INTERNATIONAL DATACASTING

IP Encapsulator (IPE) 4000

MPEG-2 DVB/ATSC Encapsulator

Providing the necessary link between IP networks and broadband DVB or ATSC networks, the IP Encapsulator (IPE) 4000 enables cost effective point-to-multipoint content delivery.

Features

- Fully DVB compliant
- Linux-based O/S
- Remote monitor/configuration using Web browser interface
- TCP to UDP tunnel support
- IRD firmware update carousel support
- Reliable operation; fully solid state (no hard drive)
- Automatic redundancy and failover support
- Support for ULE (uni-directional lightweight encapsulation)

The IPE-4000 is a solid state, fully embedded, Linux-based IP Encapsulator. The IPE receives IP packets from an Ethernet connection and encapsulates selected packets into an MPEG-2 transport stream per DVB or ATSC specifications. Once the IPE has encapsulated the data, it forwards the data packets based on the user configurations. The output transport stream can then be forwarded to a multiplexer or directly to a modulator for the high performance and cost saving transmission of IP data over cable, satellite or terrestrial networks.

License Based Performance

- Field upgradeable performance via software license

Flexible Configuration and Management

- Web-based GUI for ease of use
- SNMP remote configuration and management support
- Front panel LCD with navigation keys

Guaranteed Interoperability

- Internet standard Quality of Service (QoS) — Type of Service (TOS) bits located in IP packet headers
- Conforms to DVB and ATSC data broadcast standards
- Compatible with IDC's Datacast XD™ Server for guaranteed file delivery and the SuperFlex® Pro Series™ Receivers.

SMPTE 325M Support

- Provides a feedback path to support opportunistic data insertion
- Allows data to be output at varied bit rates filling available space in an existing Transport stream
- Interfaces directly to IDC's Transport Stream Multiplexer (TSM) 2800

DVB-S2 Support

- High performance, scalable and future proof
- Enhances bandwidth efficiency

Dependable Redundancy Support

- Support for 1:1 redundancy with minimal switching strategy
- Redundant pair share a virtual IP address
- Standby unit automatically assumes active role in the event of a failure
- Support for chain redundancy schemes
- Contact closure on fault for external switch (component redundancy)

TECHNICAL SPECIFICATIONS—IP Encapsulator (IPE)

MODEL	DESCRIPTION
5 Mb/s	Maximum Output Rate, 1 RU DVB/ATSC Encapsulator
20 Mb/s	Maximum Output Rate, 1 RU DVB/ATSC Encapsulator
40 Mb/s	Maximum Output Rate, 1 RU DVB/ATSC Encapsulator
80 Mb/s	Maximum Output Rate, 1 RU DVB/ATSC Encapsulator
130 Mb/s	Maximum Output Rate, 1 RU DVB/ATSC Encapsulator
200 Mb/s	Maximum Output Rate, 1 RU DVB/ATSC Encapsulator

DATA THROUGHPUT CONFIGURATIONS	
IP Packet Throughput	40,000 PPS
Number of PIDs	8192
Output Data Format	MPE DSM-CC Datagram sections and data piping (EN 301 192 and ATSC 1/90 compliant)
Section Packing	Yes, selectable per PID
Firmware Carousel	Selectable bit rate; MP2TS file
Input Interface	10/100/1000 Base-TX
SNMP	MIB-II
IGMP	Version 2
PSI Tables	PAT, PMT, NIT, TDT
NETWORK SPECIFIATIONS	
Interfaces	Dual 10/100/1000 Base-TX Ethernet ports (RJ-45)
OUTPUT INTERFACE	
DVB-ASI	• **Max Data Rates:** 213 Mb/s • **Connectors:** BNC (2)
SMPTE 325M (bi-directional)	• **Max Data Rates:** 200 Mb/s • **Connectors:** BNC (2)
POWER REQUIREMENTS	
Supply Voltage	85 to 250 VAC, 50 or 60 Hz autosensing
Power Consumption	<100 Watts
PHYSICAL PARAMETERS	
Chassis	1RU rackmount
Dimensions (H, W, D)	4.5 cm x 43.2 cm x 40.6 cm (1.75” x 17” x 16”)
Weight	9.53 kg (21 lbs.)
ENVIRONMENTAL CONDITIONS	
Operating Temperature	0° to 45° C (32° to 113° F)
Humidity	5% - 95% non-condensing
Shock	3.5 g @ 10 ms duration
Vibration	0.5 g @ 22-10 Hz
Air flow	Front to back
COMPLIANCE	
CB, CE, FCC, RoHS, UL/cUL	

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