

Orbital for:



Catch Up TV Service
Let your audience
catch up on the
shows they've missed



Revenue from Clip Sales
Capture, republish &
license via your own
'clip sales' website



Compliance Recording
Record 1- 48 channels
for 90 days without
any loss in quality



TV News Feed
Grab images and
video clips from
breaking news



Intelligence Gathering
Search EPG and
subtitle data for
brands or keywords



Education & Research
Create a learning
resource for Unis,
Colleges and Schools



Video-On-Demand
Capture feeds from
live events and
publish online



Enhance Your Archive
Extract metadata
from programmes as
broadcast

Orbital



ENTERPRISE VIDEO RECORDING

Orbital captures transport streams from DVB TV and encoder sources and saves them to disk. The raw stream (including EPG and subtitle data) is stored in a rolling archive.

Orbital captures feeds from one or more IP stream encoders or DVB-IP Gateways, connected to terrestrial or satellite receivers.

Users can playback the buffered transport streams, edit and export the raw content. The exported files can be used in third party video editors or stored in a long term archive.

The captured stream is stored without any loss of quality or EIT (Event Information Table) data, making it suitable for compliance recording. Orbital systems can be configured to manage between 1 to 48 Channels for 90 days.

Orbital integrates seamlessly with Imagen
- Cambridge Imaging Systems' Enterprise Video Platform

The combined system enables content owners to easily record, archive and republish TV programs or encoded streams. EPG and subtitle information can be automatically extracted from the transport stream to create rich, searchable metadata records.

The Imagen/Orbital solution is ideal for content owners who wish to create an online VOD portal, a TV catch-up service, an educational resource or an online programme library.

Your Media + Your Brand + Your Audience

Orbital for Compliance Recording

Orbital is an ideal solution for compliance recording and can store between 1 and 48 channels in a rolling buffer for 90 days. All EIT/EPG data is preserved within the transport stream and the video and audio is captured as broadcast with no downsampling.

Orbital can capture SD and HD streams from DVB-T/T2 and DVB-S/S2 sources as well as encoded streams available from third party feeds.

Users can playback video from the buffered transport streams, edit and export the raw content

Orbital works with a range of third party head end tuners and encoders manufactured by Haivision, Cabletime, Teracue and Exterity.

The table below shows the RAID storage necessary for storing 1-48 channels for 90 days.

SD 1	
SD Channels	1
HD Channels	1
Storage	8TB
SD-6	
SD Channels	6
HD Channels	3
Storage	30TB
SD 12	
SD Channels	12
HD Channels	6
Storage	60TB
SD 24	
SD Channels	24
HD Channels	12
Storage	120TB
SD 36	
SD Channels	36
HD Channels	18
Storage	180TB
SD 48	
SD Channels	48
HD Channels	24
Storage	220TB

System Components

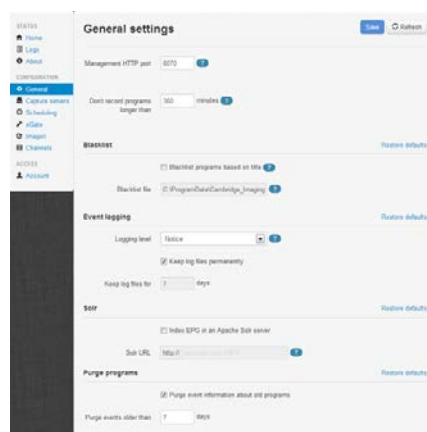
Orbital Feedserver

The Orbital FeedServer is the component responsible for managing the “feeds” from network encoders and DVB-IP Gateways and defining a capture schedule to send to the CaptureServer.

FeedServer maintains a database of event information (EIT data) by monitoring the service information from the DVB broadcasts.

The FeedServer has a browser based management interface, in which you can control:

- Channels to capture, with their logos and display names
- Length limits on recordings from captures
- CaptureServer declarations and number of streams per server
- Padding periods before and after captures
- Collection and use of Electronic Programming Guide information



Orbital CaptureService

The Orbital CaptureServer captures streams from hardware devices (determined by the schedule created by the FeedServer), and stores them in a temporary rolling archive,

The storage destination is usually a high-capacity RAID connected to the CaptureServer machine. When the storage server becomes full, the oldest material is simply overwritten, creating a rolling media archive.

