

MULTI CAMERA CONTROL UNIT

MCU-100



Quick Start Guide

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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's 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.
14. Due to the general consumer usage behavior, efficient power distribution on the field, corporate environment responsibility by eliminating harmful substances such as carbon dioxide, sculpture dioxide, etc., and other unexpected risks, this product does not provide standby power option

Warranty

Standard Warranty

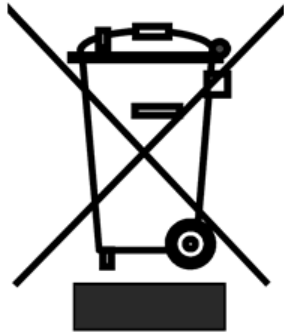
- Datavideo equipment is guaranteed against any manufacturing defects for one year from the date of purchase.
- The original purchase invoice or other documentary evidence should be supplied at the time of any request for repair under warranty.
- Damage caused by accident, misuse, unauthorized repairs, 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-tek.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 will not be treated as household waste. It must be handed over to the applicable take back scheme for the recycling of electrical and electronic equipment. For more detailed information about the recycling of this product, please contact your local Datavideo office.

Packing List

- 4 x AD-1 (Adapter Box)
- 1 x AD Switch 12V 500mA
- 1 x MCU-100 Quick Start Guide
- 1 x Ethernet CAT.6 Cable

Feature

- One MCU-100 to max connect 4 Panasonic HPX series camcorders
- Affordable cable solution for the complete setup
- Provide detail camcorder setting value by CV output via adapter box

Overview

MCU-100 is a multiple camera controller to control Panasonic camcorders (*1 Panasonic camcorder list). Useful and friendly design to connect max 4 units of Panasonic camcorders by Ethernet cables and adapter box. Provide major camcorder control functions and easily operation through MCU-100. Extension of up to 300M is possible by using Ethernet cable to control far away camcorder.

*1 Supported Panasonic camcorder list:

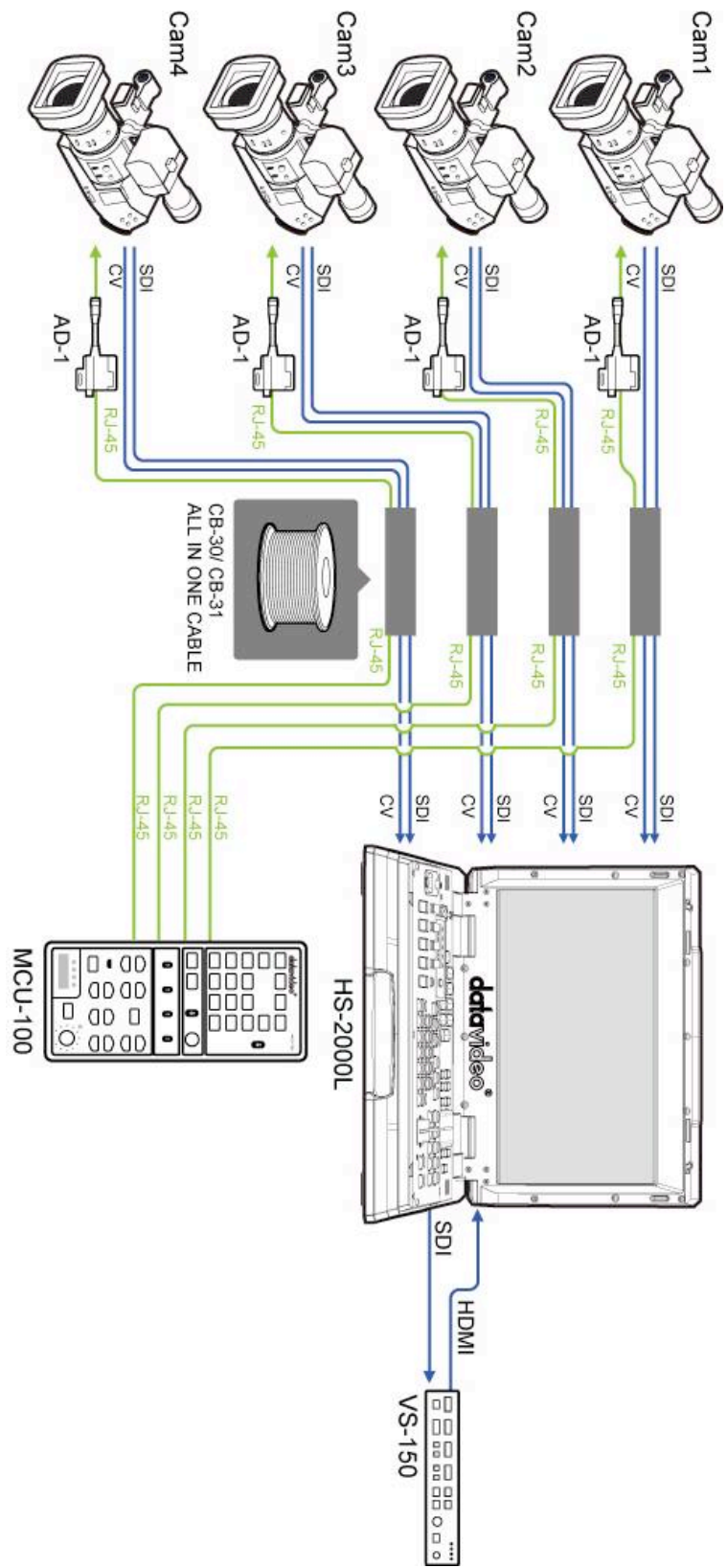
AJ- HPX3700G / AJ-HPX 3000G / AJ-HPX 2700G / AJ-HPX 2100 / AJ-HPX2000

