

# **QDVS-1100**

## **User Manual**

Model number: ME-QDVS-1100



October 27, 2023

1st Edition

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### **Revision history**

Edition	FirmWare	Date	Revision details
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## I. Introduction

This chapter describes the matters that need to be noted before the setup and the use of QDCAM

## I-1. Notes when using this product

This section provides guidelines for using this product. If you have any questions regarding the product usage or the contents of this manual, please contact MEDIAEDGE Corporation Customer Service.

MEDIAEDGE Corporation
International Customer support
Intl. Support-me@mediaedge.co.jp

#### O Do not damage the power cord:

A damaged power cord can cause a fire and/or an electric shock. Avoid placing heavy objects on the cord or positioning it near any heat sources. Additionally, do not bend or modify the power cord in any way. When unplugging the AC adapter, hold the plug itself. If the power cord is damaged, please contact the customer support at the store where you purchased the product for a replacement.

#### O not disassenble:

Opening the case or attempting to modify the product can cause a fire and/or electric shock. For internal inspections and repairs, please contact our customer support or the store where you purchased the product.

## Do not use the product in duty and humid areas:

Using the product in such conditions can lead to short circuits and heat generation, causing fires and electric shocks.

# O not allow water or foreign objects to enter the product:

If water or foreign objects get inside, they can cause fires and electric shocks. If this occurs, turn off the power, unplug the power cord, and contact the store where you purchased the product or our customer support.

## O not use the product during thunderstorm:

Avoid touching the product's body and plug, as it can cause electric shocks.

## O not touch the AC adapter with wet hands:

Do not plug in or unplug the AC adapter with wet hands, as it can cause electric shocks.

# O not place the product in direct sunlight:

Avoid placing the product in direct sunlight or near heating equipment, as it can cause fires or damage the product.

# On not use the product if it is smoking:

f the product is smoking or emitting a strange smell, discontinue use immediately, as it can cause fires or damage the product. If this occurs, turn off the power, unplug the power cord, ensure it stops smoking, and then contact the store where you purchased the product or our customer support.

### Do not use the product if it is damaged:

If the product is dropped or the cover is damaged, discontinue use to avoid fires or further damage. In such cases, turn off the power, unplug the power cord, and contact the store where you purchased the product or our customer support.

### Do not place the product in an unstable location:

Avoid placing the product on unstable stands or tilted surfaces, as it can fall and cause injuries or damage itself. Organize the power cord and AV cable to prevent tripping and potential injury or damage.

#### Turn off the power when cleaning the product:

Before connecting or cleaning the product, unplug the power cord to avoid electric shocks or damage. When cleaning the product, do not use volatile solvents such as thinner. If the product will not be used for an extended period, unplug the AC adapter.

### Do not use any AC adapter other than the one provided:

Please do not use any product other than the included AC adapter, as it may cause a fire or product malfunction.

### Do not cover the product with fabric:

Do not use the product in poorly ventilated areas or while covered. If the ventilation opening is blocked, heat can build up inside, causing fires or damage to the product.

#### Note

Regardless of whether negligence occurred during use, our company will not be responsible for any claims related to consequential, special, or incidental damages, including lost profits, arising from operating this product. We do not guarantee the product when it is used for purposes other than those originally intended or outside the recommended environment.

### ■ Handling of personal information Policy

As a general rule, our company will not use customers' personal information for purposes other than those listed below:

- •To support the use of our products.
- ·To conduct surveys on the usage of our products for product improvement, development, and service enhancement.
- ·Survey results may be provided to our business partners as a reference without including customers' personal information.
- To verify the legitimacy and validity of bank accounts and credit cards.
- To provide information on updated software versions and new products.
- To send prizes to customers who have won in sweepstakes.

With customers' permission, personal information may be used for other purposes.

We manage the provided information properly and will not disclose or provide it to third parties without customers' permission, except in special

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circumstances.

If you have any questions concerning our handling of your personal information, please contact us at http://www.mediaedge.co.jp.

#### **■** The trademarks

- (1) MEDIAEDGE is a registered trademark of MEDIAEDGE Corporation.
- (2) HDMI, High-Definition Multimedia Interface, and the HDMI logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. in the United States and other countries.
- (3) Other product names, related names, and logos are trademarks or registered trademarks of their respective companies.

### I-2. Before Use

#### Checking Package Contents

Please verify that the following items are included in your QDVS-1100 package. Although we have taken great care in packaging the product, if any items are missing, please contact the retailer where you made the purchase or reach out to our customer support using the details provided below.

