

**MULTI-CAMERA  
CONTROL UNIT  
MCU-200S**

**Quick Start Guide**

## Warnings and Precautions

1. Read all of these warnings and save them for later reference.
2. Follow all warnings and instructions marked on this unit.
3. Unplug this unit from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this unit in or near water.
5. Do not place this unit on an unstable cart, stand, or table. The unit may fall, causing serious damage.
6. Slots and openings on the cabinet top, back, and bottom are provided for ventilation. To ensure safe and reliable operation of this unit, and to protect it from overheating, do not block or cover these openings. Do not place this unit on a bed, sofa, rug, or similar surface, as the ventilation openings on the bottom of the cabinet will be blocked. This unit should never be placed near or over a heat register or radiator. This unit should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should only be operated from the type of power source indicated on the marking label of the AC adapter. If you are not sure of the type of power available, consult your Datavideo dealer or your local power company.
8. Do not allow anything to rest on the power cord. Do not locate this unit where the power cord will be walked on, rolled over, or otherwise stressed.
9. If an extension cord must be used with this unit, make sure that the total of the ampere ratings on the products plugged into the extension cord do not exceed the extension cord rating.
10. Make sure that the total amperes of all the units that are plugged into a single wall outlet do not exceed 15 amperes.
11. Never push objects of any kind into this unit through the cabinet ventilation slots, as they may touch dangerous voltage points or short out parts that could result in risk of fire or electric shock. Never spill liquid of any kind onto or into this unit.
12. Except as specifically explained elsewhere in this manual, do not attempt to service this product yourself. Opening or removing covers that are marked "Do Not Remove" may expose you to dangerous voltage points or other risks, and will void your warranty. Refer all service issues to qualified service personnel.
13. Unplug this product from the wall outlet and refer to qualified service personnel under the following conditions:
  - a. When the power cord is damaged or frayed;
  - b. When liquid has spilled into the unit;
  - c. When the product has been exposed to rain or water;
  - d. When the product does not operate normally under normal operating conditions. Adjust only those controls that are covered by the operating instructions in this manual; improper adjustment of other controls may result in damage to the unit and may often require extensive work by a qualified technician to restore the unit to normal operation;
  - e. When the product has been dropped or the cabinet has been damaged;
  - f. When the product exhibits a distinct change in performance, indicating a need for service.

## Warranty

### Standard Warranty

- Datavideo equipment is guaranteed against any manufacturing defects for one year from the date of purchase.
- The original purchase invoice or other documentary evidence should be supplied at the time of any request for repair under warranty.
- Damage caused by accident, misuse, unauthorized repairs, sand, grit or water is not covered by this warranty.
- All mail or transportation costs including insurance are at the expense of the owner.
- All other claims of any nature are not covered.
- Cables & batteries are not covered under warranty.
- Warranty only valid within the country or region of purchase.
- Your statutory rights are not affected.



### Two Year Warranty

- All Datavideo products purchased after 01-Oct.-2008 qualify for a free one year extension to the standard Warranty, providing the product is registered with Datavideo within 30 days of purchase. For information on how to register please visit [www.datavideo.com](http://www.datavideo.com) or contact your local Datavideo office or authorized Distributors.
- Certain parts with limited lifetime expectancy such as LCD Panels, DVD Drives, Hard Drives are only covered for the first 10,000 hours, or 1 year (whichever comes first).

Any second year warranty claims must be made to your local Datavideo office or one of its authorized Distributors before the extended warranty expires.

## Disposal



### For EU Customers only - WEEE Marking.

This symbol on the product indicates that it should not be treated as household waste. It must be handed over to an applicable take-back scheme for the recycling of Waste Electrical and Electronic Equipment. For more detailed information about the recycling of this product, please contact your local Datavideo office or your local recycling centre.

## Packing List

The following items should be included in the box. If any items are missing please contact your supplier.

Item No.	Description	Quantity
1	MCU-200S Main Unit	1
2	AD-1S (Adaptor Box) for Sony	4
3	Accessory kit *	1
4	MCU-200S Quick Start Guide	1

*\*The accessory kit also contains a packing list.*

## Introduction

The MCU-200S Remote Control Unit is designed for remote control of Sony studio or portable-type color video cameras and camcorders. The unit can be directly connected up to maximum 4 cameras or camcorders via cat.5 Ethernet cable.

