



**slomo.tv**

# ARROW-V

**SloMo Replay and Recording Server**  
**Record-breaking performance in 2U chassis**

- 14 Rec + 14 Search + 2 Play + FX in 3G/HD Replay mode
- Up to 16 channels Recording for NLE
- Two independent 772 replay workplaces
- Ability to work with 2x, 3x, 4x, 6x SSM cameras
- SSD-based storage
- Networking
- 2U, 12 kg



# ARROW-V

## Record-breaking performance in 3G/HD replay and recording modes

High-performance, flexible and reliable Arrow V systems are designed for broadcasting sport events of any level of complexity and recording for NLE of TV shows and series.

Compact chassis (2U, 88 x 482 x 512 mm) and lightweight (12 kg) make the Arrow V servers the ideal choice for mobile solutions and integration into existing studio and OB Van infrastructures.

Arrow V is equipped with 16 bi-directional SDI I/Os.



### Slow Motion Replays in 3G/HD:

14 Recording + 14 Search + 2 Play + FX

### NLE Recording with DMR™ technology:

HD: up to 16 channels

3G: up to 8 channels

### SSD-based subsystem

The SSD-based disk subsystem provides unprecedented performance, high-speed operation and search in Replay mode, as well as resistance to mechanical impact (shock and heavy vibration). The Arrow-V is available with different disk subsystem capacity - 133 / 266 / 530 hours of 100 Mbps HD video.

### Super Slow Motion cameras

The servers are integrated with SSM cameras from most manufacturers. Arrow V allows working with 2x, 3x, 4x, 6x cameras in various combinations.

### Networking and Transfer function

Arrow V servers support exchanging of video materials between locally networked slomo.tv servers (Transfer function).

For video exchange and integration into a network environment of TV companies Arrow V is equipped with 1 GbE interface.



## Suitable for eSports and Sports Broadcasts

Arrow V is perfectly suited for replays in eSports, thanks to its large number of 3G-SDI recording channels (a mandatory requirement for an eSports replay server) and unprecedented interface performance with high search speed.

To improve the user experience, besides a dedicated Multiviewer the server's main interface also has a built-in one. Even one operator can easily handle all the tasks.

The server Arrow V is also a great tool for replays at any sporting event.

### Arrow V

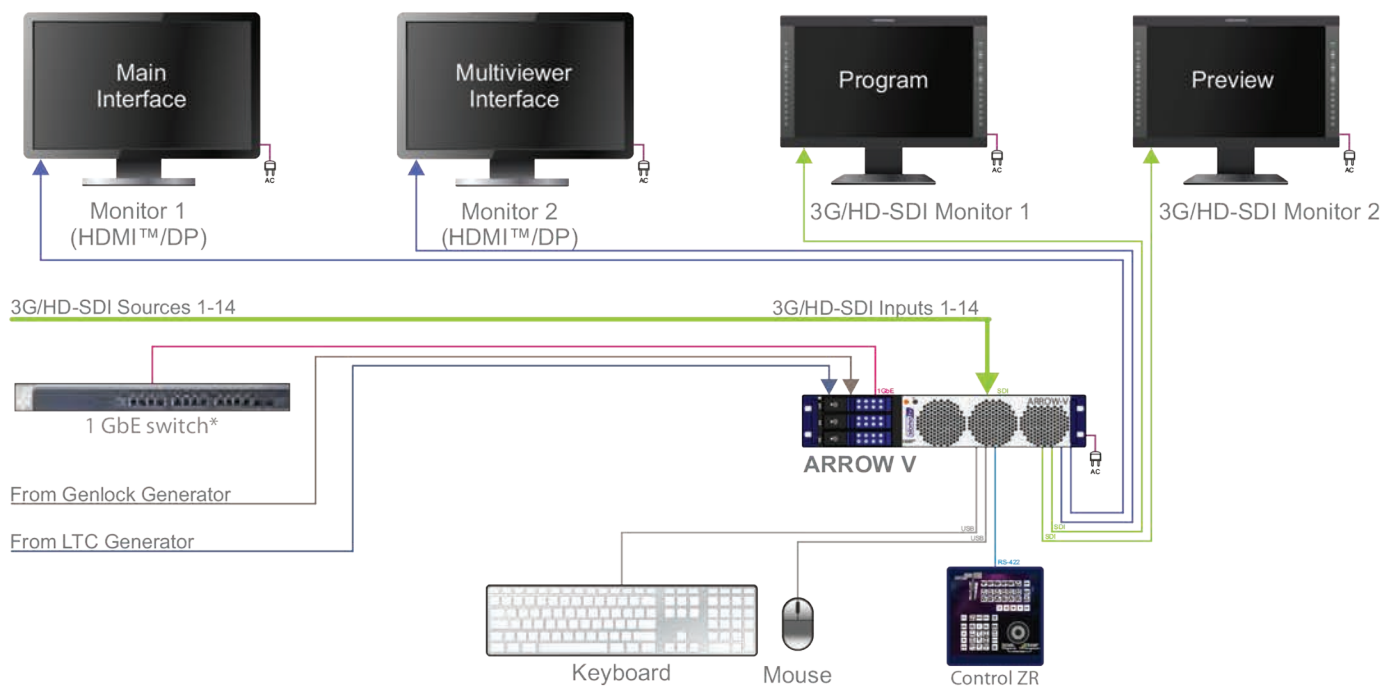
#### 14-channel 3G/HD replay configuration with Program and Preview