**MEDIAEDGE** Corporation

International customer support

Intl.Support-me@mediaedge.co.jp

Items Included with QDVS-1100.

- QDVS-1100 Main unit x 1
- Keyboard x 1
- Small Keyboard (for key operation) x 1
- Mouse x 1
- Quick Manual x 1
  - \* The User Manual (this document) can be downloaded as a PDF from our website

#### ■ About our Website

or the latest updates on our QDVS-1100 and other products, visit our website at <a href="http://www.mediaedge.co.jp">http://www.mediaedge.co.jp</a>. We provide access to the latest drivers, utilities, product manuals, and FAQs, so feel free to utilize our website for your needs.

## I-3. Precautions

#### Regarding Documentation

- If there are discrepancies between the instructions in this manual and actual operational methods, prioritize the actual operational methods.
- For the sake of clarity, the illustrations and screen images in this manual may differ from the actual product.

#### **■** Caution

- The content and specifications of this product are subject to change without prior notice.
- While we have taken great care in creating this product, if you notice any errors, omissions, or unclear points, please contact our company.
- Reverse engineering, decompiling, and disassembling of this product are strictly prohibited.

#### **■** Software Licensing

This product uses free software that falls under the GNU General Public License (referred to as "GPL") or the GNU Lesser General Public License (referred to as "LGPL") for some of its embedded software.

For a list of software under the GPL/LGPL, source code requests, and any related questions, please contact our customer support.

# II. About QDVS-1000

This section provides an overview and explains the functionalities of the different components of the QDVS-1100.

## II-1. Overview, Features, Operation, and Use Cases

#### ■ II-1-1. Overview of QDVS-1100

This device takes video output from a QDCAM's Quad Link (3G-SDIx4) as input and performs recording and playback.



QDCAM 240P Filming

Recording and playback of 240P video

#### ■ II-1-2. Features of QDVS-1100

- Records and plays back video output from QDCAM.
  - ·Can loop record video for 1 to 25 seconds.
  - ·Uses keyboard controls to play back recorded video.
  - •Input is via QUAD Link (3G-SDIx4), and playback is via HDMI output.

#### Standard Filming



#### **High-Speed Filming**



- Loop recording and live display
  - •Records uncompressed data in a loop for a preset duration.
  - •Displays with a delay corresponding to the pre-set delay time.
  - •Stops recording through keyboard operation or by time setting.

#### Playback

- Plays back recorded video at 1/4 slow speed (60p).
- · Allows adjustment of playback speed.
- ·Initial behavior upon entering playback mode can be configured.
- · Auto-starts playback, with an option to pause at the beginning or end.
- •Frame-by-frame playback through key operations (forward and reverse).
- ·Jump to the beginning or end of playback.
- •Supports synchronized playback of multiple QDVS units.
- Recording File Generation

H.264(MP4), ProRes422(MOV)

- Recording File Storage
  - ·Storage on NAS.
  - ·Storage on USB storage devices.

#### ■ II-1-3. Operation of QDVS-1100

- Sequence of Operations
  - ·Check the video from the QDCAM on the live screen.
  - ·Play the necessary scenes using key operations.
  - •Record the verified playback video to NAS or USB storage.

#### Live Screen

Displays live video filmed at 240P by QDCAM at 60P. By setting a delay, you can view the video live but delayed by the set amount of time, allowing you to review your own actions (such as a golf swing) after they are completed.

#### Playback Screen

While in live view, video of a preset duration is recorded to memory. Moving to the playback screen allows you to review the video stored in memory by using slow-motion or frame-by-frame forward and rewind. Since the video is recorded at 240P, you can see much finer movements than you would with video played back at normal speed from a regular camera (see II-1-4: Use Cases of QDCAM).

#### Recording and Saving

Video verified in the playback screen can be recorded to NAS or USB storage in H.264 or ProRes422 format, by specifying IN-OUT points.

#### ■ II-1-4. Usage Example: QDVS records and plays back video from QDCAM.

#### **Slow-Motion Playback**

The system can be connected to a slow-motion system via Quad Link 3G-SDI, allowing for 1/4 slow-motion playback at 1080p resolution.





#### **Source Video for Sports Decision Systems**

The accuracy of decision systems is significantly improved through the synchronization of high-speed, high-resolution images and exposure timing.

#### Multi-AngleView

Given the reasonable pricing of both cameras and lenses, it becomes easier to set up multiple cameras for capturing video from various angles.





