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QDVS-1000

User Manual

Model number : ME-QDVS-1000

May 29, 2020

1st Edition

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Revision history

Edition	FirmWare	Date	Revision details
1.0		May/29/2020	First edition

Contents

I. Introduction

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

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I-1. Notes when using this product

This section describes notes when using this product. If you have any questions about how touse this product and the content of this manual please contact MEDIAEDGE Corporation Customer Service.

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

🚫 **Do not damage the power cord**

If the power cord is damaged, it can cause the fire and/or the electric shock. Do not place anything heavy nor place the power code close to any heating equipment. Also, do not bend nor process the power cord. When pulling out the AC adapter, hold the plug-in part. If there is any damage in the power cord, please ask our customer support at the store you purchased for a replacement.

🚫 **Do not disassenble**

Opening the case or trying to remodel the product can cause the fire and/or the electric shock. Please ask our customer support or the store you purchased the product for an internal inspection and a repair

🚫 **Do not use the product in duty and humid areas.**

It can lead to the short circuit and the heat generation and cause the fire and electric shock.

🚫 **Do not place water or forein matter inside**

If any water or foreign matter gets inside, it can cause the fire and the electric shock. Should any water or foreign matter gets inside, turn off the power, plug out the power cord, and contact the store you purchased the product or our customer support.

🚫 **Do not use the product during the thunderstorm.**

Do not touch the body of the product and the plug. It can cause the electric shock.

🚫 **Do not touch AC adapter with wet hands.**

Do not plug in or pull out the AC adapter with wet hands. It can cause the electric shock.

🚫 **Do not place the product in the direct sunlight.**

Do not place the product in the sunlight or close to any heating equipment. It can cause 🚫 the fire or damage the product.

Do not use the product when it is smoking.

Do not use the product when it is smoking or when it is giving off strange smell. It can cause the fire or damage the product. When abnormality occurs, turn off the power, plug out the power cord, make sure that it stops smoking, and then contact the store you purchased the product or our customer support.

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🚫 **Do not use the product in the damaged condition.**

When the product is dropped or when there is any damage in the cover, discontinue the use of the product. It can cause the fire or damage the product. When the product is damaged, turn off the power, plug out the power cord, and then contact the store you purchased the product or our customer support.

⚠️ **Do not place the product in the unstable location.**

Do not place the product on the unstable stand or tilted location. The product can fall and hurt somebody around or damage the product itself. Sort the power cord and AV cable to place. It can cause the injury and the damage to the product if you get tripped on the cord

⚠️ **Turn off the power when you clean the product.**

When connecting or cleaning the product, plug out the power cord. If not, it can cause the electric shock or damage the product. When cleaning the product, do not use any volatile solvents such as thinner. When the product is not in use for a long period of time, leave AC adapter off the plug.

⚠️ **Do not cover the product with fabric.**

Do not use the product in the poorly ventilated area or in the covered condition. When the ventilation opening is blocked, heat stays inside, and it can cause the fire or damage the product.

■ **Notes**

Regardless of the presence or absence of negligence in use, our company will not be responsible for any claim against consequential damage and special, incidental, or including lost profit that is generated by operating this product.
We will not guarantee the product when the product is not used for the originally intended purposes and/or in the recommended environment.

■ **Handling Policy of personal information**

As a general rule, our company will not use customers' personal information for any purposes other than the ones listed below:
- To support the use of our products.
- To conduct surveys of the usage of our products, for product improvement, for product development, and for improvement of our service.
* The result of the survey may be provided to our business partner as a reference without including the customers' personal information.
- To verify the legitimacy and the validity of the bank accounts and the credit cards.
- To provide the information on the updated version of the software and the new products.
- To send out prizes to customers who won prizes in the sweepstakes.
  With customers' permission, the personal Information might be used for the other purposes.
  We manage the provided information

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properly and will not disclose nor provide it to the third party without customers' permission unless in special circumstances. Please contact us at http://www.mediaedge.co.jp if you have any questions concerning to our handling of your personal information.

■ The trademarks

（1）MEDIAEDGE is a registered trademark for MEDIAEDGE Corporation.

（2）The other product names, related similar names, and logos are their companies' trademark/registered trademarks.

