Filmski studio VIBA FILM Ljubljana
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B. TECHNICAL SPECIFICATION

Purchase of digital camera and pertaining parts of digital image acquisition system

The individual parts of a digital cinematography image acquisition system are divided into three groups:

1. High-definition digital capture of moving images.
2. Monitoring of blocking of the scene with the camera, recording of the scene, as well as the repeated viewing of images directly after their capture.
3. Safety transcription and reproduction of digital images with the option of their basic processing.

GROUP I: High-definition digital capture of moving images

The capture of high-definition moving images requires the use of a high-definition digital cinematography camera with accessories.

The bidder shall specify:

- the manufacturer, type and model of the high-definition digital cinematography camera
- the principal technical characteristics of the camera

The bidder shall ensure:

- A high-definition camera which, together with its accessories, comprises an operational system for the digital capture of moving images.
- That the digital camera is in conformity with CE regulations governing this area, which must also be evident in the enclosed technical documentation of the camera's manufacturer.
- That the camera is compatible with the existing optical, mechanical, electronic and electric shooting equipment already owned and used by the public institute Filmski Studio Viba Film Ljubljana for its primary business activity.
- That the manufacturer of the offered version of the digital camera regularly upgrades its firmware and software applications for the camera, and the basic upgrades are available to buyers of its digital cameras free of charge.

- That the offered version of the digital cameras supports recording in different Apple ProRes 422 and 4444 formats.
- That the offered version of the digital camera has a built-in recording unit and allows acquisition of moving images in a 12-bit logarithmic, uncompressed (RAW) format on a removable medium, which has a storage capacity of at least 15 minutes of high-definition images in an uncompressed recording format utilising the entire 4:3 sensor area (whose physical area is comparable to the area of the whole 35 mm film frame), and at a recording speed of 24 frames per second.
- That the offered version of the digital camera enables image capture using spherical and anamorphic lenses; when using the latter, it enables the simultaneous export of an image signal in an unsqueezed ratio of image sides in at least one of the supported formats of recording.
- That the camera has a recording speed of up to 30 frames per second, irrespective of the selected image ratio and recording format, and also offers high-speed recording of up to 200 frames per second in at least one of the supported aspect ratios and recording formats.
- That the offered version of the camera also features, via a built-in radio module, connectivity with a wireless control unit for a focus puller of at least one manufacturer, and the module should be directly connectable to electric motors for regulating lens adjustment values (focus, iris, zoom) of at least one manufacturer.
- That the camera outputs a video signal in one of the supported formats via one of at least two HD-SDI video outputs built into the body of the camera.
- That the offered version of the camera can be powered with a DC voltage ranging from 10.5 to 34 V. Adequate hardware should be incorporated, and adequate software installed for the purpose of managing electricity supply, which provides for the automatic selection of an appropriate power supply source, e.g. 12 V or 26 V.
- That the offered version of the camera is equipped with sensors for communicating with compatibly equipped lenses enabling the transmission of lens data (focus, iris, zoom), which are recorded by the camera in the data file alongside the image (and optional sound) for the needs of post-production processing (e.g. metadata).
- That the offered version of the camera has at least three built-in motorised ND filters which, in line with their declarative intensity, enable uniform filtration of the entire light spectrum.
- That the offered camera is supplied with a high-definition electronic viewfinder with a resolution of at least 1280 x 1024 pixels, which has built-in controls for the viewfinder and the camera, and for which a heated eyecup may be additionally purchased.

The bidder shall deliver:

- Printed instructions for use of the offered digital camera in the Slovenian or English language.
- A protective case adapted to the offered digital camera with the option of simultaneous transport of other parts of the camera and recording system.
- Adequate rain protection for the digital camera when it is in the operating mode.
- Camera body with PL lens mount, which has incorporated L-Bus connector and cover for the PL mount.
- A built-in recording module enabling the storage of images on a removable medium.

- A built-in module for the mechanical regulation of lens adjustments (focus, iris, zoom), an accompanying radio module with an antenna and additional BNC sockets for HD-SDI.
- Electric motor for the mechanical regulation of lens adjustments (focus, iris, zoom) with corresponding cable for direct connection with the built-in module.
- A computer (Ethernet) cable for internet (IP) communication with the camera.
- Electronic viewfinder with corresponding cables and its mounting bracket.
- Camera transport handle with accessories for mounting.
- Shoulder pad with accessories.
- Camera bridge plate with pertaining sliding plate, support rods and accessories.
- V-mount Power Splitting Box for on-board batteries, which features 3 x Lemo 2p 12 V (unregulated) 2 A output and 2 x Twist D-TAP 12 V (unregulated) 2.5 A output.
- Four V-lock batteries 14.4 V, maximum load 20 A, 10.8 Ah, 155 Wh and LED display.
- 4 Channel V-Mount Simultaneous charger with XLR-4 socket, pertaining cables for connection to the 230 V power network.

