R&S®CLIPSTER
Mastering excellence.

www.rohde-schwarz.com/clipster

ROHDE & SCHWARZ
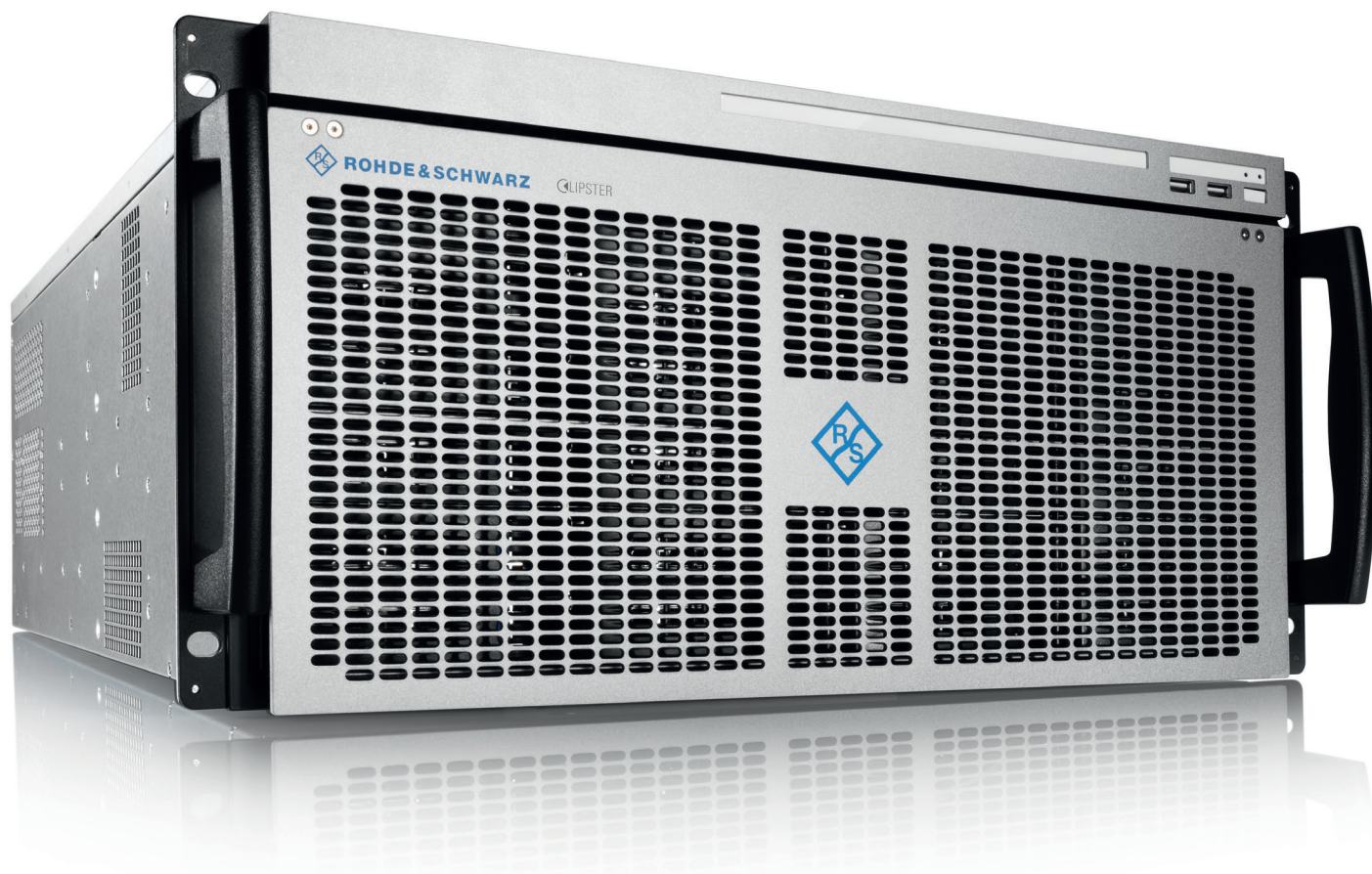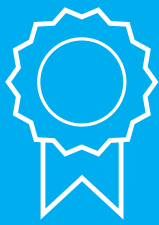
R&S®CLIPSTER
the gold standard for mastering

IMF   DCI   AS-02   AS-11
File packages

100 % standards compliant

4K | 120 FPS | HDR
Uncompressed

Any file – Any style
- SD, HD, 2K, UHD, 4K
- RGB, YUV, XYZ
- P3, HLG, PQ, 601, 709, 2020

Display interfaces

SDI   HDMI   Display-port

Partners in excellence

◎IMF
#ispeakimf

R&S®CLIPSTER offers extensive support for IMF applications and provides superior flexibility, reliability and efficiency for the creation, refinement and QC of IMF packages.