14142 Replay configuration. Channels: 14 Recording; 14 Search; 2 Playback.

Graphics Port 1 – Main Interface, Graphics Port 2 – Multiviewer Interface.

SDI Out 1 – Program, SDI Out 2 – Preview.

Redundant Power Supply Option.



## Video-refereeing option

In addition to its main functionality, the Arrow V can be used as a VAR system with 4-16 cameras in various sport competitions.

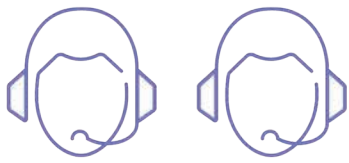


# INDEPENDENT WORKPLACES

## High-quality complete coverage of action-packed events

The Arrow V is designed for events and sports competitions with a high density of unrelated activities and multiple focus areas.

With its compact size, the Arrow V server supports up to two independent full-featured workspaces.

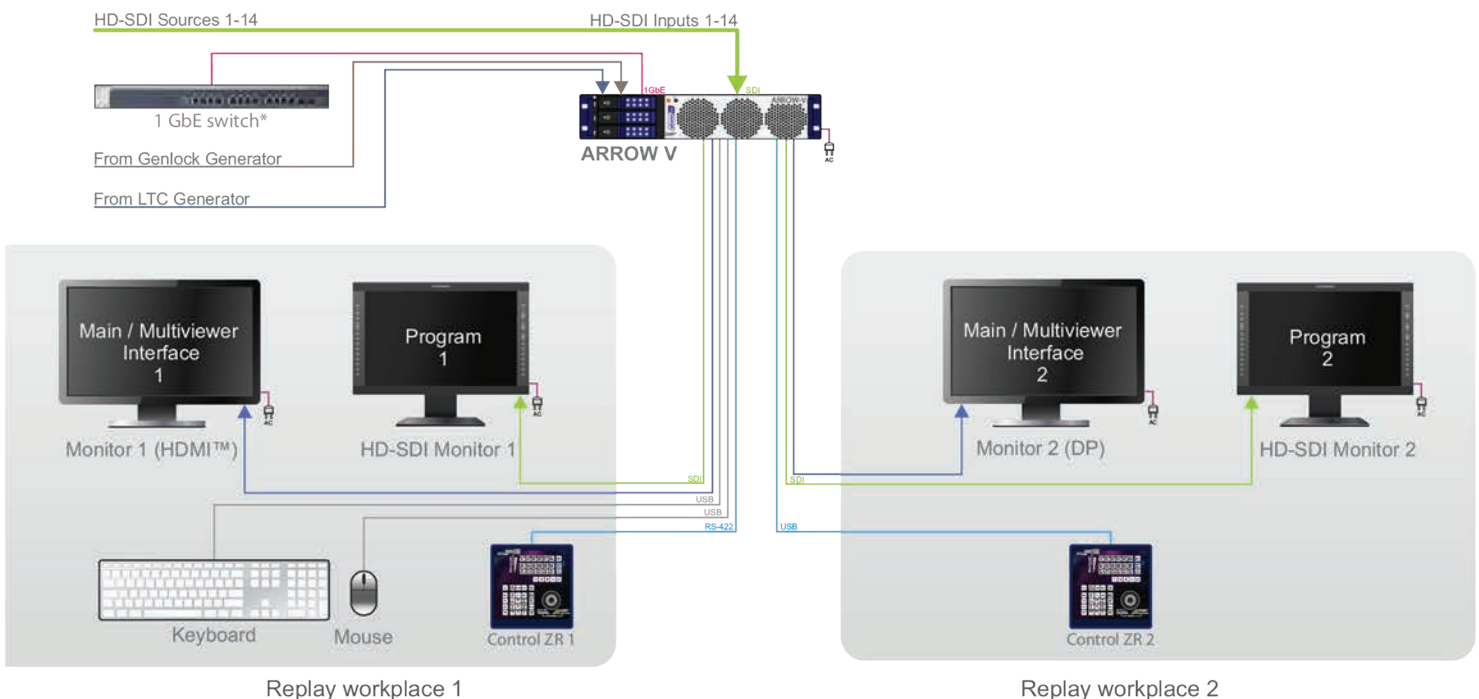


**Two full-featured 772 workplaces for HD and 662 for 3G**  
 HD Replays: 7 Rec + 7 Search + 2 Play + FX configuration  
 3G Replays: 6 Rec + 6 Search + 2 Play + FX configuration

Two operators follow the actions taking place, prepare clips and replays in parallel, work in the background or create Highlights/Summary. Each operator works with up to 7 recording channels + 7 search channels + 2 playback channels + FX with SDI output for PGM and PVW output in the Multiviewer interface. Clip and playlist sharing between workplaces is available.

### 14-channel HD replay configuration. Two Independent 772 Replay Workplaces

- 14 HD SDI inputs. Each workplace: 7 Record, 7 Search, 2 Playback channels.
- Graphics Port 1 (2) – Main Interface and Multiviewer via Multiskin,
- SDI Output 1 (2) – Program.
- Redundant Power Supply Option.



# ARROW-V

## COMFORTABLE WORK IN REPLAY MODE

### High-performance and intuitive interface

Easy access to all functions, camera selection and quick preparation of replays.

### Simultaneous search on all channels

Search does not require a dedicated SDI output and switching between channels.

### Automatic creation of clips and playlists

Aired clips are automatically saved to playlists.

### Quick clip marking

Requires 1-3 operations less than other systems.

### Alpha channel

Play pre-loaded clips and graphics with an Alpha channel.

### 2 graphics ports

For outputting the main interface, Multiviewer, Game Analyzer (telestrator).

### Reliable protection of recorded material

Restore clips and playlists at restart.

### Networking

Exchange clips and playlists between slomo.tv servers.

### Hotkeys

Quick access to 100 objects - clips or playlists.

