



OCEAN

## OCEAN IS A FLEXIBLE SOLUTION FOR FILM AND TAPE DAILIES

### CREATE YOUR DAILIES IN A SINGLE PATH

With its wide range of i/o capabilities OCEAN is the ideal tool for film and tape dailies creation: OCEAN remote controls the telecine or the VTR and performs automatic scene detection. An EDL or an ALE log file can be exported for further editing process.

Handy tools like Output Blanking for letterbox formats, Pan&Scan, Time Code and Edge Code burned-in overlays will speed up and enhance the dailies creation process, no matter the format of choice.

### CONTROL AND ANALYZE YOUR IMAGE ACCURACY

OCEAN has a toolset of image color analyzers like Vectorscope, Histogram or Color Picker. It can also display a wide range of guides and safe margins like title or action frames, as well as aspect ratio. All these features allow full control over your image accuracy and conformity with industry standards (SMPTE).

### REVIEW THE IMAGES WITH A FILM OR VIDEO LOOK

1D and 3D LUTs can be used on the incoming SDI signal or on the output destined for a reference monitor at the same time. You can also bake-in the LUT on the output signal in order to transfer the resulting image, with the applied look, on a VTR or render it to a SAN.

### OUTPUT MULTIPLE FORMATS AND RESOLUTIONS

OCEAN is able to transfer signals, ranging from SD up to 2K(through HSDL), directly to a disk array or a SAN, all uncompressed for optimal quality, turning your telecine into a data-cine. Data export can be done in QuickTime, DNxHD and of course as file sequences(DPX, TIFF, etc). For tape recording purposes, OCEAN can also embed the TimeCode(RP188) in the SDI output signal.

Up to 4 VTRs can be connected and remote controlled from OCEAN with on the fly automatic upconvert/downconvert performed directly on the video stream if needed.

### FORWARD YOUR FIRST COLOR DECISIONS TO THE FILM LAB

OCEAN's Primary Grading capabilities allow for real-time color correction of the images using Printer Lights: add or remove points and half-points of Red, Green and Blue and export this Color Decision List in ASC format.

## OCEAN SPEEDS UP THE PROCESS OF YOUR ARCHIVE TRANSFERS

### TRANSFER YOUR FILM ARCHIVES IN REAL-TIME, WITH EASE

OCEAN's user interface has been designed to easily navigate through the telecine controls and to allow quick manipulations of the grading tools. One Light and Best Light transfers are ready to be captured in data, on a SAN, or for later storage on LTOs, in a single path. Traditional auxiliary devices like denoisers and key code readers are also supported within the same user interface, creating a holistic approach to user experience.

### SWIFTLY CREATE A SCENE-BY-SCENE TRANSFER

Use the Still Store available in OCEAN to store, recall, and apply on one or several scenes the desired look. The Grade Library allows you to store unlimited color looks for your current project, and to simply access other projects' grades. Telecine's controls and OCEAN's digital color corrections can be easily compared frame by frame using wipes.

### STABILIZE YOUR IMAGE

OCEAN's digital Pan&Scan allows to compensate for the differences in the images: each pan or zoom correction can be animated, achieving a stabilized playback. This can also be done automatically with an image stabilization device such as imageMill Steady, remotely controlled and integrated within OCEAN's user interface.

### DIGITIZE OLD MASTER TAPES FOR CONTENT ENHANCEMENT

OCEAN's control capabilities can also be applied to digitize tapes: the VTR can be remotely controlled using the RS422 Sony 9-pin protocol, allowing the video stream to be resized and graded in Real Time, with the speed of a traditional linear system. The result is directly rendered in DPX, or encoded in MXF DNxHD (optional) for immediate broadcasting purpose or later DCP mastering.

### GET AUDIO SYNCHRONIZED

OCEAN is able to embed up to 16 channels of AES/EBU 24-bit 48 KHz audio into the outputted SDI signal. It can also ingest audio through AES/EBU connectors, an SDI embedded audio stream or it can be synchronized with a sound follower.



