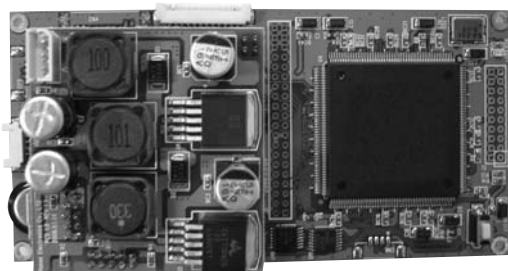


COLOR VIDEO MEMORY

HMU-840N/P User's Manual



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This specifications will be able to be changed for products quality and performance improvement without notice in advance.
Do not disassemble this product for unusual applications.

SAFETY RULES

Please read the "Safety Rules" carefully before using this product. Following of the safety rules prevents users from any damage related with the misuse of this product.

It is very important that users follow these safety rules. We state "Caution" and "Warning" to clarify any potential damage associated with misuse of the product.



May cause bodily harm or even death if users ignore warnings in the safety rules.



May cause bodily harm or even death if users ignore cautions in the safety rules.



"Do not"



"Follow directions carefully"



WARNING



Do not get product wet and operate with wet hands.

(---This may cause electric shock.)



Do not use in bathtub, Do not pull the plug with wet hands.

(---This may cause electric shock.)



Do not use unapproved power voltage.

(---This may cause fire or electric shock.)



Do not damage or bend electric cord. Do not place heavy objects on electric cord.

(---This may cause fire from electric sparks.)



Do not use damaged electric cord.

(---This may cause fire and/or electric shock.)



Do not put pins or needles into the product or electric cord of product.

(---If it happens, stop the product operation immediately. Continuous use may cause fire. Electric shock and/or malfunction.)



Do not place any containers with water or any small metal objects on top of the product or nearby it.

(---Unplug the product when water or metal comes in contact with the product. Continuous use may cause fire, electric shock and/or malfunction.)



Stop using the product immediately when you drop it or damage the outside shell.

(---Continuous use may cause fire, electric shock and/or malfunction.)



Do not attempt to open, disassemble or repair the product by any person except and authorized service dealer.

(---This may cause electric shock and/or malfunction. You should request an authorized service dealer or any inspector and repair of the product.)



CAUTION



Do not put the product in a place where sudden temperature increase .



Do not place the product where high temperature and/or the direct ray of the sun occurs.

(---This may cause fire, electric shock and/or malfunction.)



Do not put the product in an unstable place where the product may be exposed to shock and/or impact.

(---The product may fall and be damaged.)



Do not place electric cord near a heating product.

(---The cord surface may melt and cause fire and/or electric shock.)



Clean electric shock area often.

(---Dust in the area may cause fire.)



Keep electric cord properly positioned.

(---An improperly positioned electric cord may cause fire or electric shock when metal material is in contact with the power source.)



Unplug the product and remove cords when moving.

(---It may damage cords and cause fire and/or electric shock.)



Do not pull the cord line when you unplug it.

(---Damaged cords may cause fire and/or electric shock.)



Unplug the product when you don't use it for a long period of time.

(---Insulation may cause electric shock, electric leak and/or fire.)



Unplug the product when you clean or care for it.

(---Not unplugging product may cause electric shock.)



When you transport the product, remove all cords and do not give any shock.

(---This may cause a malfunction.)



Do not place volatile materials such as insecticides on the product.



The product should not come in contact with rubber or vinyl for a long period of time.

(---The surface of the product may change and paint may peel off.)



If you find any strange occurrences or malfunction in the product or any foreign substance gets into the product, please contact the authorized retailer where you purchased the product.