### Export and import clips and playlists

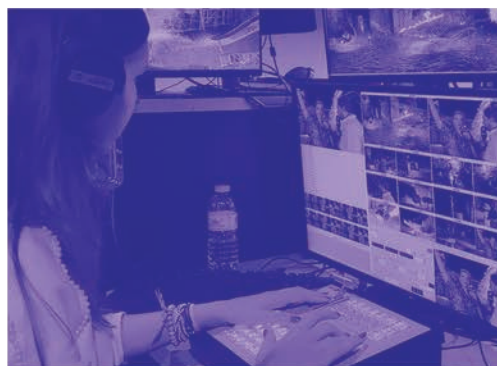
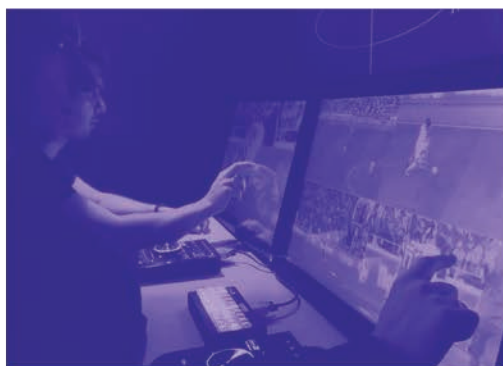
Via file media or network. Export as one file or with markup by clips.

### Built-in or separate Multiviewer

All indicators, controls and video windows are always in front of the operator's eyes.

### MultiSkin function

Quickly switch between different interfaces on one monitor.





## ARROW V – GREAT ALTERNATIVE TO LARGE RECORDING SERVERS

DMR™ technology – Direct recording for non-linear editing on external HDDs/SSDs in parallel with built-in storage.