N Post Technology Alliance

R&S®CLIPSTER v6.7 is a Netflix Post Technology Alliance product approved for delivery of Netflix Originals content in IMF format fulfilling the latest Netflix Originals delivery specifications.

▷◁ DOLBY ATMOS®

Create immersive audio experiences easily with the R&S®CLIPSTER capability to include Dolby Atmos mixes in digital cinema packages.

▷◁ DOLBY VISION™   eclair COLOR

R&S®CLIPSTER supports multiple standards in the creation of high dynamic range and extended dynamic range masters and deliverables for cinema and home entertainment.

R&S®CLIPSTER

The R&S®CLIPSTER is the gold standard solution for mastering and distribution of feature films and episodic TV. It provides a powerful way to edit any type of media, in any resolution, and create a high-quality professional deliverable that meets stringent, professional delivery specifications. The R&S®CLIPSTER provides a foundation for post-production vendors to build services upon.

Key features

Flexible color format
The R&S®CLIPSTER uses a high-precision, procedural color-processing pipeline to mix and match any color format in the timeline, allowing the user to select the target color container that all clips will be converted to.

Mix and match codecs
Whether working with compressed or uncompressed formats, the R&S®CLIPSTER can handle them all at the same time. Mix and match different codecs alongside uncompressed frame sequences – the R&S®CLIPSTER won't skip a beat.

Mix resolutions
If you have a mix of HD, 2K, UHD and 4K, each can be combined within the same timeline and formatted to the desired output, and can be switched on the fly.

Input any file type or video signal
The R&S®CLIPSTER supports an extensive list of file formats that are supported natively in the timeline without any preprocessing, and captures material in the highest quality from SDI inputs.

Conforming to non-linear timeline
The R&S®CLIPSTER timeline works just like a nonlinear editor, including a conforming tool to aid in assembly. Combining a nonlinear timeline with the power of the resolution- and format-independent processing engine behind it makes the R&S®CLIPSTER a workhorse for high-end post-production workflows.

Customizable file-based media
The R&S®CLIPSTER can output to an extensive list of file formats through a customizable generic file output setup. The finalize tool allows you to customize an output to meet a proprietary delivery specification.

Video-tape-based media
The R&S®CLIPSTER has a tried and true I/O tool to create tape deliverables in SD and HD directly from the timeline.

Standardized file-based media
The R&S®CLIPSTER has highly refined output wizards to simplify the creation of standardized formats such as DCP, IMP, AS02 and AS11, so that the outputs are constrained to comply with standards and ensure interoperability.

- Flexible color format
- Mix and match codecs
- Mix resolutions
- Input flexibility
- Nonlinear timeline
- Customizable media
- Tape-based media
- Standardized media

Applications

Professionals all over the world highly esteem the R&S®CLIPSTER for its flexibility and dependability. The R&S®CLIPSTER is the trusted solution for businesses from boutique facilities to major movie studios in their post-production workflow chain. Besides its outstanding transcoding capabilities, the R&S®CLIPSTER excels in mastering applications such as QC, conforming and the creation of deliverables. Going from any source file to any target, the R&S®CLIPSTER provides the versatility to produce generic AV file formats as well as constrained packages for DCI and IMF.

Highlights

HDR conversion

High dynamic range allows artists to express their creative intent with more freedom than ever before. To preserve the image quality of the source in all subsequent masters, high-precision color processing is mandatory. But pixel data is just one component. HDR metadata is equally important to make sure HDR-capable display devices reproduce the content as intended. The R&S®CLIPSTER provides the right tools to combine all video, audio and metadata sources and generate standard-compliant outputs with the highest fidelity.

IMF

The interoperable master format is on the rise to become the new standard in content distribution. Many studios and vendors have already adopted IMF to benefit from its workflow enhancements. The R&S®CLIPSTER supports these workflows with a comprehensive toolset to efficiently create new packages and perform downstream processes such as merging and versioning.