The unit can control a camera from a distance of up to 300 m. Easy operation, cost effective and major camera functions to be this wonderful solution.

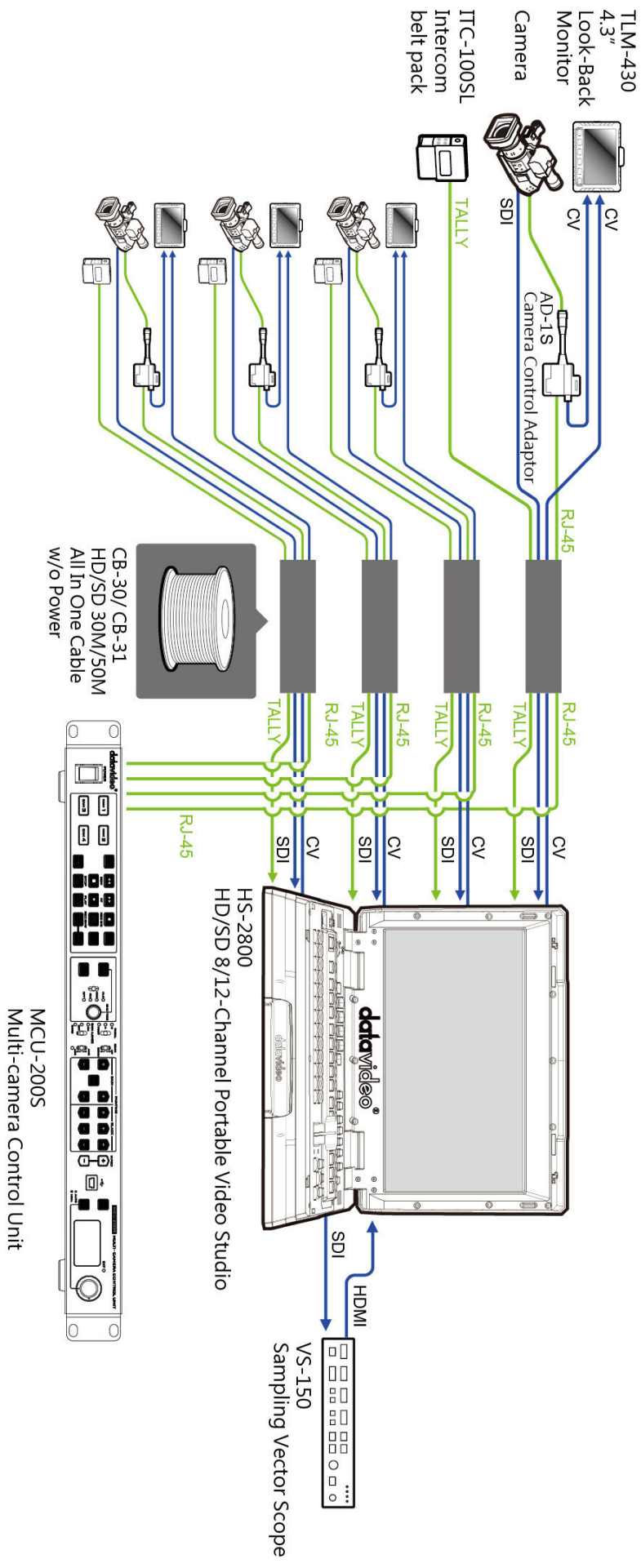
### Features

- Four RJ-45 connections allow remote set up of up-to four SONY cameras.
- RJ-45 cabling allows unit to be placed up to 300m away from the camera(s).
- Control of Record and Playback functions.
- Control of Camera User memory functions.
- Control of Camera OSD Menu Navigation.
- Control of Shutter adjustment.
- Control of Iris adjustment.
- Control of AWB & ABB functions.
- Control of White Balance A, B and Preset functions.
- Control of Camera Gain adjustment.