### RELIABLE AND SIMPLE RECORDING FOR NLE

Multi-channel recording with selected codec (ProRes; AVID DNxHD; DVCPro HD; DVCPro 50; XDCAM 50; AVC-Intra 100/XAVC) to a built-in video array in a specially developed fail-safe highly reliable file format and in native files of NLE system on any available media. 3.5" SATA HDDs or SSDs with adapters are recommended.

#### SD Proxy files support

DMR™ technology provides simultaneous recording of both full resolution video files and SD Proxy files, which significantly increases the speed and comfort of editing.

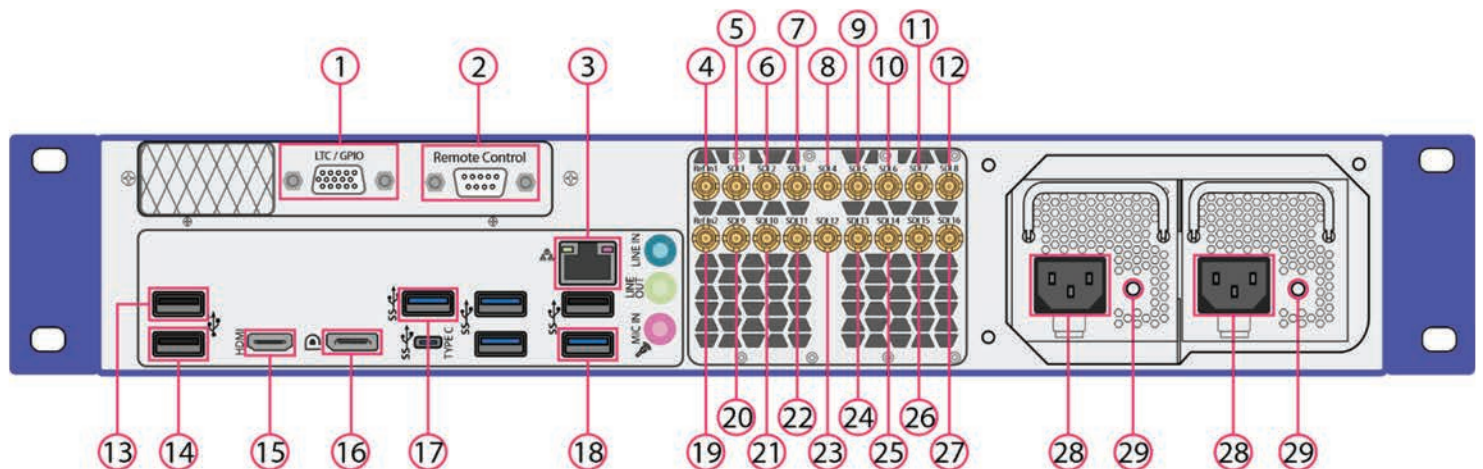
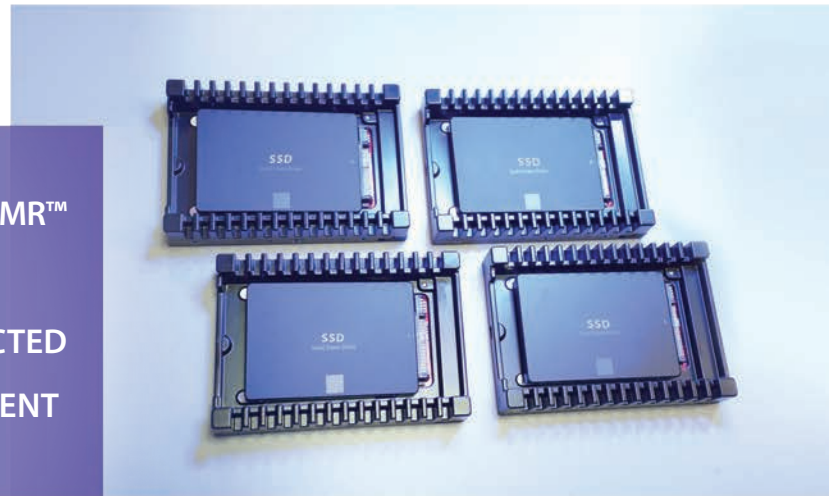
#### Export to XDCAM 50