DCP

The digital cinema (r)evolution, to which R&S®CLIPSTER contributed in large part, has matured and so have the comprehensive workflow solutions in R&S®CLIPSTER itself.
Supporting all standards from InterOp to SMPTE DCP in both 2K and 4K as well as multichannel sound (including Dolby Atmos) and DCI subtitles. R&S®CLIPSTER is the reliable solution to generate both full and supplemental packages with confidence.
By building in special hardware accelerators for faster than realtime processing, Rohde&Schwarz has ensured that making packages with R&S®CLIPSTER is a breeze.
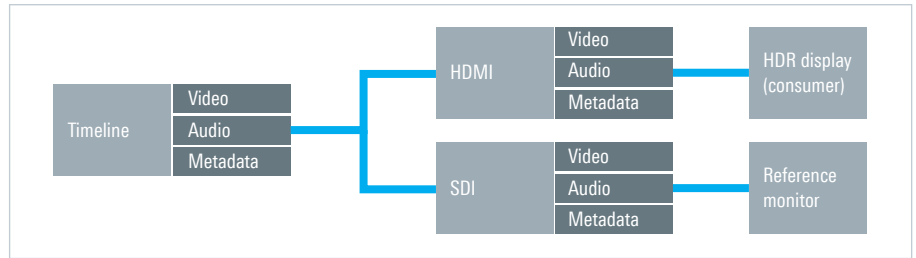
Software configurations

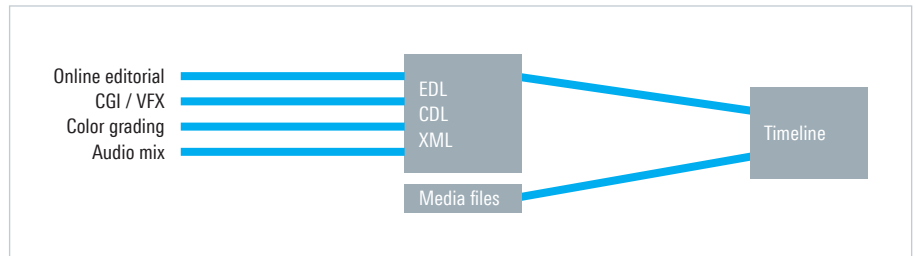|	Playback to SDI/ HDMI outputs	DCP mastering	IMF mastering	Finalize	VTR capture/ layoff	Other delivery tools
Play	●					
Play + DCP mastering	●	●		●		
Play + IMF mastering	●		●	●		
Complete	●	●	●	●	●	●

Workflows

QC

ı Visually validate any source or delivery package
ı Output up to 4K 60p through SDI, and up to 4K 120p through HDMI, both with embedded HDR metadata
ı Control playback externally via RS-422, LTC chase, or SOAP interface
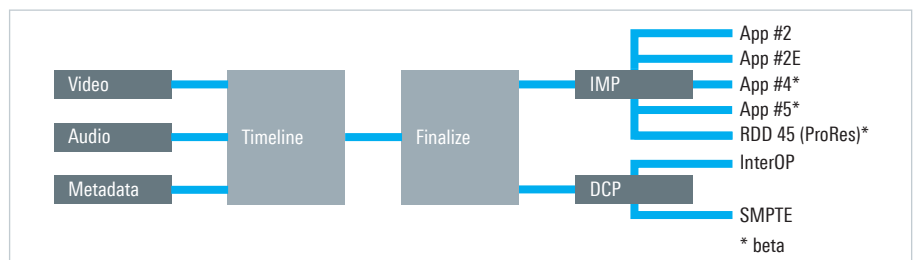ı Overlay subtitles and any metadata available

```
                                    ┌──────┬──────────┐     ┌─────────────┐
                            ┌─ HDMI │      │ Video    │─────│ HDR display │
┌──────────┬──────────┐     │       │      │ Audio    │     │ (consumer)  │
│ Timeline │ Video    │─────┤       │      │ Metadata │     └─────────────┘
│          │ Audio    │     │       └──────┴──────────┘
│          │ Metadata │     │       ┌──────┬──────────┐     ┌─────────────┐
└──────────┴──────────┘     └─ SDI  │      │ Video    │─────│ Reference   │
                                    │      │ Audio    │     │ monitor     │
                                    │      │ Metadata │     └─────────────┘
                                    └──────┴──────────┘
```

