DTA *3050* Digital Turn Around Router

The DTA-3050 is specifically designed for turning MPEG 2 Transport via ASI and IP sources to ASI, SMPTE-310 and IP outputs. It supports MPEG, ATSC, Digicypher, or DVB based digital television services. It is ideal for traditional Satellite distribution and contribution, Cable, Terrestrial, Telco TV and Broadband TV distribution systems utilizing MPEG 2 or MPEG 4 AVC (H.264).

DOLBY DIGITAL   a t s c   DVB

DTA

Digital television service operators wishing to aggregate and process MPEG, ATSC, Digicypher, or DVB based services for traditional (satellite, cable, terrestrial) or next generation IPTV based services will find the DTA ideal. It boasts 10 ASI inputs. Each supporting wire speed, a three-way mirrored ASI output, GIGE, and optional SMPTE-310. Redundancy for ASI and SMPTE-310 is supported with an intelligent built in relay-bypassed switch. The DTA-3050 is IPTV and BBTV ready today, it supports multicast and unicast configurations including SPTS/UDP or RTP, MPTS/UPD or RTP, MPEG and DVB tables. Encryption support includes DVB-CSA with Ethernet Simylcrypt, AES for use with Simylcrypt compatible Conditional Access management Servers (CAS) vendors. The DTA 3050 is ideal for traditional and next generation television networks.

ADTEC Digital

applications

● **Telco IPTV / Broadband IPTV:** Cost-effective and reliable delivery of video, audio and data services to an unlimited number of consumer set top boxes or PC/MAC clients on an IP network.

● **Satellite Digital TV:** Aggregate video, audio and data services, process services, inject tables, encrypt and pass them via ASI or IP to modulators supporting traditional DVBS and the emerging DVBS2 or other satellite distribution method.

● **Terrestrial Digital TV:** Aggregate video, audio and data services, process services, inject tables, encrypt them and pass them via ASI or IP to modulators supporting ATSC, DVBT, DVBH, DMB, or other terrestrial distribution method.

● **Cable Digital TV:** Aggregate video, audio and data services, process services, inject tables, encrypt them and pass them via ASI or IP to modulators supporting traditional DVBC (Annex A, B, C) distribution method.

● **IP over MPEG 2 Transport:** Delivery of IP data services to set top boxes or computers over MPEG-2 transport using IP encapsulation.
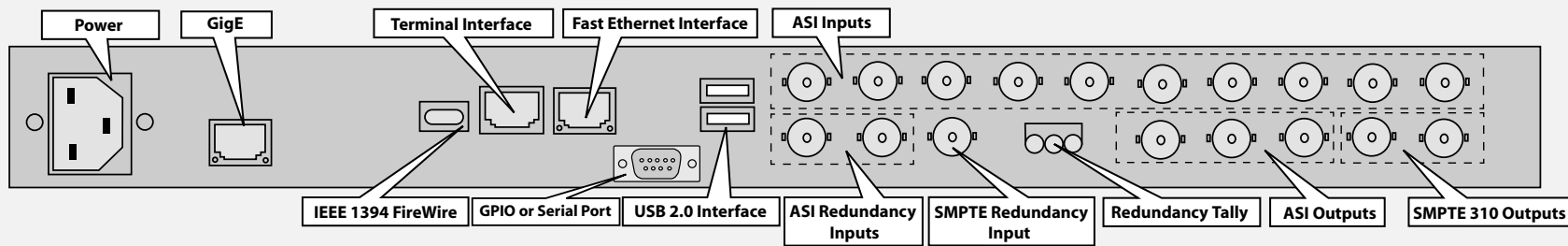
benefits

● **Conditional Access:** The DTA-3050 provides DVB-CSA and BISS encryption and AES conditional access encrypt and decrypt capabilities. DVB-CSA encryption is available as fixed key BISS or Simulcrypt based interfaces compatible with most major DVB-CSA CAS vendors. AES decryption and encryption include support for Adtec's OST for Transport and Verimatrix VCAS for residential set top and computer-based decryption.

● **Aggregation of ASI, SMPTE-310, or IP based SPTS or MPTS services:** The DTA-3050 provides ten ASI input ports enabling it to aggregate locally encoded SPTS or re-muxed MPTS from encoders, receivers, video servers or other devices providing MPEG 2 Transport via ASI or IP.

● **IPTV:** Gigabit Ethernet distribution of digital television services includes MPTS, SPTS over UDP, RTP for Set Top, or computer decoding and MPTS over UDP or RTP for bundled distribution (Digital Simulcast).

● **ASI:** An optional 3 port mirrored ASI output interface provides integration with traditional distribution methods including Cable, Satellite, and Terrestrial.

● **SMPTE-310:** An optional 2 port mirrored SMPTE-310 output interface provides integration with ATSC distribution.

● **Flexible Configuration & Control:** Controlling and configuring the DTA-3050 is easy. Whether using the integrated front panel keypad and LCD, Terminal or remote Web page interface, they respond rapidly and reliably to the desires of the operator.

