



AdvancedDigital Inc.

# Multiplexer Model: DTA-3050

## DTA 3050 Digital Turn Around Router

Digital television service operators wishing to aggregate and process MPEG, ATSC, Digicypher, or DVB based services for traditional (satellite, cable, terrestrial) 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, MPTS/UDP, MPEG and DVB tables. Encryption support includes DVB-CSA with Ethernet Simulcrypt, AES for use with Simulcrypt compatible Conditional Access management Servers (CAS) vendors. The DTA 3050 is ideal for traditional and next generation television networks.



### Options & Accessories

**DTA-ASI-KEY:** The DTA-3050 comes standard with 5 unlocked ASI ports. Additional ports (up to 5 more) can be unlocked for use by purchasing a DTA-ASI-KEY.

**DVB-CSA: Encryption Algorithm feature for DTA's.** Capable of encrypting 210 Mbs and is supported via ASI and IP egress.

**DVB-AES: AES Scrambling Algorithm feature for DTA's.** Capable of encrypting 210 Mbs. Used for IPTV with Verimatrix server.

**DTVGUIDE:** Electronic Program Guide Service

### Related Products

**mediaHUB-HD 422:**

High and Standard Definition Multi-CODEC Contribution and Distribution Encoder

**mediaHUB-HD Pro:**

High and Standard Definition Contribution and Distribution Encoder

**edje-5110:**

Real-Time Distribution Encoder

**IPTVManage:**

Enterprise Management Server

**DTVManage:**

Enterprise Management Server

### features

- **Conditional Access:** The DTA-3050 provides DVB-CSA and BISS encryption and AES conditional access encrypt capabilities. DVB-CSA encryption is available as fixed key BISS or Simulcrypt based interfaces compatible with most major DVB-CSA CAS vendors. AES encryption includes support for Adtec's OST for Transport and Verimatrix VCAS for residential set top and computer-based decryption.
- **Aggregation of ASI, or IP based SPTS or MPTS services:** The DTA-3050 provides ten ASI input ports enabling it to aggregate locally encoded SPTS or re-mixed MPTS from encoders, receivers, video servers or other devices providing MPEG 2 Transport via ASI and IP, or SMPTE310 and IP.
- **IPTV:** Gigabit Ethernet distribution of digital television services includes MPTS, SPTS over UDP for Set Top, or computer decoding and MPTS over UDP for bundled distribution (Digital Simulcast).
- **ASI:** Three 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.
- **DTV Electronic Program Guide:** Create and upload your own program listings for distribution over ATSC, DVB, and IPTV applications using our web-hosted DTVGuide electronic program guide generator service. A very economical way to instantly begin sending EIT data, DTVGuide requires no additional equipment when paired with the DTA and its built-in EIT injection carousel. The DTA fetches EIT data which has been uploaded to DTVGuide over the internet, and immediately begins to inject the data into the transport stream.



04.07.09

## DTA 3050 Digital Turn Around Router Technical Specifications

### Front Panel

#### Tactile Raised Keypad Buttons:

Mode, Select, Enter, Escape, Up, Down, Left, Right

#### Blue Translucent LCD:

20 character by 2 row

#### Front Panel Host LEDs:

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

210 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 Input N + 1, N + 2 Input

ASI x 2 (BNC inputs for auto switch)

No external controller required

### Outputs

Gigabit Ethernet

- SPTS over UDP

- MPTS over UDP

Very low jitter

ASI (model is DTA 3050-ASI)

Mirrored (BNC x 3) Byte or Burst Mode

54 Mbs Byte

210 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

#### 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 DVB/ATSC)

### Conditional Access Encryption

DVB-Common Scrambling Algorithm (CSA)

DVB Simulcrypt TS 103 197 v 1.2.1

FIPS 140-2 hardware based random number generator (RNG)

Approved 3rd Party CA Vendors include:

CSA: Irdeto, Conax, EuroCAS, KeyFly, Xcrypt

AES: Verimatrix

### 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, 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 in. wide, 1.75 in. tall, 16 in. deep,

(483 x 44.5 x 406 mm)

1 Rack Unit

Weight 13lbs.

### Environmental

Active cooling (Push pull Fans)

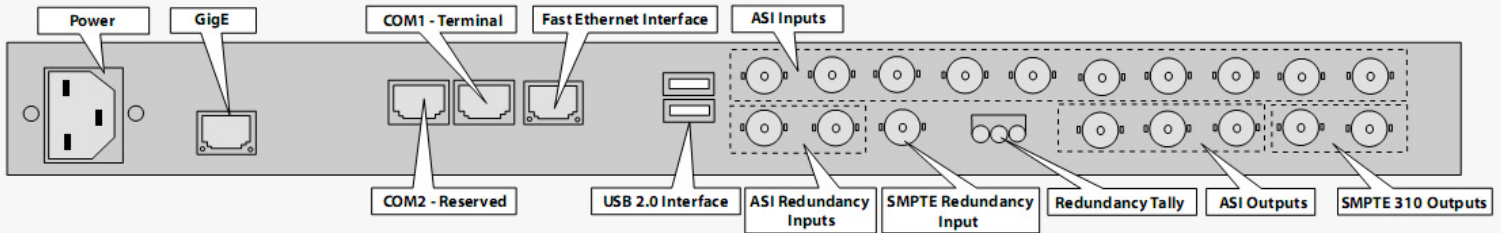
Operating: 0 to +50 degrees C

Storage: -30 to +65 degrees C

Less than 70% RH

Non-Condensing

## DTA 3050 Digital Turn Around Router



- Power:** 70 – 240 VAC switching power supply; standard 3-pin computer power plug.
- GigE:** Gigabit Ethernet used for IP Egress
- COM2 - Reserved:** Reserved for redundancy switching
- COM1 - Terminal:** Back end serial port for Adtec service technicians
- Fast Ethernet:** 10/100 base T ethernet used for connecting to control interface
- USB 2.0:** Reserved for future use.
- ASI Inputs (10):** Asynchronous Serial Inputs for receiving programming
- ASI Redundancy Input:** Used to link 2 DTA-3050 units in tandem; one as primary, one as backup.
- SMPTE Redundancy Input:** Used to link 2 DTA-3050 units in tandem; one as primary, one as backup. (Optional)
- Redundancy Tally:** Used to hook up to an external alarm device
- ASI Outputs (3):** Triple Mirrored ASI Outputs
- SMPTE 310 Outputs (2)** Optional Mirrored SMPTE Output

### ORDERING INFORMATION

- Model #:** **DTA3050-ASI-HW3-5** - Multiplexer with ASI and GigE outputs
- DTA3051-310-HW3-5** - Multiplexer with SMPTE310 and GigE outputs
- Options:** **DTA-ASI-KEY** - Allows user to unlock five (5) additional ASI inputs (TOTAL of 10 ASI inputs per DTA3050 chassis)
- DVB-CSA** - DVB Common Scrambling Algorithm feature. Capable of encrypting 280 Mbs. CSA is supported via ASI and IP egress.
- DVB-AES** - AES Scrambling Algorithm feature. Capable of encrypting 280 Mbs. Used for IPTV with Verimatrix server.

Contact info: [sales@advanceddigital.ca](mailto:sales@advanceddigital.ca) WEB: <http://www.advanceddigital.ca> Tel: +1 416 479 0480  
+1 416 848 0715