Digital Video Broadcasting

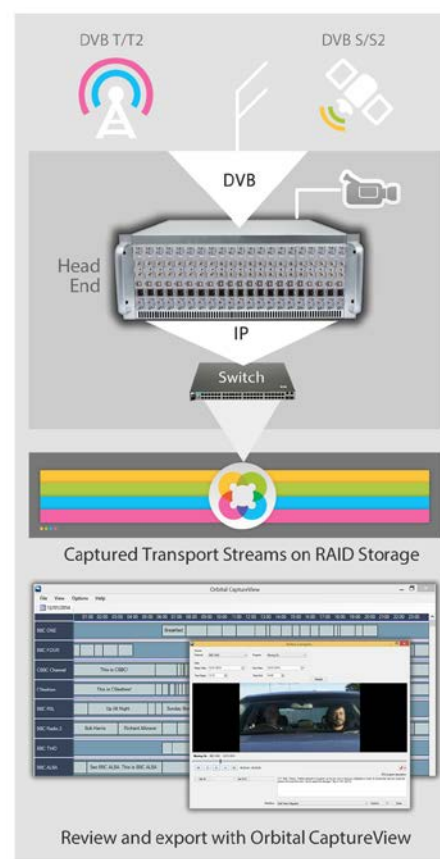
The most typical use of Orbital involves the multicast capture of DVB signals onto an IP network.

DVB is the most widely adopted format for digital broadcasting, supported in over 140 countries including all of Europe, Africa, the Middle East, South America, Australia, India and most of Asia. Terrestrial (DVB-T) and satellite (DVB-S) streams are supported, including DVB-T2 and DVB-S2 standards.

DVB has the notable advantage that it automatically includes valuable metadata, such as channel names, an Electronic Programming Guide and program descriptions, which makes scheduling an automated process.

Other stream types

Orbital can also be used with generic encoders that produce raw streams from devices such as camcorders, CCTV systems, or computers - ideal for capturing live sports, concerts and lectures.



Browser based scheduling

When Orbital is combined with Imagen, authorised users (administrators or end-users) can access a browser based interface which can be used to schedule recordings or retrieve programmes from the rolling archive.

The web page displays the EPG information in a grid and users can navigate the TV schedule or locate a programme using a Google style text search.

Results from the EPG search provide a list of programmes which can either be recorded when broadcast in the future or retrieved immediately from the short term archive.

When a programme is requested, the transport stream is submitted to an Imagen Workflow. Typically, the workflow will archive the requested programme and also convert the raw transport stream into a series of proxy formats which can be accessed via the web or on mobile devices.

The web interface is completely themeable and can be configured to accommodate your branding.

The combined Orbital and Imagen solution can be used to create very large archives of programmes recorded off-air which are also made available online.

Our largest system, currently used by over 60 Universities in the UK currently supports +100,000 users and has generated an archive containing over 1 million programmes.



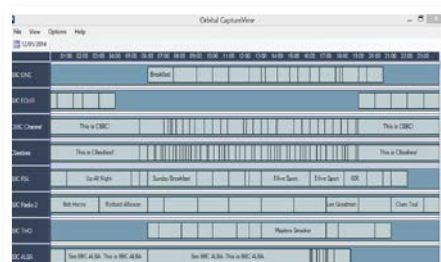
Web browser based scheduler

Orbital GUIs

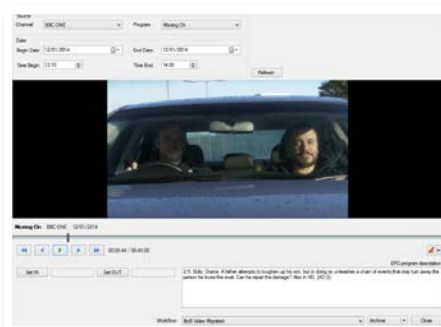
Orbital CaptureView

CaptureView is a Windows PC based application which enables system administrators to navigate and review the captured transport streams available in the rolling archive.