- Do not use the product in the following locations.
This may cause malfunction.
- In direct rays of the sun and near heating products.
- High in humidity and with bad ventilation
- Dusty or oily locations
- Low temperatures
- Unstable environment

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1. Product Operating

(1) Key

KEY	Description
SETUP	- Menu POP up on screen - Exit from Menu or Sub-Menu
Capture	- Save some Images manually
Search	- Display the List of Images captured in Flash Memory
FREEZE	- Freeze function with On/Off
ZOOM	- Zoom function with On/Off
Backup	- Save some Images into USB Memory Stick(Optional)
Enter	- In Setup Mode, Move into the sub-menu
Up	- Move to Tab position or Zoom area to upper side
Down	- Move to Tab position or Zoom area to lower side
Left	- In Setup Mode, Changing the value (Decrease direction) - Move Zoom area to left side
Right	- In Setup Mode, Changing the value (Increase direction) - Move Zoom area to right side

(2) LED

- **POWER** : Indicate the status of Power
- **Memory** : The LED blink, whenever saving some Image by detecting Motion or Manually.

(3) SETUP



- When you press the SETUP Key, you can see Setup Mode Menu.
- Choose the tab position by pressing UP/DOWN Key.

1) System Setup



. **Video Format** : NTSC / PAL

Input Signal	KEY
NTSC	Select by pressing Left / Right Key
PAL	

. Overwrite : On / Off

Overwrite	Description	KEY
Off	MCU stop capturing images when the memory is full	Select by pressing Left / Right Key
On	MCU overwrite images from the first position when the memory is full	

. Flash Format : Format / Resolution / Image Quality



Tab position		KEY
Flash Format	Yes / No	Selecting the value by pressing Left/Right Key
Resolution	360 / 720	Moving the Tab position by pressing Up/Down Key
Image Quality	16 / 32 / 64 / 128 (Kbytes)	Moving into the upper Menu by pressing Setup Key

2) Capture Setup

Tab Position			KEY	
Capture Speed	NTSC	1/2/3/5/10/15/30 (fps)	Left/ Right	Selecting the value
	PAL	1/2/3/5/10/12/25 (fps)		
Capture Count	1 ~ 30 (unit)		UP/ DOWN	Moving the Tab position
Capture Type	Off	Disable		
	Motion	Saving some Images automatically, when the Motion is occurred		
	Manual	When you press the Capture Key, saving images		



3) Time/Date Setup

Tab Position

Type	YY - MM - DD	ASIA	Left / Right	Change the value
	MM - DD - YY	USA		
	DD - MM - YY	EUROPE		
Date	Year / Month / Day		Left / Right	Change the value
Time	Hour / Minute / Second		Up / Down	Move the Tab position
Display	On	Appear	SETUP	Move the upper Menu
	Off	Disappear		



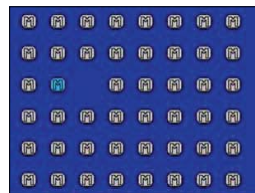
4) Event Setup

Tab position		KEY	
Motion Enable	On / Off	Left / Right	Change the value
Sensitivity	Very Low / Low / Normal / High / Very High	Up / Down	Move the Tab position
Motion Area		SETUP	Move the upper Menu
		ENTER	Move to setting up Area in motion area



color of Motion Icon(each area)

color of Motion Icon(each area)		KEY	
White	Off	Left / Right	Move toward left/right
		Up / Down	Move toward up/down
Blue	On	ENTER	On / Off
		SETUP	Move into the upper Menu



5) Backup Setup

- When Memory Stick is inserted,
- When Memory Stick is not inserted,



Tab position		KEY	
Save Field	1~60(Field)	Left / Right	Change the value
		SETUP	Move into the upper Menu

2. Memory Capacity (Flash Memory)

- **Basic Capacity** : 128M Bits
- **Memory Expansion** : Up to 2G Bits (Option)

Size perImage	16KBytes	32KBytes	64KBytes	128KBytes
Capacity				
128MBits	864 Image	432 Image	216 Image	108 Image
256MBits	1888 Images	944 Image	472 Image	236 Image
512MBits	3936 Image	1968 Image	984 Image	492 Image
1GBits	Not Support	Not Support	Not Support	1004 Image
2GBits	Not Support	Not Support	Not Support	2028 Image

