Scientific Atlanta
A CISCO COMPANY

Headend Systems

Continuum DVP™ D9600 Advanced Headend Processor Model D9655 IP Streamer with optional built-in scrambler

Description

Today's digital systems demand powerful, flexible and compact solutions. The Model D9655 IP Streamer with built-in scrambler, which is part of the Continuum DVP™ D9600 Advanced Headend Processor family, is an ultra-high performing IP streamer for professional video headend solutions. The optional built-in DVB scrambler allows easy integration with several leading Conditional Access (CA) systems.

This unit combines re-multiplexing and transport stream processing together with IP streaming capabilities. This combination of compactness and flexibility leads to a cost-effective and state-of-the-art solution. The unit allows distributing a multiple program transport stream over a high-speed IP network or backbone towards multiple regional headends or hub sites.

Its re-multiplexing and transport stream processing features are similar to those of the Continuum DVP D9600 Advanced Headend Processor Re-multiplexer and Transport Stream Processor Series and are based on years of experience guaranteeing that the device will work in most situations, even if the transport streams are not fully DVB or MPEG compliant. The extended PSI/SI capabilities allow it to address many unique situations and challenges. All PSI and SI tables can be regenerated and played out, changing dynamically according to input changes and configurations. Together with Scientific-Atlanta's Continuum DVP SI-Server certain customized and even non-compliant situations may be addressed.

The built-in scrambler allows easy integration with several leading Conditional Access Systems. Migrating several CA systems is possible through the Simulcrypt interface. Furthermore, redundancy is supported in order to help minimize a system failure.

The unit supports streaming of one Multiple Programs Transport Stream (MPTS) or up to 512 Single Program Transport Streams (SPTS) over IP. In the SPTS-mode, the unit breaks up the input feeds into SPTS before sending them into the IP network.

The Model D9655 IP Streamer with built-in scrambler has a graphical user interface based on Java technology. This creates a user-friendly environment and limits the learning curve and training costs. Additionally, the units fit into Scientific-Atlanta's total management solutions, the ROSA™ Network Management System. This creates a high integration of the Model D9655 IP Streamer with built-in scrambler into the complete digital solution.

ROSA™ SUPPORTED

Manage your network with ROSA and TNCS open standards element management. Get faster mean-time-to-repair, increased uptime, and management that evolves as you provision your networks. US toll-free 1-800-722-2009. EMEA +32 56 445 445. www.scientificatlanta.com/ROSA

Features

- Re-multiplexing
  - Up to 8 ASI inputs on the 1 RU version and up to 20 ASI inputs on the 2 RU version with dual ASI output interfaces
  - Possibility to configure a main – backup on the inputs
  - Configurable ASI input loop through
  - Each input supports MPTS, SPTS or a PID stream
  - High output payload
  - Advanced Processing
  - PID filtering / re-mapping on each input
  - Blocking of services/components
- Basic Monitoring
  - Error Monitoring on each input (includes most TR 101 290 errors)
  - Detailed bit rate measurement of incoming services (programs)
  - Built-in PSI/SI viewer
- Extended PSI-SI capabilities
  - Dynamic PSI/SI re-generation
  - PSI/SI play-out carousel
  - Import of all PSI/SI tables
- Optional built-in DVB Scrambler
  - DVB Simulcrypt V3 interface
  - Supports several leading CA Systems
- Streaming of one MPEG-2 MPTS or up to 512 MPEG-2 SPTS
- Demultiplexing of MPTS into SPTS
- Up to 200 Mbps throughput in MPTS mode
- Up to 300 Mbps throughput in SPTS mode on D9655-4, or up to 600 Mbps on D9655-8 and up to 900 Mbps on the D9655-12, 16 or 20
- Unicast and Multicast support
- Two 1 Gigabit Ethernet network interfaces (main and backup)
- 1 RU stackable device
- Front panel for direct alarm status information
- Ethernet interface for communication with management system, web browser and SI-server
- Easy control using web browser

Specifications

Environmental Specifications	
Ambient temperature range	
Within specs	+10°C to +40°C / +50°F to +104°F
Operating temperature	0°C to +50°C / +32°F to +122°F
Storage temperature	-20°C to +70°C / -4°F to +158°F
Power supply (nominal)	100 to 240 V AC ± 10 %, 47 to 63 Hz
Power consumption	
Model D9655-4, D9655-8	< 35 W
Model D9655-12, D9655-16, D9655-20	< 51 W

Mechanical Specifications	
Height	44 mm / 1.74 in. (1 RU) 88 mm / 3.48 in. (2 RU)
Width	482 mm / 19 in.
Depth	470 mm / 18.5 in.
Weight	Approx. 7.0 kg / 15.4 lbs

ASI Input Interface	
Number of inputs	4 or 8 on the 1 RU version 12, 16 or 20 on the 2 RU version
Connector	BNC-type
Input impedance	75 Ω
Interface type	Asynchronous Serial Interface (ASI) (according to EN 50083-9)
Packet format	Auto detection: 188 / 204 byte packets
Bit rate	1 to 214 Mbit/s (minimum 1 Mbit/s payload)
Syntax	SPTS or MPTS (according to ISO/IEC 13818)