All servers have a built-in export for subsequent editing with XDCAM 50 codec.

#### Support for growing files

Arrow V works with growing files (MXF, XDCAM 50).

- UP TO 16 CHANNELS RECORDING FOR NLE WITH DMR™
- 3 BUILT-IN DMR™ RACKS FOR HDDs/SSDs
- THE RECORDED MATERIAL IS SECURELY PROTECTED
- DOES NOT REQUIRE ANY ADDITIONAL EQUIPMENT



- 1 – LTC In +GPIO – Time-code (DHS-15);
- 2 – Remote Control – for Control Z / Zx / ZR (DB-9);
- 3 – 1 GbE Network (RJ-45 Port);
- 4 – Ref In 1 – Synchronization (DIN1.0/2.3);
- 5...12 – SDI I/O 1...8 – SDI video Input/Output (DIN1.0/2.3);
- 13 – Mouse (USB 2.0 Port Type A);
- 14 – Keyboard (USB 2.0 Port Type A);
- 15 – Main Monitor 1920x1080 (HDMI™);

- 16 – Additional Monitor 1920x1080 (Display Port);
- 17\* – DMR™ External Box (USB 3.0 Port Type A);
- 18\* – Remote Control – for Control ZR (USB 3.0 Port Type A);
- 19 – Ref In 2 – Synchronization (DIN1.0/2.3);
- 20...27 – SDI I/O 9...16 – SDI video Input/Output (DIN1.0/2.3);
- 28 – Power AC 110/220V 60/50Hz;
- 29 – BZ Reset.
- \* – optional

# Control ZR

## THE NEW-GENERATION ERGONOMIC REPLAY CONSOLE

Maximum speed and efficiency. Control ZR has 51 RGB backlit buttons, T-bar and Jog/Shuttle for search and playback speed control, light and color indication providing hints for the operator.

THE **Control ZR** REPLAY CONSOLE IS INCLUDED WITH ARROW V.

The highly reliable T-bar provides over 1000 values of lever position. The Shuttle wheel has 64 left and right positions for smooth and accurate control of search and playback speed.



Direct access to 24 recording channels, presets, and most functions.

Connection via RS-232/422, USB and Ethernet. Control ZR is powered via USB or Power over Ethernet (PoE) technology.