3. How to Capture

Method 1) Set capture type as Manual

- In System Setup, setup Resolution and Image Quality
- Set up Capture Speed, Capture Count and Capture Type as Manual
- Exit Setup mode
- Press the Capture KEY

Method 2) Set capture type as Motion sensing

- In System Setup, set up Resolution and Image Quality
- Set up Capture Speed, Capture Count and Capture Type as Motion
- Set up Motion Enable as On type
- Select Sensitivity
- Select the area to be detected
- Exit Setup mode by Setup Key

Notice) In Motion capture mode, you have to set up Capture Type, Motion Enable and Motion Area

4. How to Replay

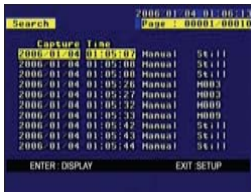
• Press the Search KEY.

Move into a list you want to replay by pressing the Up/Down KEY.

You can see a captured image pressing the ENTER KEY.

You can see the forward or backward Page with the Left/Right KEY.
(the order list of 10 captured image on one page)

• Exit Menu with Set up Key.



Manual : Image captured manually

MXXX : Images that have the number of xxx

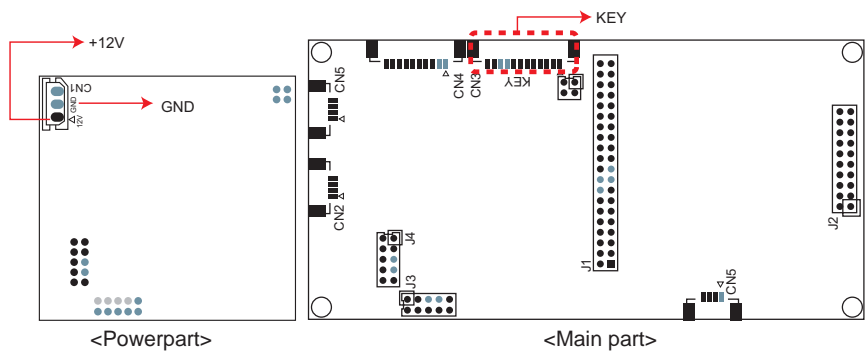
Still : Image contains just one image

Motion : Image captured when Motion is occurred

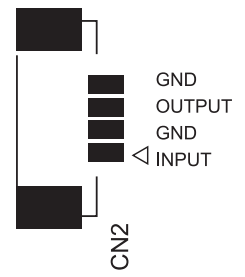
5. Specification

Internal Storage Device	Built-In Flash Memory : 128 MB(Up to 2 GB)
Extensive Storage Device & Data Backup	USB Memory Stick (Option)
Image Quality	16 / 32 / 64 / 128 kbyte
Image In/Out	Single Channel Input/Output
Resolution	720 x 240 / 360 x 240
Recording Speed	Max 30 field (NTSC 720 x 240) Max 25 field (PAL 720 x 288)
Recording	Motion / Manual
Motion Detection	Digital Image Processing
Monitoring	60-fps @720x240 / 50-fps @720x576
Zoom	Digital 2x Zoom, Zoom Area movable
Freeze	Freeze
Date Type	ASIA / US / EUROPE
Operating Voltage	DC 12V
Power consumption	DC 12V / 420mA
Operating Temperature	0 °C ~ 50 °C Humidity : under 80%
Dimension(W x H x D)	105 mm x 52 mm x 20.1mm

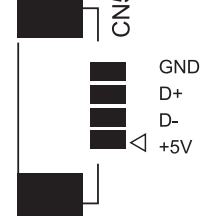
6. How to connect product



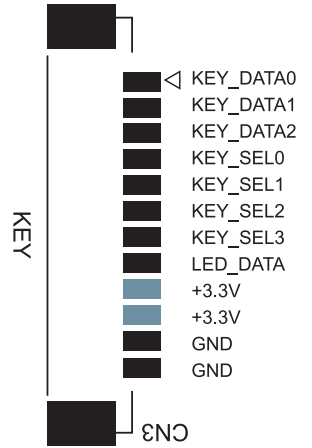
1) Camera Signal (Video Signal)



