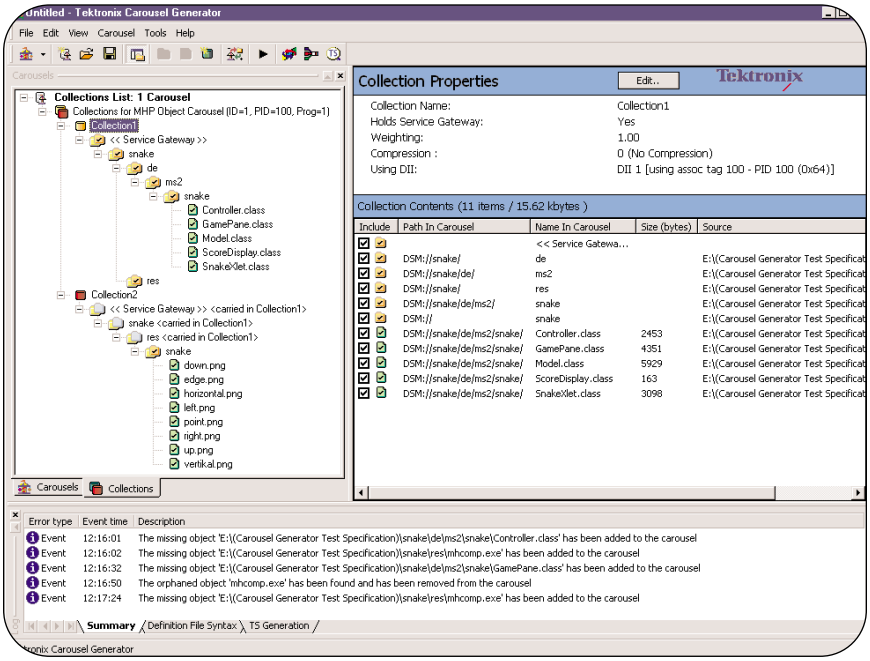
DVB Object Carousel and MHP Generator for AD95x-II and AD960 MPEG Test System



DVB Object Carousel Generator

The Tektronix Object Generator provides developers and broadcasters with a powerful, easy to use DVB Digital Storage Media Command and Control (DSM-CC) generator tool for Multimedia Home Platform (MHP) and interactive TV test applications.

The tool provides in-depth off-line generation of MPEG-2, DVB Transport Streams containing Data Broadcast Protocols including DSM-CC, DVB, MHP and Digital Terrestrial Television (DTT) object Carousels. Carousel Generator lets you fully verify products, system design and performance.

Data Broadcasting Overview

DVB Transport Streams were initially developed as means of delivering compressed audio and video services to an end user from a central service provider via a variety of different third-party delivery networks. Broadcasters realized that the same streams and networks could also be used to provide data services, with a number of different ways being defined in the MPEG-2 specification (ISO13818-6) to carry data, the method depending on the type of application.

Typical examples for data broadcast applications include:

- Set Top Box (STB) firmware updates to the STB operating system
- STB Application software downloads, such as games
- Picture or text data; for example, extended advertising information
- Extended service information and program guides
- Proprietary data, such as price lists

Features & Benefits

Reduce Time to Market and Improve Interoperability for Interactive Hardware and Software Development

Enables Full Product Verification, System Design and Performance

Reduce Test Time for Development Projects

Simple Intuitive User Interface for Ease of Use

Easy-to-Use Carousel Generator Wizard Gets You Up and Running Quickly

DSM-CC, DVB, MHP and DTT Object Carousel Generation

Broadcast Inter ORB Protocol (BIOP), DownloadServerInitiate (DSI), DownloadInfoIndication (DII), DownloadDataBlock (DDB) and DSM-CC Section Generation

Configurable Program Map Table (PMT), Program Association Table (PAT), DSI and DII Cycle Times

Supports Carousels on Multiple Packet Identifiers (PIDs)

Supports Multiple DII Carousels

Generation of MHP Application Information Table (AIT) Table

Easy-to-Use Graphical User Interface – Extensive Use of Drag and Drop to Build Carousel

Output Stream can be Number of Carousel Repetitions and/or Minimum Duration

Comprehensive Error Logging

Applications

Semiconductor Designers

Compression Equipment Research and Development

Set Top Box Development

Compression Equipment and Set Top Box Manufacturing

Terrestrial, Cable and Direct-to-Home Satellite Broadcasters and Network Operators (TPNO)

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Similar to the way in which video and audio services are delivered to end users, data broadcasting allows data to be transmitted to consumers set top boxes using Object and Data Carousels, which contain periodic transmissions of information in a transport stream.

The Tektronix Carousel Generator supports Multimedia Home Platform (MHP) with the inclusion of the Application Information Table (AIT) and Object Carousels (as specified in the MHP standard) viewing.

Shown below is how information carried by object carousels is sub-divided and carried by the transport stream:

- BIOP messages comprise a message header, a message sub-header and the message body which contains data. The message body may contain complete data objects
- BIOP messages are broadcast in Modules. A Module is formed from one or more concatenated, complete BIOP messages
- Each Module is fragmented into one or more DDBs that are in turn transmitted in corresponding DSM-CC Sections
- Sections are transmitted in packets in the transport stream

Carousel Types

The carousel types supported by the carousel generator are as follows:

- **Object Carousels:** DSM-CC, DVB, DTT, MHP

Object Carousels	Reference Specification
DSM-CC	Digital Storage Media – Command and Control
DVB	Digital Video Broadcast
DTT	Digital Terrestrial Television
MHP	Multimedia Home Platform

- **Data Carousels:** (Not supported)

Ordering Information

For orders placed for a new AD95X-II or AD960 and for upgrades to an existing system. Shipped with CD, dongle or dongle upgrade and manual.

Opt. CG – DSM-CC, DVB, MHP and DTT Object carousel generator.

Note: To generate compliant DVB transport streams including SI and audio and video PIDs, use the Tektronix AD95x or AD960 off-line multiplexer, Opt. MX.

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