#### Wide-Angle and Close-Up Shooting Suitable for Sports Broadcasting

By placing the camera close to the players and using a wide-angle lens, you can capture more dynamic footage.







#### **Utilization of Video for Sports Coaching**

Accurate sports analysis is made possible through the synchronization of high-speed, high-resolution images and exposure timing. In addition, the slow-motion playback feature can be utilized for checking players' performance and for receiving appropriate advice from coaches.





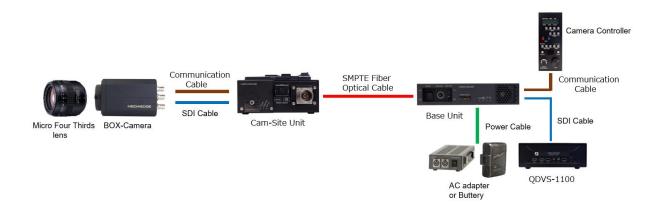
#### ■ II-1-5. System Configuration Options

■ Example1: Simple System via Cable Connection



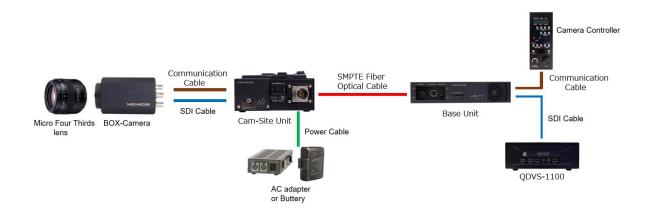
For SDI video output to a nearby QDVS-1100 or other recorders, switchers, servers, and video systems, a direct connection is made from the camera using a coaxial cable. The camera controller is also directly connected to the camera using a communication cable.

■ Example2: Medium-Distance Transmission System for Stadiums and Arenas



Optical camera cables are used to transmit the camera video to remote locations. The camera controller is also set up at a distant location for remote operation. In this system, power is supplied to the camsite unit and the camera from the base unit, eliminating the need to provide power at the camera side. The maximum length for the optical camera cable is up to 500 meters.

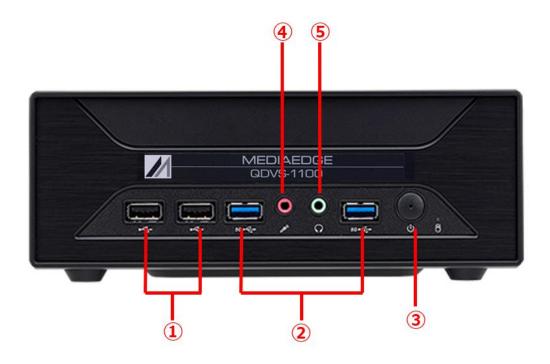
■ Long-Distance Transmission System for Golf Broadcasting, etc.



Optical camera cables are used to transmit the camera video to remote locations. The camera controller is also set up at a distant location for remote operation. In this system, power is supplied to the camsite unit. The optical camera cable can be extended up to a maximum of 2 km.

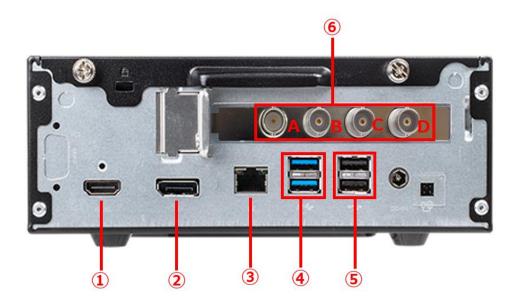
## II-2. Part Names and Function

### ■ II-2-1. Front View



1	USB2.0 Ports Connect USB peripherals such as keyboard and mouse.	
2	USB3.2 Gen1 Ports	Connect USB memory or USB external disk.
3	Power switch	Power ON / OFF switch.
4	Microphone input jack	Do not use.
(5)	Headphone jack	Do not use.