■ FCC Note

■ Federal Communication Commission FCC Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution

- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

- This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Note

This equipment has been tested and found to comply with the limits for a Class A digital device,
pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may causeharmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Declaration of Conformity
According to FCC Part 15
Responsible Party Name:
MEDIAEDGE Corporation
Address:
5-1-14,Hamabe-dori,Chuo-ku,Kobe,Hyogo, 651-0083 Japan
Telephone: +81-78-265-1552
Declares that product Model:
ME-BXC-CM100
Complies with Part 15 of the FCC Rules

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I-2. Before Use

■ Verify the package content

Check the QDVS-1000 package for the following parts. We try our best on packaging; however, should there be any missing parts, please contact to your local distributor you purchased.
If you need to contact us directly, please contact us by email.

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

QDVS-1000 enclosed items.

- QDVS-1000 x 1
- Keyboard x 1
- Small Keyboard (for key operation) x 1
- Mouse x 1
- Simple Manual x 1
  ＊You can download PDF User Manual（This document）from our website.

■ About our homepage

Updated information on our company and QDVS is posted on our homepage
(http://www.mediaedge.co.jp). Please access to our homepage to view our latest drivers, utilities, the product manual, and FAQ

I-3. Notes

■ Notation

- Please note that should there be any difference between the instructions on this manual and the actual method of operation, the latter will be regarded as a priority.
- Illustrations for the manual might differ from the actual devices.

■ Attention

- Without notice in the future, there can be some changes in the contents and the specification of this product.
- We do our best to check the contents of this product; however, should there be any questions, error, or omission of such notice, please contact our company.
- Analysis, reverse engineering, decompile, and disassembly of the software, the hardware, the manual, and the other attachment of this product are prohibited.

■ Usage Agreement

This product uses the free software that is under the General Public License GNU
(GNU General Public License, "GPL") or GNU Lesser General Public License (GNU
Lesser General Public License, "LGPL") for a part of the software.
Please contact our customer support for the questions regarding this matter, the list
of the software that corresponds GPL/LGPL, and a request for the source code.
Please contact ou
r customer support for questions regarding this matter.

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II. About QDVS-1000

This chapter describes the overview and the features of each part of the QDVS-1000

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II-1. Product Outline, Features, Usages

■ II-1-1. QDVC-1000 Outline

This product is a device for recording and playing the video output from QDCAM's Quad Link (3G-SDIx4).

Shoot at 240p   Record and play back video at 240P

■ II-1-2. QDVS-1000 Features

● Record and play back the video output from QDCAM.
・Loop recording of 1 to 25 seconds is possible.
・Plays back the recorded data by keyboard operation.
・The input is QUAD Link (3G-SDIx4) and playback is HDMI output.

Normal shooting

High speed shooting

● Loop recording and live display
・Uncompressed data is loop-recorded at the preset recording time.
・The display is delayed by the preset delay time.
・Recording is stopped by keyboard operation or time setting.

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- Play back

  ・Recorded video is played back at 1/4 slow speed (60p).

  ・The playback speed can be adjusted.

  ・Automatic playback start, pause at the first or end frame.

  ・Frame feed playback by key operation (forward feed, reverse feed).

  ・Move the playback position to the first and end frame (jump).

- Generate recording file

  MP4(H.264), ProRes422(MOV)

- Recorded file operation

  ・Save to NAS

  ・Save to USB storage

■ II-1-3. How QDVS-1000 works

- A series of actions

  ・Check the QDCAM video on the live screen.

  ・You can play the scene you want by key operation.

  ・The playback-confirmed video is recorded on the NAS or USB storage.

- Live screen

  The video that QDCAM is shooting at 240P is displayed live at 60P.

  By setting the delay, you can view the video delayed by the set time as live,

  and you can check own action (for example, golf swing etc.) after completing.

- Playback screen

  During live viewing, the video is recorded in memory only for the set time.

  You can move to the playback screen and check the video recorded in the memory

  by slowing, stepping, and playing back.

  The video is recorded at 240P, so you can see more detailed movements

  than viewing the video played back with a normal camera in slow motion.

  (see II-1-4: Usages).