GROUP II: Monitoring of blocking of the scene with the camera, recording of the scene, as well as the repeated viewing of images directly after their capture

The group comprises two interconnectable devices:

1. 5.5″ on-board monitor for focus puller
2. 7″ HD monitor with audio/video recorder

For each of the above devices, the bidder shall specify:

- the manufacturer, type and model
- its principal technical characteristics

The bidder shall ensure:

- That a HD-SDI connection can be established between the devices via a BNC cable and via HDMI cables for the transmission of image and sound signals.
- That the recorder enables HD-SDI capture of the image signal sent by the camera and also enables HD-SDI and HDMI signal transmission of the recorded images to the connected monitors.
- That the recorder is a portable device that can function autonomously with accessories, and that it can also be attached to the camera body and simultaneously serve as a focus puller's on-board monitor with a recording option.

The bidder shall deliver:

1. 5.5″ on-board monitor for focus puller

- size 5.5 inches

- displays image in 16:9 format
- resolution at least 1920 x 1080 pixels
- LCD screen protection
- enables waveform and vectorscope analysis of HD image
- image focus control function,
- has at least one HD-SDI input and one HD-SDI output
- supports SDI signals 480i, 576i, 1080i, 1080p and 1080psf
- has a HDMI input and output
- option of turning an image on its horizontal or vertical axis
- enables power supply by cable through a 12 V socket on camera housing
- the bid is to specify one power cable as described in the previous indent
- an articulating supporting arm for on-board monitor should be enclosed, with a ¼-inch thread on one side and a ⅜-inch thread on the other side

2. 7″ HD monitor with audio/video recorder

The HD signal recorder in the role of video assist should be of smaller size and weight, and suitable for hand-carrying at shooting locations. At the same time it should be suitable for attachment directly onto the camera via an adequate articulating supporting arm. Its characteristics should be the following:

- at least a 7-inch LCD screen with a resolution of at least 1920 x 1080 pixels should be built into the recorder housing, and may also function as a mini monitor for a focus puller
- operation of the device is by touch screen
- enables mutual conversion of 480i, 525i, 720p, 1080i and 1080p video signals
- records video image with or without sound onto removable, solid-state mediums in a mode supported by Windows and Apple operating systems
- simultaneous export of HD-SDI and HDMI audio-visual signals
- at least one HD-SDI input and output and one HDMI input and output connector
- two XLR connections for audio signals

<u>The bidder shall deliver:</u>

- HD signal recorder
- LCD screen protection
- two removable SSD disks with at least 128 GB capacity
- two 7.2 V Li-ion batteries
- battery charger for 7.2V Li-ion batteries,
- main power cable for connection to the 230 V power network

GROUP III: Safety transcription and reproduction of digital images with the option of their basic processing

This set includes two interconnectable devices:

- removable camera SSD (recording media) reader/writer
- high-performance laptop computer

This set also includes:

- removable SSD disks (recording medium)

For each of the above devices, the bidder is to specify:

- the manufacturer, type and model
- its principal technical characteristics

The bidder shall ensure:

- That the devices are interconnectable with at least a USB 3.0 connection and enable safety transcription, reproduction of recorded HD video images, and their basic processing using the software of the manufacturers of offered technical equipment.

The bidder shall supply:

- At least three removable SSD disks with a nominal storage capacity of 256 GB. They should enable data transmission of up to 540 MB per second.
- A reader/writer that is fully compatible with reading and writing onto the SSD disks (mediums) mentioned in the previous indent. It should enable mounting and use of at least one medium at a time while exchanging binary data with the laptop computer via the USB 3.0 or Thunderbolt connection. In addition to the corresponding cables, basic software for working with the reader/writer and the data files stored on the mediums should also be enclosed.
- A laptop computer with at least a 39.12-centimetre (15.4-inch), high-resolution, LED-illuminated monitor capable of displaying images captured by the offered digital camera in the same resolution, with at least a quad-core Intel Core i7 processor functioning with a minimum processing speed of 2.4 GHz, at least 8 GB of on-board memory (RAM), a minimum SSD capacity of 256 GB, at least two USB 3.0 connectors, and at least one HDMI connector. The laptop computer should be delivered with an installed operating system that natively supports reading and writing of audio-visual images in ProRes formats. It should also be supplied with a 230 V power cable.