AG-HPX500/ 502

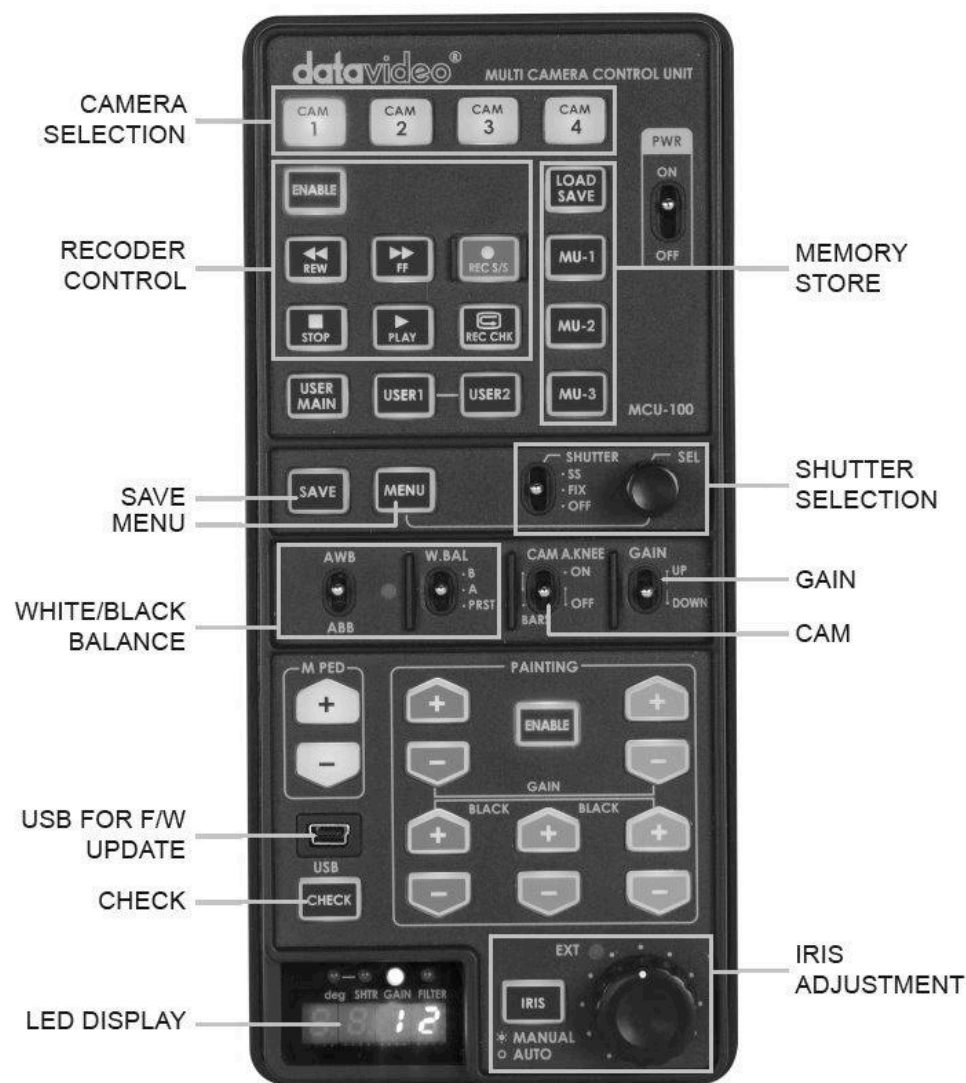
AG-HPX300/ 301 / 302 / 304 / 600

AJ-HDX900 P/E

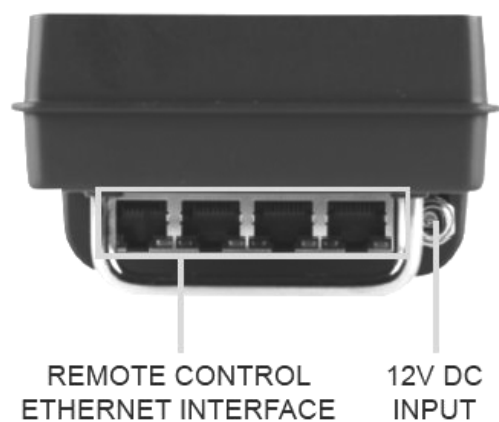
Setup Diagram



Front View



Top View



Functions

KEYS

CAM1~CAM4	This button will trigger 1st ~ 4th camcorder and start to do operation
ENABLE	To enable PLAY/REC/REW/FF/STOP
REW	Press this to rewind. The button remains lighted during rewinding.
FF	Press this to fast forward. The button remains lighted during fast forwarding.
REC S/S	When this is pressed, the camera recorder starts recording. When it is pressed again, it stops recording. This button works in exactly the same way as the camera recorder's REC button. The button remains lighted during recording.
STOP	Press this to stop the playback.
PLAY	Press this to view the playback images on the camera recorder's viewfinder or on a video monitor if one is being used. The button remains lighted during playback.
REC CHK	It's possible to check what has just been recorded (2 seconds REC review) by pressing this button during REC pause. For the DVCPRO HD camera recorder, the tape is cued to provide continuity from one shot to the next when this is pressed while pausing the playback.
LOAD / SAVE	LOAD: 1. Press one key of MU-1 ~ MU-3 to enable load memory channel. 2. Press LOAD/SAVE keys loading data to camcorder. SAVE: 1. Press one key of CAM1 ~ CAM4 to enable save memory channel. 2. Press LOAD/SAVE keys 3. Press one key of MU-1 ~ MU-3 to save camcorder setting data.