## PARAMETERS

## Arrow V

|   |   |
|---|---|
| Video inputs (3G/HD/SD bi-directional SDI I/O)              | 16  |
| <b>Video inputs (Replay Mode / Recording for NLE *)</b>     |   |
| HD/SD SDI   | Up to 14 / 16   |
| 3G SDI **   | Up to 14 / 8  |
| Video outputs   | 2 3G **/ HD / SD SDI<br>1st Out – Playout with transition effects between clips<br>2nd Out can be configured as Preview, Multiviewer, Alpha-channel, Game Analyzer or Delay Output.   |
| Graphics ports  | HDMI™, DP   |
| <b>Video Formats</b>  |   |
| HD/SD SDI   | 29.97/59.94Hz based: 1920x1080/59.94i, 1920x1080/29.97PsF, 1280x720/59.94p, 720x480/29.97PsF, 720x480/59.94i<br>25/50Hz based: 1920x1080/50i, 1920x1080/25PsF, 1280x720/50p, 720x576/25PsF, 720x576/50i<br>Support of 16:9 and 4:3 modes.   |
| 3G SDI  | 1920x1080/59.94p, 1920x1080/119.88i 1920x1080/50p, 1920x1080/100i   |
| <b>Operational channels (simultaneously) – Replay Mode</b>  |   |
| 3G **/HD/SD SDI   | Up to 14 Record / 14 Search / 2 Playback + FX   |
| Built-in storage (SSD)                                      | 133 hrs. HD video DVCPro HD codec 100 Mbps<br>Optional: 266 / 530 hrs. HD video 100 Mbps  |
| Multiviewer   | Built-in into main interface – up to 17 video windows;<br>Separate on second graphics or SDI output –up to 16 video-windows;<br>As one of MultiSkin modes<br>MultiSkin mode displays additional interfaces on primary or secondary monitors:<br>• Multiviewer with video windows of all cameras, plus Preview and Program windows. It provides convenient and comfortable way to follow all recording channels and, when necessary, select interesting views. |
| Recorded Audio Channels (Replay Mode / Recording for NLE *) | Embedded<br>16 / 24 bit 48 kHz  |
| 3G **/HD/SD SDI   | Up to 112 / 128   |
| Replay Audio Channels                                       | 8 audio channels embedded into SDI video output signal  |
| <b>Codecs</b>   |   |
| Basic   | DVCpro 50 / DVCPro HD, I-Frame DCT based  |
| DMR™ *  | ProRes 422, DNxHD, DVCPro HD/50, XDCAM422 50Mbit, XDCAM 35, AVC-Intra 100/50, XAVC  |
| Export (basic)  | XDCAM422 50Mbit   |
| Export (advanced) ***                                       | DVCPro50/HD, ProRes 422, DNxHD, DVCPro HD/50, XDCAM 35, AVC-Intra 100/50, XAVC, MPEG2 Long GOP, H.264, MPEG   |
| Simple DMR™ Recording application                           | ProRes 422, DNxHD, DVCPro HD/50, 50Mbit, XDCAM 35, AVC-Intra 100/50, XAVC   |
| Containers  | QuickTime / MXF / MP4   |
| Video Exchange  | 1 GbE (Network)<br>USB 3.0/eSATA (External HDD Box)<br>Built-in trayless/toolless 3.5" SATA HDD Rack  |
| DMR™ RACK   | 3   |
| Video Standards   | HD video conforms to SMPTE 292M, SMPTE 274<br>SD video conforms to SMPTE 259M<br>720p video conforms to SMPTE 296M<br>3G video conforms to SMPTE 424M / SMPTE 425M  |
| Controller  | Specialized console with push-buttons, T-Bar and Jog/Shuttle<br>(via RS-422/RS-232/USB/Ethernet interface)  |
| Time-code   | LTC (SMPTE 12M-1)   |
| Synchronization   | Support of Tri-level and Black Burst  |
| GPIO  | 2 inputs and 2 outputs for integration with external equipment<br>(Mixer, Switcher, Automation)   |
| Power   | 110V/60Hz or 220V/50Hz  |
| Power Consumption   | 160 W   |
| Chassis / Dimensions (HxWxD), mm / Weight, kg               | 2U / 88 x 482 x 512 / 12  |

## Notes:

- \* – DMR™ license required.
- \*\* – 3G license required.
- \*\*\* – Export option required.

