

SDM-2020 Interface Types and Redundancy

Application Note

1:1 switch is provided with the SMS-301 and SMS-451.
Limited 1:4 protection is available with the SMS-458 Switch for G.703.

Interface	Description (Same Module For Modulator and Demodulator except HSSI)	Data Rate (Mbit/s)	Modem Connector	1:1 Redundancy
EIA-530, RS422 Serial / Parallel	Both parallel and serial interfaces.			
Parallel	Parallel with pinout same as DVB LVDS	1.5 - 100	25 pin D, female	SMS-301 Tx Only, 37 pin D
Serial	Serial EIA-530 (RS422), Supports SD, ST, TT, RD, RT, DM, RS, CS	1.5 - 18	25 pin D, female	SMS-301
LVDS DVB	Same as DVB-SPI, LVDS (low voltage differential signaling, similar to PECL).			
Tx	Tx (modulator) Parallel / Serial on a shared connector. Parallel: Signals supported include parallel data D0 - D7, Byte Clock, Sync, Dvalid.	1.5- 100	25 pin D, female	SMS-301 Tx Only, 37 pin D
	Serial (Uses MSB of Parallel): Uses bit clock with D7.	1.5 - 32		
Rx	Rx (demodulator) Parallel / Serial on a shared connector. Parallel: Signals supported include parallel data D0 - D7, Byte Clock, Sync, Dvalid.	1.5 - 100	25 pin D, female	None
	Serial (Uses MSB of Parallel): Uses bit clock with D7.	1.5 - 32		
ASI / LVDS	Asynchronous Serial Interface (ASI) is DVB compliant. Uses 75 ohm coaxial cable and BNC connectors. 2 Tx BNC inputs (program to select one). 1 Rx BNC output.	1.5 - 100	Tx = 2 each BNC female Rx = 1 each BNC female	SMS-451 Data: 1 Tx and 1 Rx only. No Auto Detect of J3 / J4 Tx data. Tx = 70 / 140 Rx = 70/140 or L-Band
ASI section				
LVDS section				

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Interface	Description (Same Module For Modulator and Demodulator except HSSI)	Data Rate (Mbit/s)	Modem Connector	1:1 Redundancy
HSSI / ECL Note: Separate Module for modulator and demodulator	Serial ECL / HSSI (high speed serial interface - CISCO) Compatible with some early HDTV encoders. Supports SD, TT, ST, RD, RT, CD, DM + Dvalid, Psync and more. No Aux Connector Different module for Tx (modulator) and Rx (demodulator)	Serial Unframed 1.5 - 70 DBS Framing 1.5 - 32	50 pin D, SCCI female per EIA-613 (HSSI)	SMS-451 Tx = 70 / 140 Rx = 70 / 140 or L-Band Data rate to 52 Mbit/s
G.703 original PL/6168 PL/6168 Rev A7 (Jul 99)	6.312 Mbit/s (T2), 8.448 Mbit/s (E2), 34.368 Mbit/s (E3), 44.736 Mbit/s (T3), 51.85 Mbit/s (Cu STS-1). Adds 1.544 Mbit/s (T1), 2.048 Mbit/s (E1)	←	BNC	SMS-451 Tx = 70 / 140 Rx = 70 / 140 or L-Band

Interface	Description	Data Rate	Modem Connector	1:4 Redundancy
G.703 original PL/6168 PL/6168 Rev A7 (Jul 99)	6.312 Mbit/s (T2), 8.448 Mbit/s (E2), 34.368 Mbit/s (E3), 44.736 Mbit/s (T3), 51.85 Mbit/s (Cu STS-1). Adds 1.544 Mbit/s (T1), 2.048 Mbit/s (E1)	←	BNC	SMS-458 Tx = 70 / 140 Rx = 70 / 140 or L-Band Data rate E2 to 52 Mbit/s

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