MU-1 ~ MU-3	User memory setting 1~3 (To save the camera setting into memory1~3)
USER MAIN	This performs the same function as the USER MAIN button of the camera recorder. Operation will follow the function that was assigned in the camera recorder.
USER1 / 2	This performs the same function as the USER1/2 button of the camera recorder. Operation will follow the function that was assigned in the camera recorder.
SAVE	To save MCU-100 setting data to camera memory. Note: when MCU-100 reboot, the setting status will reset to the default.
CHECK	To adjust the SHUTTER / GAIN/ FILTER / IRIS volume. Keep press this button over 1 second, the MCU-100 will let user for IRIS control only.
MENU	To enable / disable the display menu on camcorder (monitor).
M PED UP	To adjust the master pedestal.
M PED DOWN	To adjust the master pedestal.
R GAIN UP	To adjust the R Gain volume
R GAIN DOWN	To adjust the R Gain volume
ENABLE	It enables operation by the PAINTING gain and black volume.
B GAIN UP	To adjust the B Gain volume
B GAIN DOWN	To adjust the B Gain volume
BLACK R UP	To adjust the pedestal for R in R/G/B
BLACK R DN	To adjust the pedestal for R in R/G/B
BLACK G UP	To adjust the pedestal for G in R/G/B
BLACK G DN	To adjust the pedestal for G in R/G/B
BLACK B UP	To adjust the pedestal for B in R/G/B
BLACK B DN	To adjust the pedestal for B in R/G/B
IRIS	To adjust IRIS volume.

