SECTION 5
INTERFACE SPECIFICATIONS

This section contains the specifications for the DDS DS0A/B Data Interface. This information is listed in Table 5-1.

Table 5-1
DDS DS0A/B Data Interface Specifications

Item	Specification
Operating modes	64 kb/s clear channel 64 kb/s byte encoder 64 kb/s THRU data DS0A or DS0B straightaway DS0A or DS0B loopback Secondary channel Subrate multiplexer test Multipoint Junction Unit control
Data format	Full-duplex, synchronous data
DS0A data rates	2.4, 4.8, 9.6, 19.2, and 56 kb/s
DS0B data rates	2.4, 4.8, and 9.6 kb/s
Test modes	
Alternating loopback modes	OCU, OCU+HL96, DSU, CHAN, CHAN+(1st) repeater, CHAN+(2nd) repeater, 1st & 2nd 56 kb/s repeaters, and HL96NY
Latching loopback modes	DS0-DP, OCU, CSU, LSI (HL222), DSU, NEI, and MJU
MJU control codes	Branch select, branch block, branch unblock, restore, and release
Error generation	
Operation	Continuous
Bit error rates	4E-6 to 1E-2 (1E-6 only on FIREBERD 4000)
Bit error format	Data bits only, frame bits only, or both
Clock input	
Connector	9-pin female D-type subminiature
Pin Assignments	1 Not connected 2 Signal ground 3 Logic level 64 kb/s bit clock input 4 Logic level 8 kb/s byte clock input 5 Signal ground 6 Bipolar 8 kb/s byte clock input (+) 7 Bipolar 8 kb/s byte clock input (-) 8 Bipolar 64 kb/s byte clock input (+) 9 Bipolar 64 kb/s byte clock input (-)
Signals	Logic and bipolar bit (64 kb/s) and byte (8 kb/s)

Table 5-1
DDS DS0A/B Data Interface Specifications (continued)

Item	Specification
Logic Level Clock Input	
Input impedance	1000 Ω ± 10%
Threshold	~ 1.4V
Hysteresis	~ 69 mV
Bipolar Clock Input	
Input impedance	1000 Ω ± 10%
Threshold	0.1V differential
Hysteresis	~ 69 mV
Bipolar data input	
Input connection	Bantam jack, color-coded red
Unterminated impedance	1000 Ω minimum (sleeve open)
Terminated impedance	135 Ω ± 10% (sleeve grounded)
Operating signal level	±3.5 to ±5.5 V with 0 to 1500 ft. of 24 gauge interconnecting cable
Bipolar data output	
Output connection	Bantam jack, color-coded white
Test load impedance	135 Ω, resistive
"Zero" output level	0.7 V maximum
Pulse amplitude	±5.0 ±0.5 V with maximum imbalance of ±0.25 V
Half amplitude pulse width	15.6 ±0.5 microseconds with maximum imbalance of ±0.7 microseconds
Rise and fall times	0.5 microseconds maximum
Data format	Alternate mark inversion, non-return to zero
Logic data input	
Input connection	Bantam jack, color-coded red
High level input voltage	1.6 V minimum, open circuit pulled up to logic high
Low level input voltage	0.9 V maximum
High level input current	1 mA at 5.0 V
Low level input current	1 mA at 0.7 V
Logic data output	
Output connection	Bantam jack, color-coded white
High level output	3.5 V minimum for output current less than 1 mA
Low level output	0.7 V maximum for input current less than 10 mA
Format near logic	Tip only
Format far logic	Ring only
Protocol Port	Configured as an RS-232-C DCE connection
	2 TD Input Transmit Data
	3 RD Output Received Data
	4 RTS Input Request to Send
	5 CTS Output Clear to Send
	6 DSR +V Data Set Ready
	7 SGND — Signal Ground
	8 RLSD +V Received Line Signal Detect
	15 SCT Output Serial Clock Transmit
	17 SCR Output Serial Clock Receive
Dimensions	7.3"W x 1.5"H x 5.1"D (185mm x 38mm x 130mm)