### ■ II-2-2. Rear View



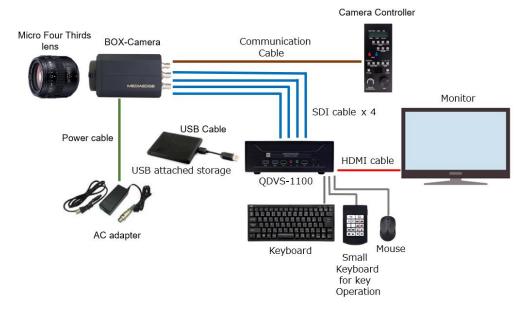
1	HDMI output Port	HDMI port to output QDVS setting screen and playback video.
2	DisplayPort	Do not use.
3	LAN port	Gigabit Ethernet port for connecting the QDVS-1000 to the network.  It is used to save the recorded video to the NAS.
4	USB3.2 Gen1 Ports	Connect USB memory or USB external disk.
(5)	USB2.0 Ports	Connect USB peripherals such as keyboard and mouse.
6	SDI Input ports	3G-SDIx4 input ports for recording QDCAM output video.  The input ports are A, B, C, D from the left.  When connecting to a QDCAM BOX camera or a QDCAM Base Unit via SDI, connect terminals with the same symbol (A-A, B-B, C-C, D-D).  BOX Camera  Base Unit  SDI output ports  SDI output ports

### II-3. Device Connection, Startup and Shutdown, Workflow.

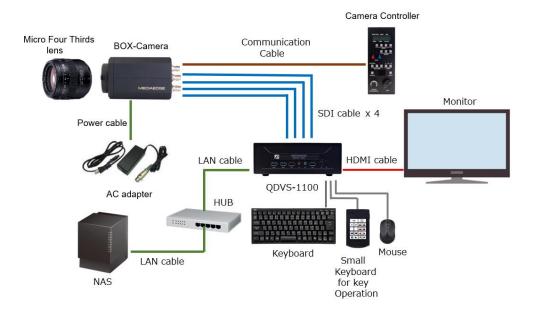
#### ■ II-3-1. Device Connection

Please refer to the following example connections and connect the QDCAM device and QDVS-1100 according to your operational needs.

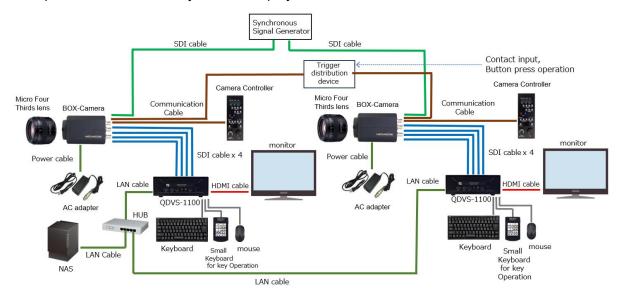
1. Operations where recorded data is saved to a USB memory stick or USB storage device connected to the main unit.



2. Operations where recorded data is saved to a NAS.

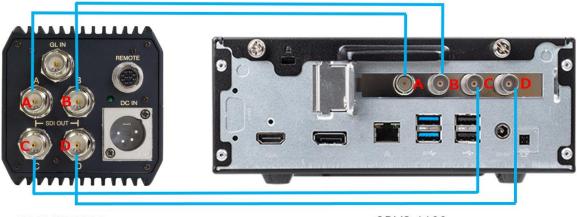


3. Operations that involve synchronized playback.



#### ■ II-3-2. Regarding SDI Cable Connection

Connect terminals with the same symbols to each other (A-A, B-B, C-C, D-D)



QDVS-1100

#### ■ II-3-3. Booting Up

Connect the power cable to the main unit and press the power button located on the front. The system will start up and the settings screen will be displayed. After configuring the settings to match your operation, press the Start button located at the bottom right of the screen. You will have two options: "Start without saving" and "Save and start." Pressing either of these will initiate the player.



Playback Setting Screen

#### ■ II-3-4. Shutdown

While the player is active, pressing the ESC key will take you back to the settings screen.

At the bottom right of the settings screen, please press the "Shutdown" button.

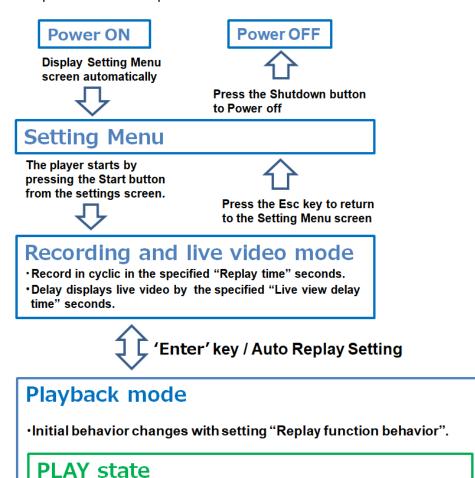
A confirmation dialog will appear; select "OK" to proceed with the shutdown.



System Setting Screen

#### ■ II-3-5. About operation Flow

The operation flow after power on is as follows.



·UpArrow / DownArrow key to play back speed up / down.