SWITCH

Power Switcher	To power on/off MCU-100
SHUTTER .SS	Turning on the synchro scan mode.
SHUTTER .FIX	Turning on the fixed shutter mode.
SHUTTER .OFF	Turning off the shutter operation.
AWB	To set white balance to be 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 the memory A or B.
ABB	For black balance to be adjusted automatically. The value to which the balance was adjusted will be stored in a dedicated memory.
W.BAL .B	This will read out the value stored in the white balance B 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 memory B.
W.BAL .A	This will read out the value stored in the white balance A 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 memory A.
W.BAL .PRST	This will read out the preset value of the white balance stored in the camera recorder.
A.KNEE ON	The image shot by the camera are output. The AUTO KNEE circuit works. It's also possible allocate the MANUAL KNEE and DRS (Dynamic Range Stretcher) functions via the menu settings on the camera.
A.KNEE OFF	The images shot by the camera are output. The AUTO KNEE circuit does not work. MANUAL KNEE is set as the camera recorder's initial setting.
GAIN UP	To adjust GAIN Value
GAIN DOWN	To adjust GAIN Value

Seven - segment LED DISPLAY

Deg	To show SHUTTER (deg) value.
SHTR	To show SHUTTER value.
GAIN	To show GAIN value.
FILTER	To show ND FILTER mode (F1~F5).

How to upgrade the MCU-100 firmware

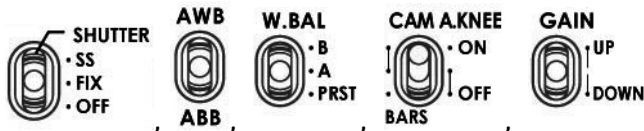
1. Used USB cable connects the MCU-100 to PC.
2. Turn off the MCU-100 power.



3. Switch **ABB** to the up (**AWB**).
4. Turn on the MCU-100 power.
5. MCU-100 (Seven - segment LED) will display “**L-0.3**”, and the PC will found MCU-100.
6. Delete the **bootcode.bin** file in “**MCU-100_U1**” file folder.
7. Copy new **bootcode.bin** file to the “**MCU-100_U1**” file folder.
8. Reboot MCU-100.

How to copy / load the camcorder status

1. Used USB cable connects the MCU-100 to PC.
2. Turn off the MCU-100 power.



3. Turn those 5 switches to the middle.



4. Press the **CAM 1** & **MU-1** two buttons at same time.
5. Turn on the MCU-100 power.
6. MCU-100 (Seven - segment LED) will display “**cU--**”, and the PC will found MCU-100.
7. Copy or load **mu_param.bin** file to the “**MCU-100_MUx**” file folder.
8. Reboot MCU-100.

*** MCU-100 & AD-1 only working on windows system.**

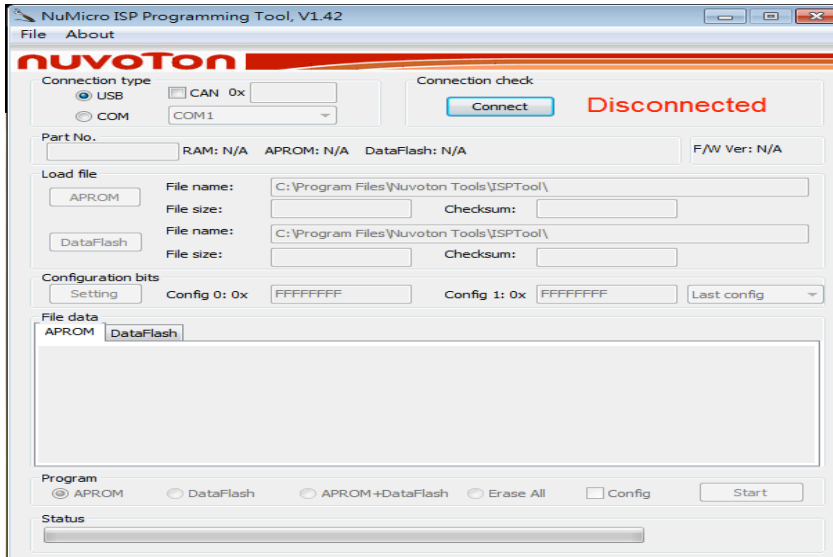
Adapter Box

The adapter box connects with MCU-100 and Panasonic camera. One side Ethernet cable; the other side is Panasonic CAM/BS cable. User can use over 300M Ethernet cable to connect MCU-100 to this adapter box and adapter box will connector Panasonic camera. The CV output can connect to monitor to see the detail camcorder setting data.