### Compatible Camera Models

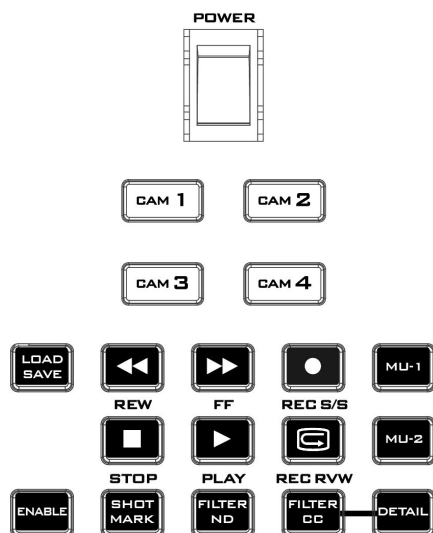
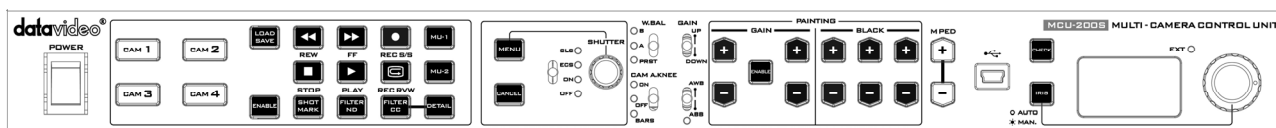
PMW EX3, PMW 300, PMW 350K, PMW F5, PDW-510, HDW-F900R and Other models (TBD).

## Example MCU-200S Set Up



## MCU-200S Keyboard Guide

### Front Side



## Power switch

Use this switch to power the MCU-200S On or Off.

## Camera selection

Select the button for the camera that you wish to control.

## MCU-200S Memory stores

Using the LOAD SAVE button it is possible to transfer the current setting from one camera to another.

MU-1, MU-2 can be used to store settings within the MCU-200S.

PS: LOAD SAVE, MU-1, MU-2, those three functions will be updated and had modifications.

## Recorder / Playback functions

ENABLE when selected activates the recorder / playback functions of the chosen camera. This includes rewind [REW], fast forward [FF], record start/stop [REC S/S], stop, play and record check [REC RVW].

REC RVW makes it possible to check what has just been recorded (2 seconds REC review) by pressing this button during REC pause.

With a DVCPRO HD camera recorder, the tape is cued to provide continuity from one shot to the next when this button is pressed while playback is paused.

PS: REW, FF, those two functions will be updated and had modifications.

## **SHORT MARK**

Press this button during recording or playback to record shot mark 1.

## **ND (ND filter) select switch and indicator**

Use this switch to select the ND filter. Press the switch upward to change the ND filter in order and downward to change the ND filter in the reverse order. The ND indicator displays the currently selected ND filter. This switch is disabled for a camera not equipped with an ND filter servo system or a camera without ND filters.

## **CC (color temperature conversion filter) select switch and indicator**

Use this switch to select the CC filter. Press the switch upward to change the CC filter in order and downward to change the CC filter in the reverse order. The CC indicator displays the currently selected CC filter. This switch is disabled for a camera not equipped with a CC filter servo system or a camera without CC filters.

PS: FILTER ND, FILTER CC, those two functions will be updated and had modifications.

## **DETAIL**

In Remote Control mode, press and light this button to enable the Detail function.



## Menu

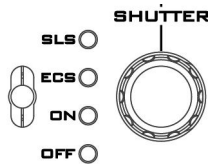
When this function is enabled, the button is back lit orange and the OSD menu is shown on the LCD panel/view finder of the camera. This OSD menu may also be shown on the AD-1S's composite output (if supported).

Some camera models also allow this OSD menu to be displayed on the SDI or HDMI output of the chosen camera. Refer to your cameras manual for more details on its OSD Menu outputs and change settings where necessary.



## CANCEL

In Camera Menu mode, press this button to cancel the set value.



## SHUTTER

In Remote Control mode, Moving this switch to enable the Shutter function. The current shutter speed is displayed on the adjustment value indicator and the shutter speed can be adjusted with the adjustment knob (rotary encoder). In Camera Menu mode, moving the switch to enable the character display function on the camera.

## ON /OFF

To turn on/ off the shutter operation.

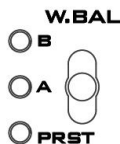
## ECS (Extended Clear Scan)

In Remote Control mode, moving the switch to enable the ECS function.

## SLS (Slow Shutter)

In Remote Control mode, moving the switch to enable the SLS function.

PS: SLS function will be updated and had modifications.



## W.BAL switch

This switch is used to recall the preset or stored values of white balance in the camera.

A or B: This will apply the value stored in the white balance A or B memory in the camera recorder. When the AWB / ABB switch is set to the AWB position, the white balance is automatically adjusted and the value adjusted is stored in the selected memory A or B.