# OCEAN ALLOWS REAL-TIME RESTORATION OF FILM, DATA AND TAPES

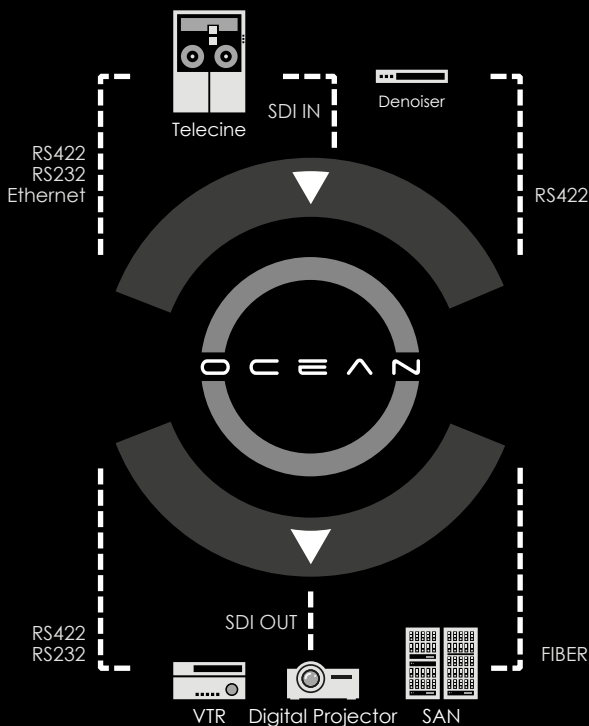
## EXPAND THE OPPORTUNITIES FOR YOUR RESTORATION PROJECTS

Gaining the ability to restore any kind of material, within one system, can become a huge asset in any post-production facility. OCEAN allows several processing workflows: film to data, film to tape, tape to data and even data to data.

Real Time de grain, denoise and stabilisation devices are remotely controlled by OCEAN, directly from the same interface. Restoration can then be applied on the fly from any traditional video source (telecine and VTR), but also from DDRs (e.g. MIST, Clipster, Doremi, etc.) playing out data files.

## RESTORE DAMAGED COLOR CHANNELS ON A TAPE

OCEAN's management of red, green and blue channels allows to compensate for time ravages like degaussing. The digital channel mixer feature, usually only available in telecines for film reels, enable the restoration of a missing or damaged color channels on a tape.



# OCEAN PROVIDES YOU WITH ADVANCED GRADING CAPABILITIES FOR YOUR COMMERCIALS

## EDL IMPORTING MADE EASY

Thanks to OCEAN's backbone Timeline, Edit Decision Lists of video commercials are easily imported in OCEAN: the conformed clips become immediately available for a real-time color grading session.

## APPLY LAST MINUTE EDITING CHANGES

The editing tools available in OCEAN allow last minute changes in the editing: cut, join, replace or insert are easily performed, and the new composition is immediately available for export in ALE or in EDL CMX 3600.

## BENEFIT FROM ADVANCED COLOR GRADING TOOLS

OCEAN's Primary Grading features are performed in Real Time on the video signal received from a telecine or a VTR. Switch between timeline and shot-view, within a streamlined and intuitive user interface, for maximum efficiency.

Color Balance, YRGB corrections and Curves are all included in the available Grading Toolset. In addition, optional Secondary Grading features are available: 6 vectors with keyers and unlimited shapes/windows.



# OCEAN FEATURES

## TRANSFER TOOLS

- Automatic scene detection
- Unlimited events on the timeline
  - Per shot Pan&Scan
- TimeCode & KeyCode support
- TimeCode & EdgeCode burn-in
  - Batch capture on disk
- Export of ALE and other log formats

## TELECINE CONTROLS

The Controls are those available on the telecine of choice and vary depending on the type of machine used: transport, camera focus, effects, etc

## COLOR GRADING

- Output Blanking for letterbox formats
- Scopes & Color Pickers for image analysis
- Additional YRGB & HSL Primary Grading available
  - Support for 1D & 3D LUTs
  - 32-bit float color processing
- Animatable parameters (keyframing/dynamics)
  - Still store for reference frames
- Wipe & Dissolve A/B comparator