- Recording, Archiving

  You can specify the IN-OUT point of the video you see on the playback screen

  and record it on NAS or USB storage in H.264 or ProRes422 format.

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■ **II-1-4. Usages**

Slow-Motion Replay

Quad link of 3G-SDI can interface 4x high speed of 1080p signal to slow-motion recorder-player.

Multi-AngleView

Affordable price of camera & lens allows to install many cameras for multi-angle shooting.

Image Analysis for Sport Judgement System

High speed & high resolution image capturing and exposure synchronization system allow accurate calculations for multi-camera image processing.

Wide Angle & Closeup Shot for Sports Broadcast

To use wide angle lens realizes exciting picture because the camera can be put near the player.

Video Capture Tool for Sports Coaching

High speed & high resolution image capturing and exposure synchronization system allow accurate calculations for sports analysis. Also, the player's performance can be checked through slow-motion replay and team coach can give the players his/her advises.
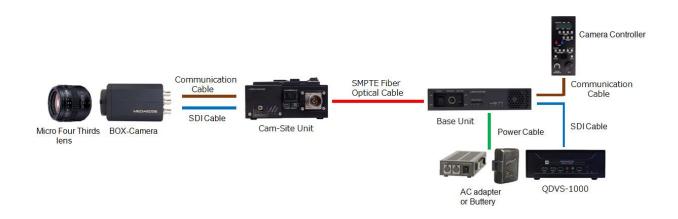

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■ II-1-5. How to configure a system

■Example1: Simple system using metallic cables

If you want to connect the SDI video output to a relatively nearby recorder, switcher, server, or other video system, connect it directly from the camera with a coaxial cable. The camera controller also connects directly to the camera using a communication cable.
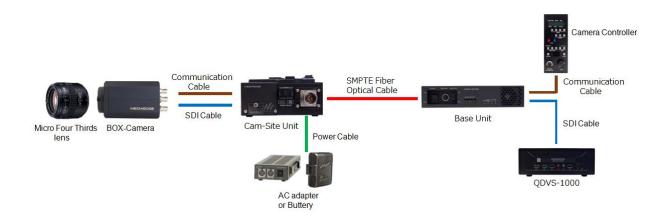
■Example2: Medium distance transmission system for stadium or arena operation

The camera image is transmitted to a remote location using an optical camera cable. The camera controller is also installed in a remote location and remotely controlled. The system supplies power from the base unit to the camsite unit and camera, so there is no need to provide power on the camera side. The optical camera cable can be up to 500 meters.

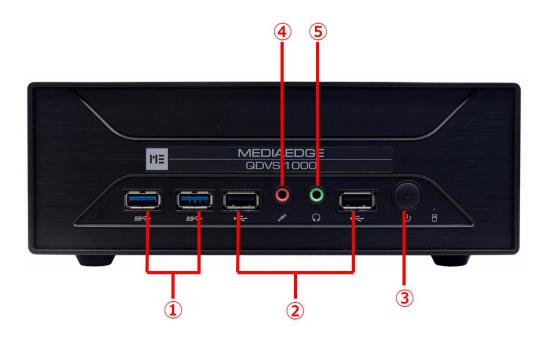■Example3: Long distance transmission system for such as golf operation

The camera image is transmitted to a remote location using an optical camera cable. The camera controller is also installed in a remote location and remotely controlled. The system, which supplies power to the camsite unit, can extend the optical camera cable up to 2 km.
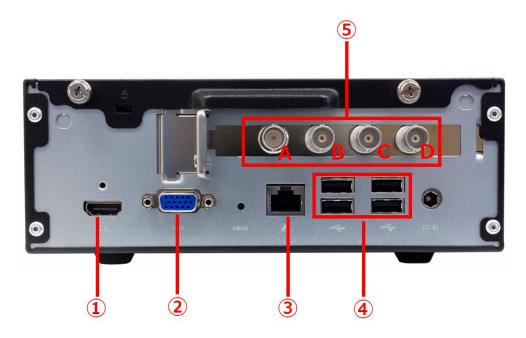
II-2. Part Names and Function