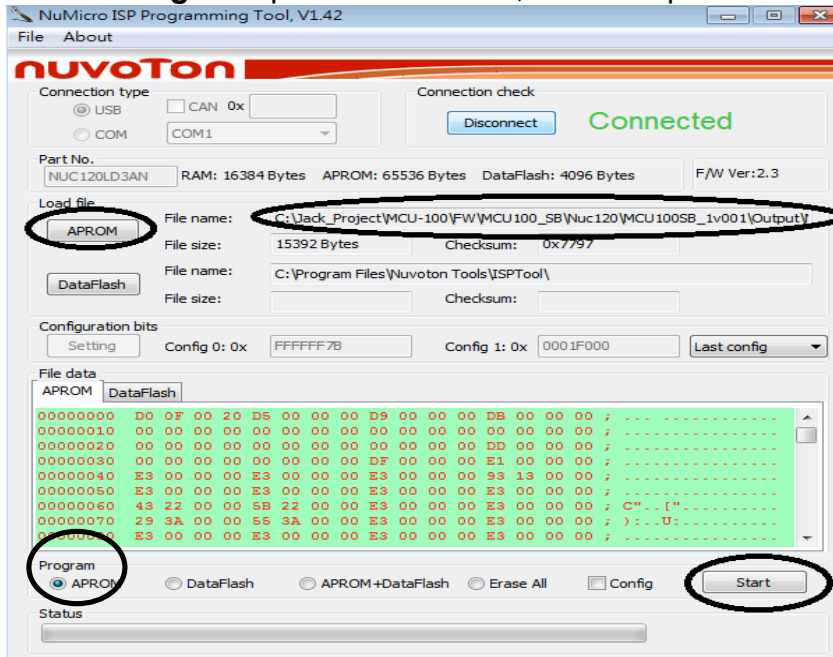


How to upgrade the AD-1 firmware

- Install the “**Setup, NuMicro ISP Programming Tool, v1.42**” to your PC.
- Using the USB cable connects the AD-1 USB port to your PC.
- Open “**NuMicro ISP Programming Tool.exe**”
- Select “**Connect**”



- Select “**APROM**” to setting the Firmware file.
- Select “**Program**” port to “**APROM**”, and then press “**Start**” to upgrade.



-
- NuMicro ISP Programming Tool, V1.42
- File About
- nuvoTon**
- Connection type
☒ USB ☐ CAN 0x
☐ COM COM1
- Connection check
 Disconnect Connected
- Part No.
 NUC120LD3AN RAM: 16384 Bytes APROM: 65536 Bytes DataFlash: 4096 Bytes F/W Ver: 2.3
- Load file
 APROM
 File name: C:\Jack_Project\MCU-100\FW\MCU100_SB\Nuc120\MCU100SB_1v001\Output\
 File size: 15392 Bytes Checksum: 0x7797
 DataFlash
 File name: C:\Program Files\Nuvoton Tools\ISPTool\
 File size: Checksum:
- Configuration bits
 Setting Config 0: 0x FFFFFFFB Config 1: 0x 0001F000 Last config
- File data
 APROM DataFlash
 00000000 D0 0F 00 20 D5 00 00 00 D9 00 00 00 00 00 00 00 ;
 00000010 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ;
 00000020 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ;
 00000030 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ;
 00000040 E3 00 00 00 E3 00 00 00 E3 00 00 00 93 13 00 00 ;
 00000050 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000060 43 22 00 00 5B 22 00 00 E3 00 00 00 E3 00 00 00 ; C"..."
 00000070 29 3A 00 00 55 3A 00 00 E3 00 00 00 E3 00 00 00 ;)...U...
 00000080 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000090 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 000000A0 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 000000B0 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 000000C0 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 000000D0 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 000000E0 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 000000F0 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000100 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000110 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000120 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000130 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000140 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000150 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
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 00000170 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000180 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000190 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 000001A0 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 000001B0 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 000001C0 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 000001D0 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 000001E0 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 000001F0 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000200 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000210 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000220 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000230 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000240 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000250 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000260 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000270 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000280 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000290 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 000002A0 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 000002B0 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 000002C0 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 000002D0 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 000002E0 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 000002F0 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000300 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000310 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000320 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
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 00000370 E3 00 00 00 E3 00 00 00 E3 00 00 00 E3 00 00 00 ;
 00000380 E3 00 00 00 E3 00 00 00 E3 00 00

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Specifications

Power Supply	DC 12V
Power Consumption	3.6 W
Weight	350 g
Dimension	95mm(W) x 208mm(H) x 54mm (D)
Input /Output Connection	RJ45 x 4
Connection Distance	Up to 300m (CAT-5 or CAT6)
Accessories	RJ45 to Panasonic control interface cable adapter AD-1 x4, 12V DC power adapter

Service & Support

It is our goal to make your products ownership a satisfying experience. Our supporting staff is available to assist you in setting up and operating your system. Please refer to our web site www.datavideo-tek.com for answers to common questions, support requests or contact your local office below.

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