## I/O AND REMOTE CONTROL

- Remote Control of RS422 Sony 9-pin devices
- Capture to DPX 10/16bit, TIFF, Targa, QuickTime\*, Cineon
  - SDI 10 bit linear or log switchable
  - HD/SD 3G-SDI 4:2:2 & 4:4:4
- Tape transfers (up to 4 VTR controllable)
- Support for Tangent Devices Wave, CP100 & CP200 control panels

\*QuickTime codecs : ProRes, DNxHD, H264, etc.

## AVAILABLE OPTIONS

- Secondary Grading Option with 6 vectors of Secondary CC with unlimited geometric shapes
  - MXF encoding
- Local Attached Storage 7 TB
- SAN Options : Fiber Channel Host Bus adapter 4/8GB, 8/16 TB SAN turn-key solution

## SUPPORTED TELECINES

- Cintel Millennium HD
- Cintel DSX / C-reality
  - Cintel URSA
- Sondor Altra HD Telecine
  - DFT Spirit data-cine
  - DFT Shadow Telecine
- MWA Flashtransfer Vario HD Telecine
- Debrie Technologies Film Transfer SD&HD 16/35

## SUPPORTED AUXILIARY DEVICES

- Cintel imageMill1 Grace & Steady
  - Aaton Key Code reader
  - Evertz Key Code reader

## VIDEOMODES

720 x 486i	59.94Hz
720 x 576i	50.00Hz
1280 x 720p	23.98/24/25/29.97/30/50/59.94/60
1920 x 1035i	59.94/60
1920 x 1080p	23.98/24/25/29.97/30/47.96/48/50/59.94/60
1920 x 1080psf	23.98/24/25/29.97/30
1920 x 1080i	47.96/48/50/59.94/60
2048 x 1080p	23.98/24/25/29.97/30/47.96/48/50/59.94/60
2048 x 1080i	47.96/48/50/59.94/60
2048 x 1556psf	14.98/15/18.98/19
2048 x 1556psf	14.98/15
2048 x 1080p	23.98/24

## VIDEO I/O

10/12bit input  
3G-SDI capable  
2K/HD/SD 4:4:4(RGB/YCrCb)  
HD/SD 4:2:2 Video(YCrCb)  
HSDL  
RGB 4:4:4  
YCrCb 4:2:2 or 4:4:4

## AUDIO I/O

INPUT	OUTPUT
24bits 48KHz sampling	24bits 48KHz sampling
16 channels SDI(A/B)	16 channels SDI(A/B)
8 channels AES/EBU	

## CONFIGURATIONS

OCEAN is designed to be fully integrated in your telecine suite, and is upgradable upon your needs:

- **OCEAN** is a turn-key solution that includes, in addition to the telecines controls, digital Primary Grading and data rendering capabilities. The solution is enhanced with optional Secondary Grading vectors and shapes for precision work. This is the ideal system for demanding transfers, like the recovery of audiovisual heritage or feature film dailies.

- **lightOCEAN** is a basic turn-key solution able to remotely control the telecine features and the connected auxiliary devices. The system is fully upgradable in order to later add the additional grading and data-cine capabilities. **LIGHTOCEAN** is designed for traditional film to tape workflows, with One Light and Best Light transfer capabilities.

- **deepOCEAN** integrates Cintel's imageMill2 board, allowing the parallel processing, in real-time, of the restoration dedicated applications GRACE, STEADY and ORIGIN, making it the unique telecine controller with internal real-time restoration capabilities.

## HARDWARE SPECS

4U 19" rackable high-end chassis
Quad-core 3.00 GHz Processors
4 GB RAM
High-Performance GPU processing with SDI Output
Video I/O 2K dual link
Internal Disk Capacity 500GB
RS-232/422 4 ports
USB3.0, FireWire, and Compact Flash cards internal reader
Fiber Channel SAN connection (option)
Additional Local Attached Storage (option)
Tangent Devices Control Panel (option)