'Space' Key

Pause state

 Press RightArrow/LeftArrow to move the frame forward/ back.

Loop Playback recording range

- Speed acceleration by pressing shift key during frame forward / back.
- Press 'A'/'S' key to jump first frame/ last frame.
- Press 'l' / 'O' key to specifies In/Out point.

Encoding save state
Saves the encoded file to the location

- Saves the encoded file to the location specified in "File save location".
- Encode settings are specified by Encode, format, Encode bitrate, Encode file range.

'Esc' key/ End of encoding

Transition of operating mode

'E' key

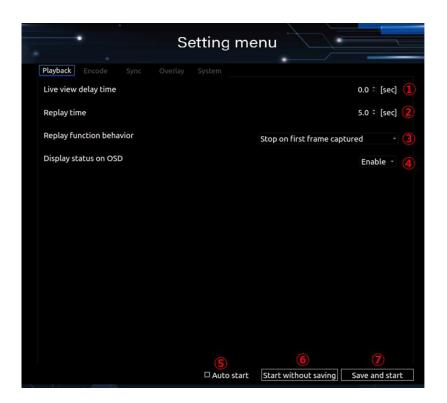
## II-4. Operating Instractions

#### ■ II-4-1. Settings Screen

Upon startup, the settings screen will automatically appear. Configure the settings according to your operational needs. The settings screen is divided into five categories: Playback, Encode, Sync, Overlay, and System. Select the tab corresponding to the desired setting option.

1	Playback	Settings for recording, live video display, and slow-motion playback
2	Encode	Settings related to creating encoded files
3	Sync	Settings for Synchronized Playback
4	Overlay	Settings for overlaying a still image on the display
(5)	System	System-related settings

#### 1.PlayBack



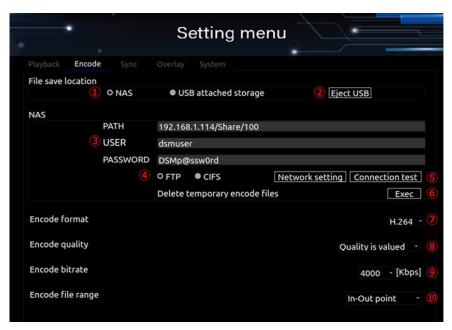
Playback setting screen

1	Live view delay time	Set the delay time for live video display in seconds.
2	Replay time	Set the recording time in seconds.

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		Choose the behavior when entering playback mode.		
	5 . 5 .:	Stop on last frame captured :		
		Stops at the last frame captured.		
3	Replay Function	Stop on first frame captured :		
	behavior	Stops at the first frame captured.		
		Play continuous until stop is pressed :		
		Starts playback automatically.		
	Dsiplay status on	Enables or disables the status display on the On-Screen Display		
4	OSD	(OSD).		
(	Auto start	The player will start automatically in subsequent launches, bypassing		
5	Auto start	this settings screen.		
		Save and start :		
6	Player Launch	Applies any changes made to settings and launches the player.		
	Buttons	Start without saving :		
7		Launches the player without applying any changes to settings.		

#### 2.Encode



**Encode Setting Screen** 

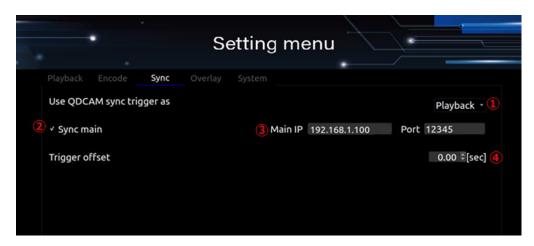
1	File save location	NAS/USB
2	Eject USB	Button to eject USB storage.
3	NAS	NAS Configuration Configure settings for the Network Attached Storage (NAS). Fields include PATH, USER, and PASSWORD. Example Setting: If the NAS IP address is 192.168.1.100 and the shared folder name is "video,"