## PRST

This will apply the preset value of the white balance stored in the camera recorder.





### CAM A.KNEE switch

To select the video signals to be output from the camera.

### BARS

Camera generated colour bar signals are output.

### CAM. AUTO KNEE OFF

The images shot by camera are output. The AUTO KNEE circuit does not work. MANUAL KNEE is set as the camera recorder's initial setting.

### CAM. AUTO KNEE ON

The images shot by the camera are output. The AUTO KNEE circuit works.

**NOTE:** AUTO KNEE circuit will not be effective if DRS (Dynamic Range Stretch) function is enabled. It is also possible allocate the MANUAL KNEE and DRS functions via the menu settings on the camera.



### GAIN switch

Allows selection of the video amplifier's gain depending on the lighting conditions that are present in the camera's location.

Moving the switch upwards increases the gain in dB steps.  
Moving the switch downwards decreases the gain in dB steps.



### AWB / ABB switch with LED

This switch is used to trigger Auto White Balance (AWB) or Auto Black Balance (ABB) adjustment.

**AWB:** White balance is adjusted automatically. When the W.BAL switch is set to A or B at this time, the value to which the balance was adjusted will be stored in memory A or memory B.

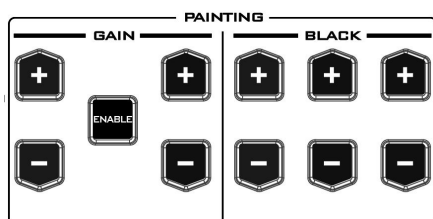
**ABB:** Black balance is adjusted automatically. This value will be stored in a dedicated ABB memory.

**LED ON:** Auto white balance / auto black balance in progress.

**LED OFF:** Auto white balance / auto black balance completed.

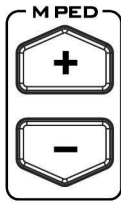
**LED stops blinking and goes off:** Auto white balance / auto black balance error.

**PS:** AWB / ABB, those two functions will be updated and had modifications.



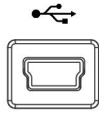
### Enable & Painting Adjustment buttons

Press the ENABLE button in the **Painting area** of the MCU-200S before choosing to adjust either the level of the Red and Blue Gain or the RGB Pedestal values.



## Master Pedestal Control

These buttons are used to adjust the level of the Master Pedestal.



## Mini USB 2.0 port

This port is used for firmware updates or to save/transfer MCU-200S settings to computer. See page 14 for firmware update details.



## CHECK / Lock

GAIN value, SHUTTER speed, FILTER position, IRIS, Master Pedestal, R/B Gain and RGB pedestal values are shown on the display below in this order each time the CHECK button is pressed.

If the CHECK button is pressed and held down for over two seconds the MCU-200S unit will switch in to LOCK mode.

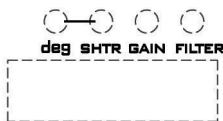
PS: CHECK function to be modifications.



## IRIS button

To enable or disable Auto Iris.

The button is back lit orange when Auto Iris is enabled.



## LED display

The IRIS value, Shutter degree, speed, Gain and Filter positions can be displayed here by using the CHECK button.

\*The M. PED, PAINTING GAIN R/B and BLACK R/G/B values can also be displayed sequentially here. See CHECK button also.

When in LOCK mode this display will show Lock.

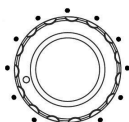
PS: Those LED display functions will be updated and had modifications.



## EXT LED

This LED will be ON when a lens extender is detected on the chosen camera.

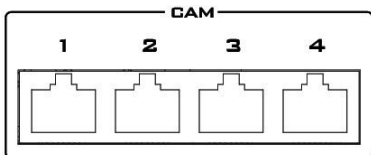
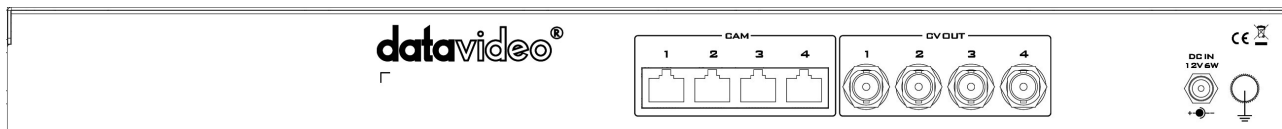
PS: EXT LED function will be updated and had modifications.