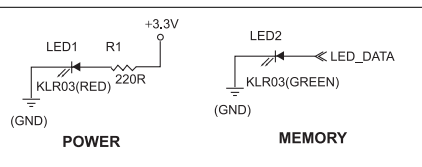
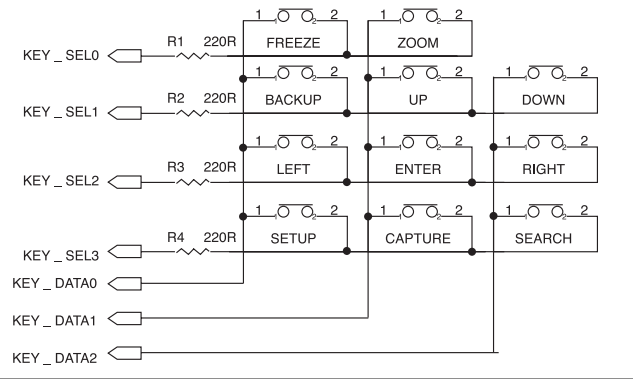
2) Usb Connector (Option)



3) Key Connector

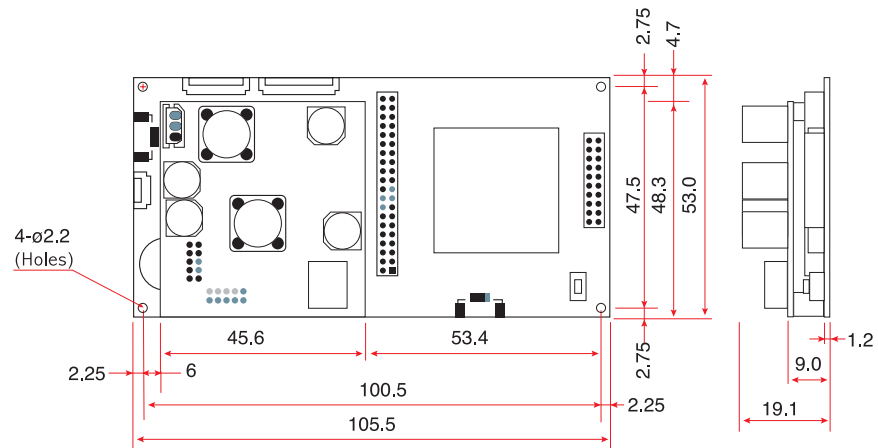


KEY BOARD



- **POWER:** Indicate the status of Power
- **MEMORY:** The LED blink, whenever saving some Image by detecting Motion or Manually

7. Dimensions



Warranty

PRODUCT	COLOR VIDEO MEMORY	MODEL	HMU-840N/P
DATE OF PURCHASE	YEAR	MONTH	DATE
TERMS OF WARRANT			
SALES AGENT			
ADDRESS OF SALES			
AGENT			

Be sure to fill in the blank when the unit is sold.

■ HOW TO REQUEST FOR AFTER SALE SERVICE

1) It is required reading manual very carefully to avoid unessential calling warrantee center for false defective and minor defects.

As minor defects by an unauthorized or improper handling of the unit are solved, many of defects can be solved by the users themselves with only a simple application after studying the instructions and cautions in the manual.

2) Request warrantee service.

Please describe problems in detail on this card when you ask warrantee service.

After presentation of this warranty card with the details, you can get the service at free of charge or with some expenses according to the contents of the written details.

3) Following cases should be paid for warrantee even within the warranty period.

- a. When defects are caused by the careless handling of the user.
- b. When improper or unauthorized repairs are done or when the inside is modified or damaged.
- c. Defects caused by natural disaster or power problem.
- d. When the warranty card is not filled in or corrected unconfirmed or lost.

4) Please be careful of keeping this warranty card as it won't be reissued.

5) Please surely present the warranty card in warrantee request.

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