■ **II-2-1. Front View**

①	USB3.0 ports	Connect USB memory or USB external disk.
②	USB2.0 Ports	Connect USB peripherals such as keyboard and mouse.
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**
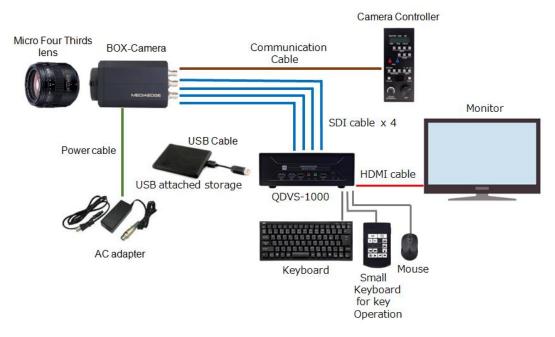
①	HDMI output Port	HDMI port to output QDVS setting screen and playback video.
②	Analog RGB D-Sub15 Output port	Do not use.
③	LAN port	Gigabit Ethernet port for connecting the QDVS-1000 to the network. It is used to save the recorded video to the NAS.
④	USB2.0 Ports	Connect USB peripherals such as keyboard 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

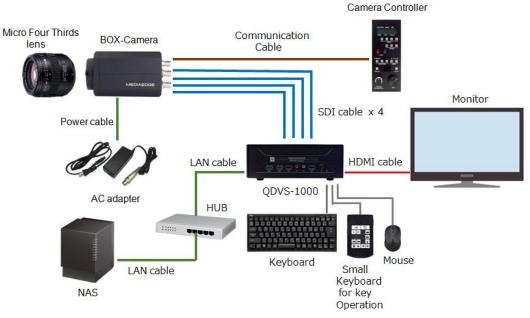## II-3. How to connect, start and stop the system and operation flow.

■ II-3-1. How to connect

Using the following connection examples, connect the QDCAM equipment to the QDVS-1000 according to operation.

1. In case of operation to save recorded data to USB memory or USB storage connected to the main unit

2. In case of operation to save recorded data to NAS

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◼ II-3-2. Start the system

Connect the power cable to the main unit and press the power button on the front to start the system and display the setting screen. After setting according to the operation, press the start button (Start without saving, Save and start) at the bottom right of the screen to start the player.

◼ II-3-3. Stop the system

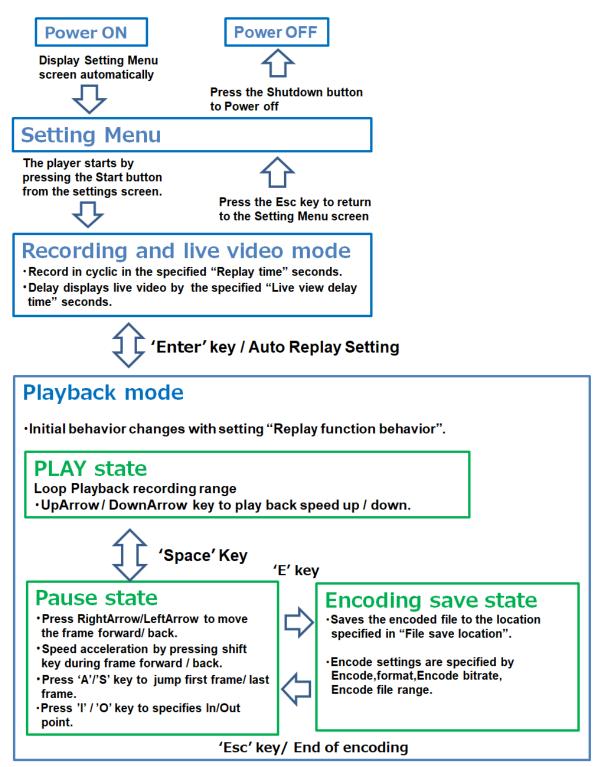Press ESC while player display to return to the settings screen.

Press the "Shutdown" button at the bottom right of the settings screen.

When you press the button, a confirmation dialog is displayed, so select OK to exit.