● **IPTV Electronic Program Guide:** Adtec's edjeGuide Server integrates seamlessly with our DTA routers to deliver an interactive electronic program guide to IP based Set Tops or a PC/MAC edjePlayer and includes support for many IP based Set Tops. Adtec's edjeVOD enterpise VOD server, an optional service installed on the edjeGuide server, is ideal for small stream count implementations like medical, educational or hospitality. Interfaces to external VOD servers facilitate large stream count VOD requirements including direct to home Telco TV.

availability

models		outputs		
		IP	ASI	SMPTE
	DTA-3050	✓		
	DTA-3050-ASI	✓	✓	
	DTA-3051	✓		✓
	DTA-3051-ASI	✓	✓	✓

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The rear panel diagram labels:
- **Power**
- **GigE**
- **Terminal Interface**
- **Fast Ethernet Interface**
- **ASI Inputs**
- **IEEE 1394 FireWire**
- **GPIO or Serial Port**
- **USB 2.0 Interface**
- **ASI Redundancy Inputs**
- **SMPTE Redundancy Input**
- **Redundancy Tally**
- **ASI Outputs**
- **SMPTE 310 Outputs**

specifications

Front Panel
- 8 Button Tactile Raised keypad:
  Mode, Select, Enter, Escape, Up, Down, Left, Right
- Blue Translucent LCD
  20 character by 2 row
- Front Panel Host LED's
  Power, Alarm, Link, Busy, MPE
- Front Panel LEDs
  In : 1 - 10 ASI
  Out : Alarm, ASI, SMPTE 310, CA, GigE

ASI Inputs
- ASI x 10 (BNC)
- 188 or 204 Byte mode
- SPTS or MPTS
- 211 Mbps per input
- 256 PIDs per input
- Fill scrubbing on input
- Input Modes
  Auto (Remap all services)
  Manual (Add/Drop/Remap PID/Services)
  Pass (Pass all services as-is)
  MHP Injector
  SI Injector

Redundancy
- 1+1 IP and ASI
- ASI x 2 (BNC inputs for auto switch)
- No external controller required

Outputs
- Gigabit Ethernet
  SPTS over UDP or RTP
  MPTS over UDP or RTP
  150 Mbs
  Very low jitter
- ASI (model is DTA 3050-ASI)

Mirrored (BNC x 3)
Byte or Burst Mode
  54 Mbs Byte
  211 Mbs Burst
Jitter less than 150 (nS)
- SMPTE-310 (model is DTA 3050-SMPTE-310)
Mirrored (BNC x 2)
Byte Mode only
19.39 Mbs fixed
SMPTE-310 option includes ASI

Table Processing
- No Tables
- MPEG Tables
  PAT
  CAT (if CA is enabled)
  PMT
- DVB Tables (Add/Drop/Remap DVB Services)
  NIT
  SDT
  TDT/TOT
  EIT
- ATSC Tables (Add/Drop/Remap ATSC Services)
  VCT (Cable or Terrestrial)
  MGT
  STT
  RRT
  EIT (1-4)
- DCII Tables (Add/Drop/Remap Digicypher services to DVB or ATSC)

IP Data Encapsulation (ISO 13818-6 MPE)
- EN 301 192 Encapsulation of IP Datagrams over
- Unicast and Multicast Support
- 32 Routes
- 32 PIDs

IP Data de-capsulation (ISO 13818-6 MPE)
- EN 301 192 de-capsulation of IP Datagrams
- 16 PiDs
- 300 Mbs

Conditional Access Encryption
- DVB-Common Scrambling Algorithm (CSA)
- DVB Simulcrypt TS 103 197 v 1.2.1 and SCTE OpenCAS™ DVS-278 compliant
- FIPS 140-2 hardware based random number generator (RNG)
- Advanced Encryption Standard (AES)
  Adtec Open Secure Transport (OST)
  IP based encryption for use with Adtec IRDs
  IP Set Top and Computer compatibility
- Approved 3rd Party CA Vendors include:
- CSA:
  Irdeto
  Conax
  EuroCAS
  KeyFly
  Xcrypt
- AES:
  Verimatrix
  Adtec OST

Host Platform
- PowerPC
- Adtec optimized Linux Kernel
- 10/100 Ethernet RJ-45 (Eth 0)
- 10/100/1000 Ethernet RJ-45 (Eth 1)
- Serial Port (RJ-48)
- USB 2.0 (2)
- IEEE 1394 (Firewire)
- N.C. / N.O. Tally Interface
- XML Configuration
- HTTP, FTP, Telnet, IP Logging, DHCP, (XCP Adtec encrypted layer 3 protocol)

Power
- 70-240 VAC switching power supply
- 50/60 Hertz
- Rated at 94 Watts return nominal usage 20 watts

Physical
- 19" wide, 1.75" tall, 16" deep, (483 x 44.5 x 406 mm)
- 1 Rack Unit
- Weight 13lbs.

Environmental
- Active cooling (Push pull Fans)
- Operating: 0 to +50 degrees C
- Storage: -30 to +65 degrees C
- Less than 70% RH
- Non-Condensing

what's included
- Digital Turn Around Router
- Rackmount Kit:
  4 rack mount screws with washers.
- Terminal Kit:
  1 - RS232 Interface
  1 - Ethernet Cable (10 foot long)
- Adtec Startup CD
- DTA Operations Manual
- US Power Cord (6 foot long)

Note: Specifications subject to change without written notice