## IRIS control

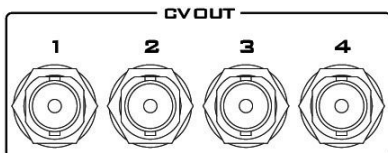
Used to adjust the Iris value. See IRIS and CHECK buttons also.

## Rear Side



### Remote Control

The [RJ-45 Interface for Remote Control](#) connects.



### Composite Connect

The Connect can be used for confidence and composition monitoring and in some cases to view the camera's own LCD/OSD menus.



### 12V DC Input

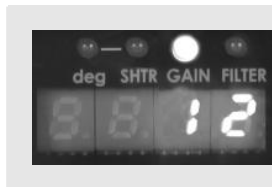
Connects the supplied 12V PSU to this socket. The connection can be secured by screwing the outer fastening ring of the DC In plug to the socket.



### Grounding Terminal

When connecting this unit to any other component, make sure that it is properly grounded by connecting this terminal to an appropriate point. When connecting, use the socket and be sure to use wire with a cross-sectional area of at least 1.0 mm<sup>2</sup>

## Seven segment display and LEDs



<b>SHTR</b>	When LED ON displays SHUTTER (speed) value.
<b>GAIN</b>	When LED ON displays GAIN value (in dB).
<b>FILTER</b>	When LED ON displays ND FILTER mode.

## Operation Modes – LOCK and NORMAL

There are two modes of operation on the MCU-200S.

### **NORMAL:**

This is always active when the unit is first turned on. Under this mode all functions are available. Buttons not back lit indicate functions that are currently not in use. The user may activate these functions via an associated ENABLE button.

### **LOCK:**

This mode is activated by pressing and holding down the CHECK button for two seconds. When in LOCK mode all functions are unavailable except for the 4 Camera selection buttons and the CHECK function. This is to prevent unauthorized or unintended operation during a LIVE production. The seven segment LED display will also show Lock.

Iris controls can be quickly accessed in LOCK mode by pressing down on the IRIS Dial once; press the dial again to return to full lock mode. When the Iris function is accessed in this way, if the MCU-200S unit is left idle for 3 seconds or more then the unit will automatically return to full Lock mode.

The Lock mode can be deactivated by pressing and holding down the CHECK button for two seconds.

## AD-1S Camera Control Adaptor



This unit allows you to operate the functions of the camera up to 300m away with the MCU-200S unit.

The AD-1S adaptor connects to the MCU-200S via RJ-45 cabling to the chosen Sony camera. This adaptor changes the RJ-45 connection to a Sony CAM/BS cable and multi-pin connector.

**NOTE:** Camera with the MCU-200S connected, please set camera remote control function set ON; and then connect the MCU-200S and AD-1S.

**Example:** Setting the PMW-300K Camera – Please reference PMW-300K Operation Manuals.

**NOTE:** Be very careful with the Sony CAM/BS cable connector which plugs into the remote socket of the Sony camera. This connector only slides into the camera's remote socket when the notches and pins are matched up correctly. ***Do not twist or force this connection as damage to the camera or connector pins may happen.***

**NOTE:** With the AD-1S connected, the menu and other functions of the Sony camera may be limited to remote control only. To regain manual control of the menu functions on the camera first disconnect the AD-1S.

The AD-1S also features a BNC type Composite (CV) output which can be taken to an SD monitor on or near the camera. This Composite output can be used for confidence and composition monitoring and in some cases to view the camera's own LCD/OSD menus too. ***Please note this feature is camera model and firmware dependant.***

Each AD-1S adaptor has a built in Velcro strap so that the unit can be quickly mounted in a convenient location on or near the camera.

A micro USB 2.0 port is provided for transfer of firmware updates to the unit. See **page 14** for more details.

## Firmware update procedure

From time to time Datavideo may release new firmware to either add new features or to fix reported bugs in the current MCU-200S firmware. Customers can update the firmware themselves if they wish or they can contact their local dealer or reseller for assistance should they prefer this method.

This page describes the firmware update process and it should take **approximately 20 minutes total time to complete**.

Once started **the update process should not be interrupted in any way** as this could result in a non-responsive unit.

**As well as a working MCU-200S you will need:**


- The latest firmware update for the **AD-1S** units **and** the **MCU-200S**.
- USB 2.0 cable with a USB A type connector and Micro USB connector.
- A Windows Vista or 7 computers with USB 2.0 port.