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■ II-3-4. About operation Flow

The operation flow after power on is as follows.

```
┌──────────────┐              ┌──────────────┐
│  Power ON    │              │  Power OFF   │
└──────────────┘              └──────────────┘
 Display Setting Menu               ⇧
 screen automatically
                               Press the Shutdown button
      ⇩                        to Power off

┌─────────────────────────────────────────┐
│  Setting Menu                            │
└─────────────────────────────────────────┘
 The player starts by               ⇧
 pressing the Start button
 from the settings screen.     Press the Esc key to return
                               to the Setting Menu screen
      ⇩

┌─────────────────────────────────────────┐
│  Recording and live video mode           │
│ ·Record in cyclic in the specified "Replay time" seconds. │
│ ·Delay displays live video by the specified "Live view delay │
│   time" seconds.                         │
└─────────────────────────────────────────┘

      ⇕  'Enter' key / Auto Replay Setting

┌───────────────────────────────────────────────────────────┐
│  Playback mode                                             │
│                                                            │
│ ·Initial behavior changes with setting "Replay function behavior". │
│                                                            │
│  ┌──────────────────────────────────────────────────────┐ │
│  │  PLAY state                                          │ │
│  │ Loop Playback recording range                        │ │
│  │  ·UpArrow / DownArrow key to play back speed up / down.│ │
│  └──────────────────────────────────────────────────────┘ │
│                                                            │
│          ⇕  'Space' Key                                    │
│                         'E' key                            │
│  ┌────────────────────────────┐    ┌─────────────────────┐ │
│  │  Pause state               │    │ Encoding save state │ │
│  │ ·Press RightArrow/LeftArrow to move │ ·Saves the encoded file to the location │
│  │  the frame forward/ back.  │ ⇨   │  specified in "File save location". │
│  │ ·Speed acceleration by pressing shift │                │ │
│  │  key during frame forward / back. │ ·Encode settings are specified by │
│  │ ·Press 'A'/'S' key to jump first frame/ last │ ⇦ │ Encode,format,Encode bitrate, │
│  │  frame.                    │    │ Encode file range.  │ │
│  │ ·Press 'I' / 'O' key to specifies In/Out │           │ │
│  │  point.                    │    │                     │ │
│  └────────────────────────────┘    └─────────────────────┘ │
│                'Esc' key/ End of encoding                   │
└───────────────────────────────────────────────────────────┘
```

Transition of operating mode

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II-4. Instractions

■ II-4-1. Setting Menu

When the console starts, the settings screen is automatically displayed, so make settings according to the operation.
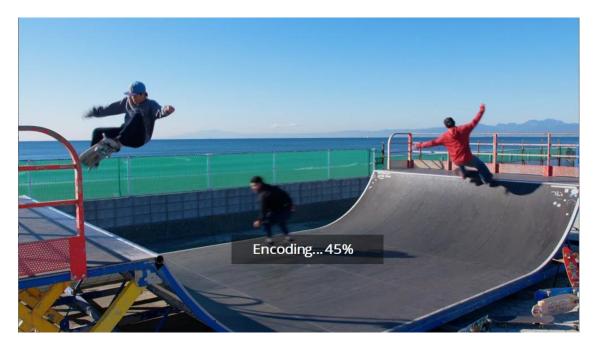

①	Live view delay time	Sets the delay time for live video display in seconds.
②	Replay time	Sets the recording time in seconds.
③	Auto Replay	When the data for the recording time is accumulated, set whether to automatically switch to the replay mode and set the operation after playback. Disable: Do nothing

		Enable - Stop at last frame after replay: 　　Pause at the last frame after playback. Enable - Return to live view after replay: 　　Automatically returns to "recording and live video mode" after 　　playback.
④	Replay Function behavior	Select the action when entering the playback mode. Stop on last frame captured： 　　Stop at the last frame. Stop on first frame captured　: 　　Stop at the first frame. Play continuous until stop is pressed： 　　Playback start automatically.
⑤	Forward/Reverse function behavior	Set how many frames to advance with the +Shift key when sending frames (Left and right buttons). Only the left and right buttons go one frame at a time.
⑥	File save location	NAS/USB: USB storage eject button.
⑦	NAS	Set up the NAS.　PATH, USER, PASSWORD Example of setting: 　If the NAS IP address is 192.168.1.100 and the shared folder name is 　video, setting as follows. 　PATH　192.168.1.100/video Network setting button: 　The network settings dialog opens and you can change the network 　settings.