ASI Output Interface (only active in low-speed mode)	
Number of outputs	2 + 1 ASI loop for transrating
Connector	BNC-type
Output impedance	75 Ω
Interface type	Asynchronous Serial Interface (ASI) (according to EN 50083-9)
Bit rate	1 to 200 Mbit/s
Syntax	SPTS or MPTS (according to ISO/IEC 13818)

Conditional Access (optional, to be used in low-speed mode)	
Scrambling Algorithm	DVB Common Scrambling Algorithm
Level and mode of scrambling	Service/Program level scrambling support, Component level scrambling support MPTS scrambling or SPTS scrambling (EMM playout on selective SPTS's)
Number of connectors	1
Connector type	RJ-45
Interface type	Ethernet 10/100Base-T, ASI
Simulcrypt	Simulcrypt version 3
CAS	Conax™, Philips™, Beijing Compunicate Technology™, Irdeto™, Nagra™, Tsinghua Tongfang™, France Telecom™, NDS™, and others

Specifications - continued

IP Network Interface	
Number of connections	1 main and 1 backup
Connector type	1000 Base GbE (SFP) optical or copper
Processing	IP encapsulation of 1 MPTS or up to 512 MPEG-2 SPTS
MPEG-2 Mapping	UDP/IP encapsulation format
Throughput	MPTS mode: 1 TS at max 200 Mbps SPTS low speed mode: up to 200 Mbps SPTS high speed mode: up to 300 Mbps for D9655-4, up to 600 Mbps for D9655-8 and up to 900 Mbps for D9655-12/16/20

Ethernet (management)	
Number of connectors	1
Connector type	RJ-45
Interface type	1 x 10Base-T
Protocols	HTTP, SNMP, IIOP
User interface	Java

Transport Stream Processing (MPTS Mode)
PID filtering / re-mapping capability
Dynamic PSI/SI regeneration
Built-in PSI/SI viewer
Detailed bit rate measurement of incoming services
Error monitoring

Ordering Information

Continuum DVP D9600 Advanced Headend Processor Model D9655 IP Streamer	Part Number
Model D9655-4 Continuum DVP IP Streamer with 4 ASI inputs	4006242
Model D9655-8 Continuum DVP IP Streamer with 8 ASI inputs	4007876
Model D9655-12 Continuum DVP IP Streamer with 12 ASI inputs	4009254
Model D9655-16 Continuum DVP IP Streamer with 16 ASI inputs	4009255
Model D9655-20 Continuum DVP IP Streamer with 20 ASI inputs	4009256

Continuum DVP D9600 Advanced Headend Processor Model D9655 IP Streamer with built-in scrambler	Part Number
Model D9655-4 Continuum DVP IP Streamer with 4 ASI inputs and built-in scrambler	4009688
Model D9655-8 Continuum DVP IP Streamer with 8 ASI inputs and built-in scrambler	4009689
Model D9655-12 Continuum DVP IP Streamer with 12 ASI inputs and built-in scrambler	4010803
Model D9655-16 Continuum DVP IP Streamer with 16 ASI inputs and built-in scrambler	4010804
Model D9655-20 Continuum DVP IP Streamer with 20 ASI inputs and built-in scrambler	4010805

SFP Plug-ins – Copper	Part Number
Prisma GbE SFP Copper (RJ-45)	4006222

SFP Plug-ins – WDM types (only for versions with Optical GbE on SFP)	Part Number
Prisma GbE SFP Module 850 nm (LC, up to 500 m)	4002019
Prisma GbE SFP Module 1310 nm (LC, up to 5 km)	4002020
Prisma GbE SFP Module 1310 nm (LC, up to 25 km)	4002021
Prisma GbE SFP Module 1550 nm (LC, up to 40 km)	4002022
Prisma GbE SFP Module 1550 nm (LC, up to 70 km)	4002023

SFP Plug-ins – CWDM types (only for versions with Optical GbE on SFP)	Part Number
Prisma GbE SFP Module 1470 nm (LC, up to 40 km)	4002003
Prisma GbE SFP Module 1490 nm (LC, up to 40 km)	4002004
Prisma GbE SFP Module 1510 nm (LC, up to 40 km)	4002005
Prisma GbE SFP Module 1530 nm (LC, up to 40 km)	4002006
Prisma GbE SFP Module 1550 nm (LC, up to 40 km)	4002007
Prisma GbE SFP Module 1570 nm (LC, up to 40 km)	4002008
Prisma GbE SFP Module 1590 nm (LC, up to 40 km)	4002009
Prisma GbE SFP Module 1610 nm (LC, up to 40 km)	4002010
Prisma GbE SFP Module 1470 nm (LC, up to 70 km)	4002011
Prisma GbE SFP Module 1490 nm (LC, up to 70 km)	4002012
Prisma GbE SFP Module 1510 nm (LC, up to 70 km)	4002013
Prisma GbE SFP Module 1530 nm (LC, up to 70 km)	4002014
Prisma GbE SFP Module 1550 nm (LC, up to 70 km)	4002015
Prisma GbE SFP Module 1570 nm (LC, up to 70 km)	4002016
Prisma GbE SFP Module 1590 nm (LC, up to 70 km)	4002017
Prisma GbE SFP Module 1610 nm (LC, up to 70 km)	4002018

Note : All Class 1 SFP plug-ins according to IEC 60825-1 (1997) Amendement 2 (2001)

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