Conforming

ı Build timelines from EDL, FCP XML, cutlists
ı Re-arrange track order
ı Link media to ALE
ı Export timeline to EDL

```
Online editorial ═══╗
CGI / VFX        ═══╣   ┌──────────┐
Color grading    ═══╣   │ EDL      │═══╗      ┌──────────┐
Audio mix        ═══╝   │ CDL      │   ╠══════│ Timeline │
                        │ XML      │   ║      └──────────┘
                        └──────────┘   ║
                        ┌──────────┐   ║
                        │ Media files│═╝
                        └──────────┘
```
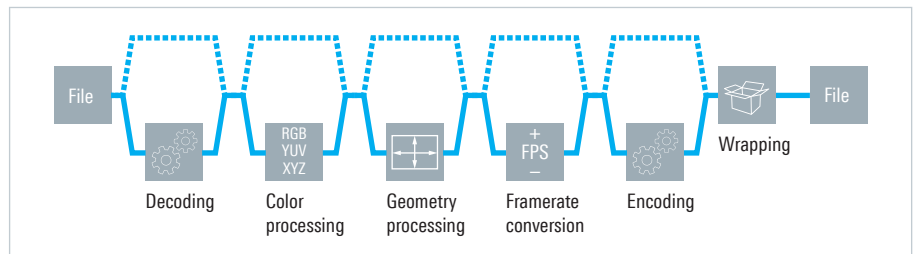
Package creation

ı Create new DCI and IMF packages from any source media type
ı Efficiently create alternate versions of existing packages by re-using existing assets
ı IMF merge tool to consolidate IMPs
ı Find CPL by metadata via the R&S®Spycer database
ı DCP security: hardware-based private key
ı DCP KDM management
ı DCP validation tool

```
                                                        ┌──── App #2
┌─────────┐                                             ├──── App #2E
│ Video   │──┐                               ┌─────┐    ├──── App #4*
└─────────┘  │  ┌──────────┐   ┌──────────┐  │ IMP │────┼──── App #5*
┌─────────┐  ├──│ Timeline │───│ Finalize │──┤     │    └──── RDD 45 (ProRes)*
│ Audio   │──┤  └──────────┘   └──────────┘  └─────┘    ┌──── InterOP
└─────────┘  │                               ┌─────┐    │
┌─────────┐  │                               │ DCP │────┤
│ Metadata│──┘                               └─────┘    └──── SMPTE
└─────────┘
                                                        * beta
```

Generic file transcoding

ı Choose specific configuration for each output type
ı Select color parameters, raster, codec and wrapper individually
ı Render subtitles as separate track files or burn-in to picture
ı Create sequences or scene-based renders

```
┌──────┐    ┌──────────┐  ┌──────────┐  ┌──────────┐  ┌──────────┐  ┌──────────┐  ┌──────────┐    ┌──────┐
│ File │    │ Decoding │  │ Color    │  │ Geometry │  │Framerate │  │ Encoding │  │ Wrapping │    │ File │
└──────┘    │          │  │processing│  │processing│  │conversion│  │          │  └──────────┘    └──────┘
            └──────────┘  │ RGB      │  └──────────┘  │ + FPS −  │  └──────────┘
                          │ YUV XYZ  │
                          └──────────┘
```

Service that adds value
❚ Worldwide
❚ Local and personalized
❚ Customized and flexible
❚ Uncompromising quality
❚ Long-term dependability

Rohde & Schwarz
The Rohde & Schwarz electronics group offers innovative solutions in the following business fields: test and measurement, broadcast and media, secure communications, cybersecurity, monitoring and network testing. Founded more than 80 years ago, the independent company which is headquartered in Munich, Germany, has an extensive sales and service network with locations in more than 70 countries.

Sustainable product design
❚ Environmental compatibility and eco-footprint
❚ Energy efficiency and low emissions
❚ Longevity and optimized total cost of ownership

Regional contact
❚ Europe, Africa, Middle East | +49 89 4129 12345
 customersupport@rohde-schwarz.com
❚ North America | 1 888 TEST RSA (1 888 837 87 72)
 customer.support@rsa.rohde-schwarz.com
❚ Latin America | +1 410 910 79 88
 customersupport.la@rohde-schwarz.com
❚ Asia Pacific | +65 65 13 04 88
 customersupport.asia@rohde-schwarz.com
❚ China | +86 800 810 82 28 | +86 400 650 58 96
 customersupport.china@rohde-schwarz.com

Rohde & Schwarz GmbH & Co. KG
www.rohde-schwarz.com

5215.7639.32