

DL4000

Modular Video Transport Platform

Overview

Applications

- Video-Over-fiber
- Video-Over-IP
- Optical multiplexing
- Signal generation
- Circuit verification and monitoring
- Format conversion

Formats supported

- 2.967Gb/s 3G-SDI (SMPTE 424M)
- 1.485Gb/s HD-SDI (SMPTE 292M)
- SD-SDI (SMPTE 259M-C, ITU 656)
- SDTI (SMPTE 305M)
- DVB-ASI
- Other 270Mb/s video services
- Composite analog video & audio (NTSC, PAL)
- 19.39Mb/s ATSC (SMPTE 310M)
- 10/100/1000 ethernet

Chassis features

- Simplified deployment and configuration
- 1, 4 and 12 slot (3RU) options
- Unlimited, non-spaced installation
- Dual hot-swappable AC or DC power
- Passive backplane
- Switchless video interconnect between modules
- On-board SNMP and HTTP element Management System (EMS)

Module features

- Single-piece, hot-swappable
- Front panel status LEDs and video monitoring
- Common set of external SFP optics
- Available WDM, CWDM, and DWDM channels
- Configured with on-board switches or HTTP interface
- Multi-purpose, multi-format

Certifications

- NEBS Level 3
- GR-63
- GR-1089
- CSA 60950
- EN60950 and 55022
- FCC Part 15 (Class A)
- CISPR 22



The DL4000 platform is a state-of-the-art modular, video transport platform that leverages Artel's 30 years of carrier-class video transmission experience to provide unparalleled performance and value. Innovative design features make DL4000 the most reliable, easily deployed platform ever developed for broadcast-quality video transport requirements— and it's been successfully deployed all over the world by major TELCOs, CATV operators and video service providers for mission critical applications.

Features unique to the DL4000 platform include multi-purpose, single-piece function modules; compact, rugged stackable chassis; external SFP transceiver optics; front panel accessible status LEDs; and, a video monitor port for each module. In addition, a passive backplane with internal module-to-module interconnectivity and NEBS Level 3 certification make the DL4000 platform the most rugged and dependable video transport platform ever developed. The flexibility of the system also includes chassis for every application from DL4300, a 12 slot, three RU shelf for head-end and CO deployments to the DL4100 single-module unit for portable and single channel applications.

DL4300 Chassis, 12 Slot, Three RU



DL4000 Chassis Specifications



DL4000 Video Transport System Chassis Specifications

Chassis Model	DL4300	DL4000	DL4042	DL4000P	DL4100
Part #	390-009000-00	390-008000-00	390-008001-00	390-008750-00	390-001000-00
Number of function module slots	12	4	4	4 (Passive only)	1
Power supplies	1 or 2 AC, DC or 1 of each (Hot swappable)	1 or 2 AC, DC or 1 of each (Hot swappable)	2 Internal AC (Non-removable)	None	1 AC external
Cooling	Active Power supplies: 1 each function modules: 3 fans, hot swappable	Active (1 fan per power supply)	Active (2 fans)	N/A	Convection
Chassis dimensions (h, w, d)	5.25" s 17.0" x 10.5"	1.75" x 17.0" x 10.5"			.83" x 5.88" x 10.5"
Chassis wt. (Fully populated)	< 20 lbs	<10 lbs			<3 lbs
Operating Temperature	0 to 50°C				0 to 40°C
Relative humidity	10 to 95% (non-condensing)				
Ambient storage	-40 to 80°C				
Module-to-module internal communication	Yes, In banks of 4	Yes	No	No	No
Remote monitoring and management via DL-Manager	Yes	Yes	No	No	No

Regulatory Conformance

NEBS Level 3 certification	Yes	Yes	No	No	No
NEBS Level 3 compliance	Yes	Yes	Yes	Yes	No
CSA 60950, EN60950, EN55022, FCC Part 15 (Class A), CISPR 22	Yes	Yes	Yes	Yes	Yes

AC Power Supply Specifications

Chassis	DL4300	DL4000	DL4042	DL4100
Model	DLM301	DLP001	DLM130A	DLPE001
Part #	390-009002-00	390-008002-00	390-008095-00	390-001002-00
Integrated DL-Manager HTTP & SNMP interface	Yes	No	Yes	No
Input voltage	90 to 254 VAC at 50 or 60 Hz			
Power consumption (max)	250 watts	60 watts (per chassis)		15 watts
Current (max)		1 amp		.25 amps
BTU/hr (max)		205 (per chassis)		55

DC Power Supply Specifications

Chassis	DL4300	DL4000
Model	DLM302	DLP002
Part #	390-009005-00	390-008005-00
Integrated DL-Manager HTTP & SNMP Interface	Yes	No
Input voltage	-40 to -70 VDC	
Power consumption (Max)	250 watts	60 watts (per chassis)
Current (Max)		1.5 Amps
BTU/hr (Max)		205 (per chassis)

DL4000 Function Modules

DL4000 VIDEO TRANSPORT SYSTEM

Formats Supported

Single Channel	103	150E	170AD	170DA	200	270	274M	274D	300	410	710	Comments
Composite analog			✓	✓		✓				✓		Used in conjunction with DLC170
ATSC	✓					✓			✓			
DVB-ASI	✓	✓		✓		✓	✓	✓	✓	✓		
SD-SDI	✓	✓		✓		✓	✓	✓	✓*	✓		* Native, dithered signal
SDTI	✓	✓		✓		✓	✓	✓	✓	✓		
HD-SDI	✓			✓		✓			✓*			* Native, dithered signal
3G-SDI	✓								✓*			* Native, dithered signal
10/100/1000 ethernet					✓							
Multi-channel	103	150E	170AD	170DA	200	270	274M	274D	300	410	710	Comments
Composite analog			✓*	✓*		✓*	✓	✓				* Used in conjunction with DLC274
DVB-ASI							✓	✓		✓		
SD-SDI							✓	✓		✓		
SDTI							✓	✓		✓		

Optical Functions

Function	103	150E	170AD	170DA	200	270	274M	274D	300	410	710	Comments
Transmitter	✓	✓	✓		✓	✓	✓		✓	✓		
Receiver	✓			✓	✓			✓	✓	✓		
Repeater	✓			✓	✓			✓	✓			
Transceiver	✓									✓		
Dual Transmitter									✓			
Dual Receiver									✓*			* Automatic switchover on loss of signal
Dual Repeater									✓*			* Automatic switchover on loss of signal
Repeater Compatibility	103	150E	170AD	170DA	200	270	274M	274D	300	410	710	Comments
DLC103	✓	✓	✓	✓		✓	✓	✓	✓			
DLC200					✓							
DLC300	✓	✓	✓	✓		✓	✓	✓	✓			

Other Functions

Format Conversion	103	150E	170AD	170DA	200	270	274M	274D	300	410	710	Comments
Audio embed into SDI		✓	✓			✓						
Audio de-embed from SDI				✓								
Composite analog to SDI			✓			✓						
SDI to composite analog				✓								
ATSC to DVB-ASI									✓*			* In transmit mode
Test Signal Generator	103	150E	170AD	170DA	200	270	274M	274D	300	410	710	Comments
Composite analog			✓			✓						
ATSC											✓	
DVB-ASI											✓	
SD-SDI									✓		✓	
HD-SDI									✓		✓	
3G-SDI									✓		✓	
Signal Test & Verification	103	150E	170AD	170DA	200	270	274M	274D	300	410	710	Comments
ATSC											✓	
DVB-ASI											✓	
SD-SDI											✓	
HD-SDI											✓	
3G-SDI											✓	