- Up to the minute review of video and radio programmes or captured streams
- Select full programmes or clips of any duration for export
- Full MPEG-2 transport stream exported as broadcast - no downsampling
- Export EPG/EIT information as XML
- Grab images from video and save to desktop or clipboard
- EPG based layout per channel for easy navigation
- Set up series recordings or schedule recordings by date/time event
- CaptureView accesses the stored Transport Stream data over a standard http connection - third party systems are also able to request the archived streams via this protocol
- When combined with Imagen, programmes or clips can be submitted to an ingest workflow for transcoding, long term archiving and distribution via a web interface



Navigate the captured transport streams



Review & export video, audio & EPG data

Orbital MediaPlan

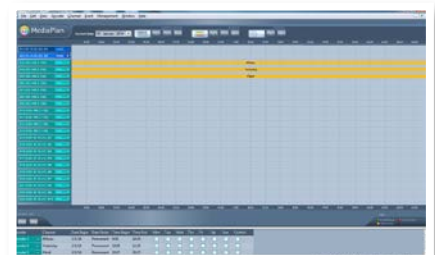
Orbital MediaPlan is used by system administrators to build capture schedules from encoded stream sources and communicate with encoder hardware available on the network.

When recording from DVB T/T2 or S/S2 sources, MediaPlan can interrogate head-end hardware and extract the full range of channels available. MediaPlan can control compatible encoders and instruct them to tune into a particular channel at a set date and time.

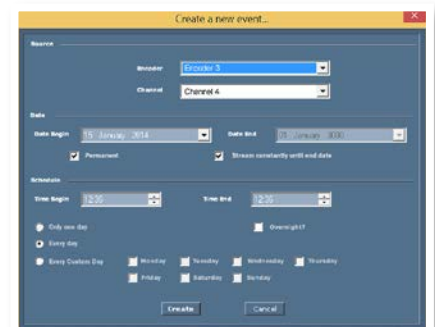
Schedules can be set up to record streams 24/7, or on any specific day or time, as a repeating event or as a one-off task.

Using MediaPlan, TV or radio channels in the DVB spectrum can be captured at any time. Encoded streams produced by uncontrolled encoders can also be captured and written to the storage RAID.

All scheduling events created by the MediaPlan interface can be modified or deleted. MediaPlan can manage any combination of controlled or uncontrolled encoders - from a wide range of manufacturers.



View of schedules and available encoders



Setting up a capture schedule

Imagen



Manage and publish your video, images and audio online in your own secure, branded web site

Imagen is a highly scalable solution for managing and distributing audio-visual assets. If you are a broadcaster, a producer of video content, a media curator or simply own a collection of audio-visual material that you want to publish or aggregate, Imagen will give you a full set of tools to ingest, catalogue, transcode and distribute your content through a fully customizable web site.

End users will experience a cutting edge range of features for searching, clipping, collecting and downloading, with access levels that you control.

Automated ingest and distribution workflows will save you time. Secure data transfers and replication routines protect your data for the long term, while a range of system options from cloud to on-premises cater to a wide range of budgets.

Tools for migrating legacy media archives are available and help for design and technical implementation are also at hand.

Imagen is comprehensive, flexible, scalable and has been designed with open interfaces to enable integration with third party systems.

Orbital & Imagen Enterprise Video Platform



Orbital integrates seamlessly with Imagen - Cambridge Imaging System's software suite for media archiving and web publication.

The combined system enables broadcasters and content owners to capture and republish their broadcast content online via a branded web site.

The system can be used as a catch-up TV service, a programme library archive, a clip sales business, a VOD platform, a resource for education and research or as a way to gather market intelligence.

One-click re-publishing

Individual programs or edited clips can be selected from Orbital's rolling capture archives and sent to Imagen for long-term preservation and publishing.

All EPG data collected from the EIT (Event Information Tables) on the Orbital DVB-IP Gateways can be retrieved and saved in Imagen as searchable metadata records.

When submitted to an Imagen ingest workflow, broadcast captures can be transcoded into a variety of formats for optimized web streaming or downloading online.

The original transport stream, proxy and metadata, can also be archived to a long-term storage location.

Your own online media archive

Imagen includes a Web module which allows you to create a secure, fully customized site. Highly configurable, and with full web page content management, its features include:

Google-style searching and results filtering:

find content using customizable filtering and sorting controls.

Create Clips: Use on screen edit controls in the video player window.

Download content (for authorized users): In a variety of formats to a range of devices.

Create Collections: Share with colleagues and friends or find collections created by others.

Change metadata, add comments: Depending on access level, users can make comments about a record or even change record metadata.

