop commands and remains looped as long as each third pattern byte is the loop command. It returns to normal operation after at least four pattern bytes that are not the loop command. This is a unidirectional loop that retransmits the DSU received data on the DSU transmit data. Receive data is unaffected and circuit CF is Off.



V.54 Channel Loop (Annex B: RDL)

This loop is activated by the receipt of the V.54 loop command. This loop is unidirectional and returns the DSU receive data to the DSU transmit data, and subsequently the DDS transmit data. Receive data is unaffected.

Configuration

On power up, the unit configures to the hardware settings of option switches SW1 and SW2. Changes to these settings take effect after resetting the unit by removing and then reapplying power. The unit then cycles through its LEDs and reads the new configuration.

These switches provide the following configuration parameters.

Network Bit Rate Select

Positions SW1-1, SW1-2, and SW1-3 are used to set the network bit rate. Refer to the table shown in the upper left of the figure to determine the switch settings for a particular bit rate. RTS-to-CTS delays double when position SW1-8 is in the B position.

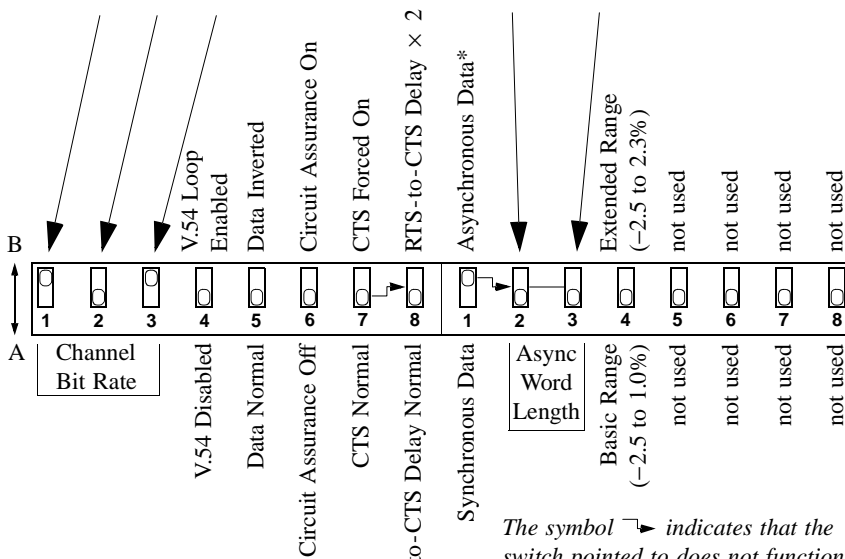
V.54 Loop Operation

Position SW1-4 is used to enable or disable V.54 loop operation.

Data Polarity

SW1-5 is used to determine whether data bits are inverted. In the A position, marks equal 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).

Rate (kbps)	SW 1-1	SW 1-2	SW 1-3	RTS-to-CTS Delay (ms)
2.4	B	B	B	8.0
4.8	A	B	B	4.0
9.6	B	A	B	2.0
19.2	A	A	B	1.0
28.0	B	B	A	0.8
38.4	A	B	A	0.5
56.0	B	A	A	0.4
64.0	A	A	A	0.3



* Asynchronous data does not function at 28, 56, and 64 kbps.

Circuit Assurance

When SW1-6 is in position B, the status of CF (receive line signal detector) and CA (request to send) controls the output CB (clear to send). If either CA or CF is Off, CB is Off. If CA and CF are On, CB is On.

CTS Control

When SW1-7 is in position B, CTS is forced On regardless of the RTS input status. In the A position, the delays are determined by SW1-8.

RTS-to-CTS Delay

When SW1-8 is in the A position, the RTS-to-CTS delay is as shown in the table shown in the upper left of the figure. In the B position, the delays double.

Synchronous/Asynchronous Data

When SW2-1 is in the A position, the unit operates in Synchronous mode. This switch must be in position B for switches SW2-2 and SW2-3 to function. When in position B, the unit operates in Asynchronous mode. In Asynchronous mode, data functions at 2.4, 4.8, 9.6, 19.2, and 38.4 kbps.

Asynchronous Word Length

Switches SW2-2 and SW2-3 are set to match the number of bits that make in each word of the asynchronous data. Refer to the table shown in the upper right of the figure.

Signalling Rate Range

Switch SW2-4 is set to match the ranges provided by the service provider.

Not Used

Switches S2-5, S2-6, S2-7, and S2-8 are not used.

Warranty

Verilink's product warranty covers repair or replacement of all equipment under normal use for a five-year period from date of shipment. Replacement products may be new or reconditioned. Any replaced or repaired product or part has a ninety (90) day warranty or the remainder of the initial warranty period, whichever is longer. Our in-house Repair Center services on a standard 10-workday-turnaround basis.

Returning Products

A product must be assigned a Return Materials Authorization (RMA) number before it is sent to Verilink for repair. An RMA number is issued by Verilink Customer Service at (800) 926-0085, ext. 2282.



145 Baytech Drive
San Jose, California 95134

127 Jetplex Circle
Madison, Alabama 35758

(800) 837-4546

www.verilink.com

FAX-On-Demand
(800) 957-5465

Technical Assistance Center
(800) 285-2755

The symbol indicates that the switch pointed to does not function unless the opposite end of the arrow is in the position shown. For example, SW1-8 functions only when SW1-7 is in the A position.