		se	t the PATH as 19	2.168.1.100/video.
<u>(4)</u>	FTP or CIFS	Specify the protocol to be used when uploading to NAS.		
(5)	Network setting  Network Setting Button:			on: k settings dialog, where you can modify your network 3.1.100/24 ②
				s.1.100/24 <b>5</b>
			teway 192.168.1.2	
		ga	152.166.1.s	<b>?</b> 8
				Close Apply
		1	DHCP	Check this if you want to obtain an IPv4 address automatically from DHCP.
		2	address	Displays the current IPv4 address and subnet mask in CIDR notation. **1
		3	gateway	Displays the current IPv4 gateway.
		4	Manual IPv4	Check this if you want to manually set the IPv4 address.
		(5)	address	Set the IPv4 address and subnet mask in CIDR notation. <sup>**1</sup>
		6	gateway	Set the IPv4 gateway.
<ul> <li>Cancel button</li> <li>Closes the netwo changes.</li> <li>Apply button</li> </ul> Apply button		Cancel button	Closes the network settings without applying changes.	
		Applies changes and closes the network settings.		
		*1 CIDR notation represents the subnet mask in binary and shows how		
		many bits are set to '1' from the leftmost bit. Expressed as "/number		
			of bits." 255 255 0 0 -> /1	6
		255.255.0.0 -> /16 255.255.255.0 -> /24		
		255.255.255.128 -> /25		
			nection Test Butto	on: AS settings allow a successful connection.
6	Delete temporary encode files	Deletes encoded files created within QDVS. This prevents unnecessary re-uploading when the encoded files are moved or deleted from the NAS folder, as the upload process synchronizes with the NAS folder.		
7	Encode Format	Specifies the format for saving encoded files.  ProRes:		

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		Saves files in ProRes422 MOV format. H.264: Saves files in H.264 MP4 format.
8	Encode Quality	Speed is Valued  This option prioritizes encoding speed. Compared to the "Quality is Valued" setting, there tends to be a reduction in file size, shorter encoding times, and a slight decrease in image quality.
		Quality is Valued  This option prioritizes image quality. Compared to the "Speed is Valued" setting, the file size will be closer to the specified bitrate, the encoding time will be slightly longer, and the image quality will be improved.
9	Encode Bitrate	Specifies the bitrate for encoding the file (only applicable for H.264).
10	Encode File range	Specifies the range for saving encoded files Playback frames: Save the entire recorded file. In-Out point: Save between In/Out points.

### 3.Sync

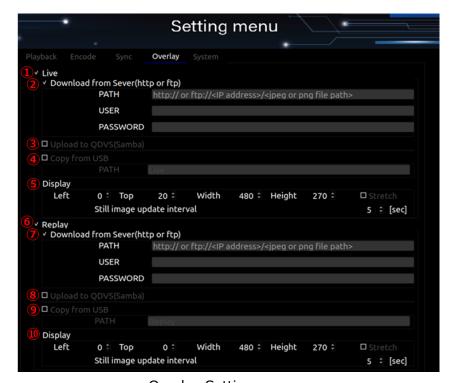


#### Sync setting screen

	Use QDCAM trigger as	sync	Enables or disables the synchronization feature across multiple QDVS units.  Disable: Synchronization feature is disabled.  Encoding: Enables the synchronized recording function.  Playback: Enables the synchronized playback function.
2	Sync main		Operates as the main device for the synchronization feature.  Main IP  If not the main device, specify the IP address of the main device here.  Specify the network port number for exchanging synchronization data.

	Main IP Port	Main IP: When operating as a subordinate device (when Sync Main is unchecked), specify the IP address of the main device. Port: Specify the port number used for synchronization communication between the main and subordinate devices.	
4	Trigger offset	Specifies an offset for the recorded files when synchronized encoding is enabled, relative to triggers received from QDCAM.  Example Settings:  Replay time 5[sec], Trigger offset 0[sec]: The recorded file will I include video from 5 seconds before up to the trigger reception timing.  Replay time 5[sec], Trigger offset -5[sec]: The recorded file will include video from the trigger reception timing for 5 seconds.  Replay time 5[sec], Trigger offset +2[sec]: The recorded file will include video from 7 seconds before up to 2 seconds before the trigger reception timing.	

#### 4.Overlay



Overlay Setting screen

1	Live	Enables overlay of still images on the live video feed.	
		Note: The still images must be in JPEG or PNG format.	
2	Download from Server	Downloads a still image to overlay on the live video from a NAS.	
	(http or ftp)	PATH: http:// <ip-address>/<path> or</path></ip-address>	
		ftp:// <ip-address>/<path></path></ip-address>	
3	Upload to QDVS	Uploads a still image to overlay on the live video feed via Samba to	