①	DHCP	Check to get the IPv4 address from DHCP.
②	address	Displays the current IPv4 address and subnet mask in CIDR format.　※1

		③	gateway	Display the current IPv4 gateway.
		④	Manual IPv4	Check this when manually setting the IPv4 address.
		⑤	address	Set the IPv4 address and subnet mask in CIDR format. ※1
		⑥	gateway	Set the IPv4 gateway.
		⑦	Cancel button	Exit network settings without reflecting any configuration changes.
		⑧	Apply button	Exit the network settings to reflect the configuration changes.

※1 CIDR format:

The subnet mask is expressed as a binary number, and the subnet mask is expressed consecutively from the topmost to the number of bits is expressed in terms of how many bits are 1, as in "/number of bits".

255.255.0.0 -> /16
255.255.255.0 -> /24
255.255.255.128 -> /25

Connection test button:
Test connectivity in NAS settings.

⑧	Encode Format	Specify the format when saving the encoded file. ProRes:　Save in ProRes422 MOV format. H.264:　　Save in H.264 MP4 format.
⑨	Encode Bitrate	Specify the bit rate for writing the encoded file. (only H.264 is valid).
⑩	Encode File range	Specify the range when writing the encoded file. Playback frames: Entire recording file. In-Out point: Between In/Out Points.
⑪	System	Reboot / Shutdown button. Press the button to reboot or shut down the system.
⑫	Player start button	Save and start: 　Start the player to reflect the change in the settings. Start without saving: 　Start the player without reflecting the change in the settings.

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■ **II-4-2. Operation screen**

1. After setting on the settings screen, press the Start button to display the playback screen according to the setting.

Example: This is the screen when encoding and saveing during playback.

(Playback screen is always displayed on the full monitor)

2. After the playback screen is displayed, use the keyboard and mouse to operate.

List of available key and mouse operations

Enter	Switch between recording and live video mode and playback mode.
D	When pressed in the record and live video mode, the delay time setting is enabled / disabled (use for adjusting camera, etc.).
Space	Switch between Play and Stop during playback mode.
E	Start encoding save while in playback mode.

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UpArrow	Playback speed up during Play in playback mode.
DownArrow	Playback speed down during play in playback mode.
RightArrow	Frame feed during stop in playback mode.
LeftArrow	Frame back during stop in playback mode.
Shift	By Pressing RightArrow or LeftArrow at the same time during stop in playback mode will forward or reverse the set number of frames in the Forward / Reverse function behavior.
A	Return to the first frame recording data during stop in playback mode.
S	Return to the last frame recording data during stop in playback mode.
I	Specify the In point during stop in playback mode. (Leading position during playback mode playback and encoding save.)
O	Specify the Out point during stop in playback mode. (End position during playback mode playback and encoding save.)
X	Resets in out points during stop in playback mode.
Mouse WheelUp	Frame feed during stop in playback mode.
Mouse WheelDown	Frame back during stop in playback mode.

3. You can also operate with the dedicated small keyboard.

How the button works

①	ENC	Start encording.
②	REC/PLAY	Switch between recording and playback.
③	IN、OUT	Specify the IN point and the OUT point.
④	1/4▶▶、 1/8▶▶、 1/16▶	Play slow-motion replay (1/4, 1/8, 1/16).
⑤	｜◀◀、 ▶▶｜	Stop at the first frame or last frame.
⑥	❚❚/▶	Switch between pause and playback.
⑦	◀❚❚、 ❚❚▶	Frame forward or backward.

II-5. Dimensions

※ At the time of installation, in addition to the main body size,
please make space 50mm on the top surface and more than 50mm on the back.

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II-6.　General Specifications

■**Hardware Specification**

Size	
Dimensions(mm)	200(W) × 250(D) × 78(H) mm　※protrusions(s) not included.
Weight	1.91kg

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

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

Video audio		
Video output	Format	HDMI 2,0
Audio output	Terminal	Superimposed on HDMI signal Stereo mini jack

General-purpose input / output		
USB	Format	Conforming to USB3.0 standards
	Terminal	USB Type A ×2 （Front）
	Format	Conforming to USB 2.0 standards
	Terminal	USB Type A ×2（Front）　×4（Rear）