**Note:** It is best to update the firmware of the **AD-1S** unit(s) at the same time as the **MCU-200S**.

### How to update the MCU-200S firmware

1. Turn off the MCU-200S power.
2. USB cable connects the MCU-200S to PC.

3. Set the five switches  on the MCU-200S to their middle position.

4. Move  switch up towards (**AWB**) and at the same time also press the **shutter select** button in. Hold both in place.
5. Turn on the MCU-200S power.
6. MCU-200S LED display will show "**L-x.x**", and the PC will find MCU-200S by USB 2.0.
7. Open "**MCU-200S\_U1**" folder on PC.
8. Delete the **bootcode.bin** file in "MCU-200S\_U1" folder.
9. Copy new **xxxxxxxxx.bin** file to the "MCU-200S\_U1" folder. Do not worry about the new file name; the MCU-200S will amend the file name automatically after reboot.
10. Reboot MCU-200S.

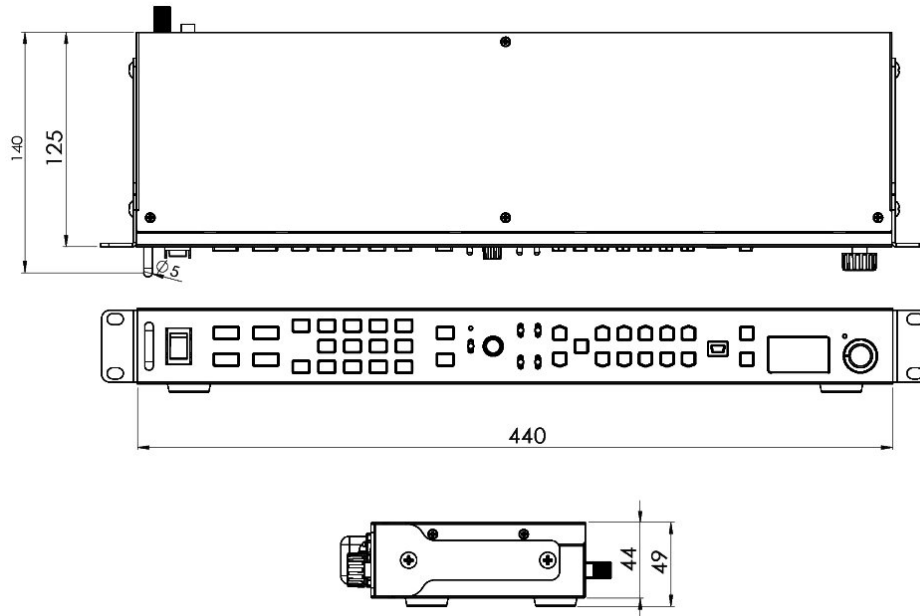
### How to update the AD-1S firmware

1. Use USB cable connect AD-1S to PC
2. Power on PC
3. Copy the XXXXXXXX\_XXXXX.bin file to AD-1S from the PC.

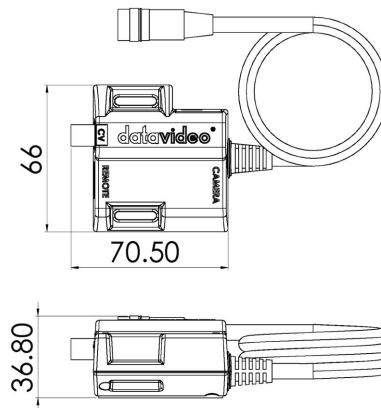
**Note:** It is best to update the firmware of the **AD-1S** unit(s) at the same time as the **MCU-200S**.

## Dimensions

### MCU-200S



### AD-1S



## Specifications

<b>Power Supply</b>	DC 12V
<b>Power Consumption</b>	6 W
<b>Dimension</b>	440mm(W) x 49mm(H) x 140mm (D)
<b>Input /Output Connection</b>	RJ45 x 4
<b>Connection Distance</b>	Up to 300m (CAT-5 or CAT6)

# Service & Support

It is our goal to make owning and using Datavideo products a satisfying experience. Our support staff is available to assist you to set up and operate your system. Contact your local office for specific support requests. Plus, please visit [www.datavideo.com](http://www.datavideo.com) to access our FAQ section.

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