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	(Samba)	QDVS. Target the QDVS public folder Live for uploading the still image.	
4	Copy from USB	Copies a still image to overlay on the live video feed from a USB storage device.  PATH: Specify the path from the root of the USB.  For example, if you create a folder called image at the root of the USB and a folder called live inside the image folder, set the path as image/live.	
<b>(5)</b>	Display	Left, Top, Width, Height:  Specifies the position and size of the still image on the display.  The upper left corner is Left=0, Top=0 and the lower right corne Left=1920, Top=1080.  Stretch:  If the dimensions of the still image differ from the display size, it will stretched to fit.  Still image update interval[sec]:  If multiple still images are included, this sets the time interval to sw between them.  The still images will be displayed in ascending order based on the filenames.	
6	Replay	Enables the overlay of still images on slow-motion video playback.  Note: The still images must be in either JPEG or PNG format.	
7	Download from Server (http or ftp)	Downloads still images to overlay on slow-motion video from NAS.  PATH: http:// <ip-address>/<path> or ftp://<ip-address>/<path></path></ip-address></path></ip-address>	
8	Upload to QDVS (Samba)	Uploads still images via Samba to QDVS for overlaying on slow-motion video playback.  Note:  Upload the still images to QDVS's public folder named "Replay."	
9	Copy from USB	Copies still images from a USB drive to overlay on slow-motion video playback.  PATH: Specify the path from the root directory of the USB drive.  For example, if you create a folder named "image" at the root of the USB and inside it a folder named "replay," set the PATH to image/replay.	

10	Display	Left, Top, Width, Height:	
		Specifies the position and size for displaying the still images.	
		The top-left corner is Left=0, Top=0, and the bottom-right corner is	
		Left=1920, Top=1080.	
		Stretch:	
		If the size of the still image differs from the display size, the image will	
		be stretched to fit the display area.	
		Still image update interval[sec] :	
		Specifies the time interval for switching between multiple still images.	
		Note: Still images will be displayed in ascending order based on their	
		filenames.	

#### 5.System



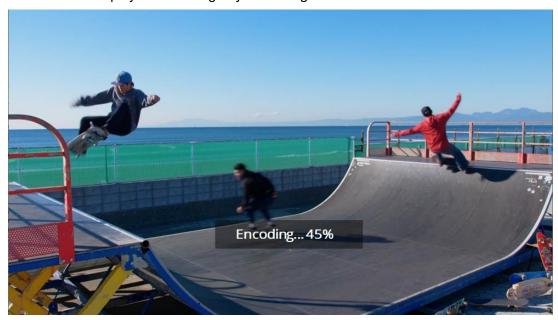
System setting screen

1	Date & &Time setting	Configures the date, time, and time zone settings.
2	Version	Displays the current version of the application.
Nertwork setting  Network Setting Button:  Opens the network settings dialog, where you can network configurations.		Opens the network settings dialog, where you can modify your

		DHCP		
		address 192.168.1.100/24		
		gateway 192.168.1.254		
		✓ Manual IPv4		
		address 192.168.1.100/24		
		gateway 192.168.1.254		
		Close Apply		
4	Refresh rate	Setting the Video Output Refresh Rate.		
		When set to "Auto," the refresh rate will match that of the input		
		video.		
(5)	Network command	Configures the connection to a network command server for		
		remote and multi-device operations.		
		Note: A separate PC with an application capable of issuing		
		network commands is required.		
6	Reboot/Shutdown	Performs a reboot or shutdown of the QDVS system.		

#### ■ II-4-2. Recording, Live, and Playback Screen

1. After setting your preferences in the settings menu, press the Start button. The playback screen will be displayed according to your settings.



Example:During playback, the screen will display what it looks like when encoding is being saved. (The playback screen will always be displayed in full-screen mode.)

2. After the playback screen is displayed, operations are conducted using a keyboard and mouse.

Below is a list of available keyboard and mouse actions:

ESC	Exit the player and return to the settings menu; also interrupts any ongoing	
	encoding process.	
Enter	Toggle between recording/live display mode and playback mode.	
Space	In playback mode, toggle between Play and Pause.	
LeftArrow	In Pause state, step backwards one frame.	
RightArrow	In Pause state, step forward one frame.	
Chiff	While in Pause state, simultaneously press with either Right or Left Arrow to step	
Shift	forward or backward by a predefined number of frames.	
Mouse Left In playback mode, click to zoom in centered on the selected point.		
Click Zoom levels are 1.2x, 1.5x, 2.0x, and 3.0x.		
Mouse Right	Cancel the zoom	
Click		
UpArrow	Increase playback speed when in Play state.	
DownArrow Decrease playback speed when in Play state.		
A In Pause state, go back to the beginning of the recorded data.		
S In Pause state, go to the end of the recorded data.		

#### **User Manual**

	In Recording/Live Display Mode:	
	Sets the current frame as the starting point (In-point) when switching to playback	
1	mode.	
	In Playback Mode:	
	Jumps to the stored In-point.	
	In Recording/Live Display Mode:	
	Switches to playback mode.	
0	In Playback Mode:	
	Sets the current frame as the ending point (Out-point) for encoding.	
X	Resets In and Out points while in Stop state in Playback mode.	
6	Toggles the delay time setting on and off while in Recording/Live Display Mode	
D	(used for camera corrections, etc.)	
Е	Starts encoding in Playback Mode.	
F	Changes playback direction to forward while in Play state in Playback Mode.	
R	Changes playback direction to reverse while in Play state in Playback Mode.	
G	In Recording/Live Display Mode, switches to Playback Mode > Starts encoding >	
	switches back to Recording/Live Display Mode (One-Key Encoding).	
0	Pauses if in Playback Mode.	
1	Sets to 1x speed if in Playback Mode.	
2	Sets to 1/2x speed if in Playback Mode.	
4	Sets to 1/4x speed if in Playback Mode.	
8	Sets to 1/8x speed if in Playback Mode.	
6	Sets to 1/16x speed if in Playback Mode.	
3	Sets to 1/32x speed if in Playback Mode.	
Р	Toggles On-Screen Display (OSD) status on and off.	
	In Recording/Live Display Mode:	
	"Live" is displayed in the upper-right corner.	
	In Playback Mode when Stopped:	
	"Pause" is displayed in the upper-right corner.	
K	In Recording/Live Display Mode:	
	Switches to Playback Mode and enters Pause state.	
	In Playback Mode:	
	Toggles between Play and Pause states.	
L	Switches from Playback Mode to Recording/Live Display Mode.	
F12	Toggles the still image display on and off.	

2 . You can also operate the system using the specially designed mini-keyboard that comes with the package.



### Description of Key Functions:

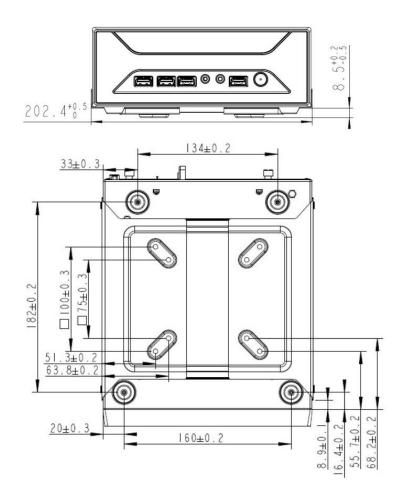
1	ENC	Initiates encoding.
2	REC/PLAY	Toggles between recording and playback modes.
3	IN, OUT	Sets the IN and OUT points.
4	1/4▶▶▶、1/8▶▶、1/16▶	Performs slow-motion playback in forward at speeds
		of 1/4, 1/8, and 1/16.
	1/4◀◀◀、1/8◀◀、1/16◀	Performs slow-motion playback in reverse at speeds
		of 1/4, 1/8, and 1/16.
(5)	<b> </b> ◀◀、▶▶	Stops at the beginning or the end of the footage.
6	11/▶	Toggles between pause and play modes.
7	<b>∢</b> II、II <b>▶</b>	Steps frames backward or forward.

## II-5. Dimensions



#### Note:

Please ensure to leave a space of at least 50mm on both the top and the rear side of the unit when installing it.



## II-6. General Specifications

### **■** Hardware Specification

Size		
Dimensions(mm)	200(W) × 250(D) × 78.5(H) mm    **xprotrusions(s) not included.	
Weight	1.91kg	

Rating			
	AC adapter	INPUT:AC 100V~240V(50Hz/60Hz) 2.5A(max)	
Power		OUTPUT:DC 19.5V 9.23A	
requirements	Body	INPUT:DC 19.5V 9.23A	
	Power consumption	Normal operation: 60W	
RoHS	Compliant		

Network		
	Format	1000Base-TX ×1
LAN port		Conforms to Ethernet / IEEE802.3 frame format
	Terminal	RJ45modular connector ×1

Video audio		
Video output	Format	HDMI 2,0
Audio output	Terminal	Does not support audio input/output

General-purpose input / output			
USB	Format	Conforming to USB3.2 Gen1 standards	
	Terminal	USB Type A ×2 (Front) ×2 (Rear)	
	Format	Conforming to USB 2.0 standards	
	Terminal	USB Type A ×2 (Front) ×2 (Rear)	