

## Safety

General Standard (with DS-8500 System):

EN 60601-1: 1990+A1: 1993+A2: 1995

IEC 60601-1: 1988+A1: 1991+A2: 1995

(Medical electrical equipment - Part 1: General requirements for safety)

EN 60601-1-1: 2001

IEC 60601-1-1: 2000

(Medical electrical equipment – Part 1-1:General requirements for safety- Collateral standard: Safety requirements for medical electrical systems)

EMC Standard (with DS-8500 System):

EN 60601-1-2: 2007

IEC 60601-1-2: 2007

(Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance - Collateral standard: Electromagnetic compatibility Requirements and tests)

Class of protection against electric shock

: Class I Equipment (with DS-8500 System)

Waterproof Level : IPX0 (no protection)

Protection against Ignition of Flammable Anesthetic

: Not provided

## Power Supply

Voltage : DC 12V

(Supplied from the DSC-8500 series Main Unit.)

## Usable Life

6 years (according to self-certification)

## Accessories

The standard accessory of this equipment is as follows:

Item	Qty.
Instruction Manual (this manual)	1

## Option

The optional equipments available are as follows:

Item	Model Type	Note
Display Unit	L760T-C	Type-1, 19 inch (EIZO)
Display Unit	ET1528L	Type-2, 15 inch (Tyco)
Display Unit	ET1928L	Type-2, 19 inch (Tyco)
Relay Cable	CJ-726	Fukuda Denshi

## Electromagnetic Compatibility

The performance of this equipment under electromagnetic environment complies with EN 60601-1-2 (2007)/IEC 60601-1-2 (2007) (When using with the DS-8500 System).

For the precautions for safe operation under electromagnetic influence and EMC guidance, refer to the operation manual of the DS-8500 System.

## Instruction Manual CC-82 / CC-83 Extension Board



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This device bears the CE label in accordance with the provisions of Medical Device Directive 93/42/EEC and RoHS Directive 2011/65/EU.



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Thank you for purchasing our product.

Read the “Safety Precautions” thoroughly before use to ensure correct and safe use of the product.

Please also refer to the operation manual of the DS-8500 System Patient Monitor.

## Safety Precautions

Make sure to follow the precautions indicated below, as these are important messages related to safety. The followings are descriptions and graphic symbols of the safety and precaution messages used in this manual.

	Failure to follow this message may cause immediate threat of death or serious injury.
	Failure to follow this message may result in death or serious injury.
	Failure to follow this message may cause injury or failure to the equipment.
<b>NOTE</b>	A note is not related to product safety, but provides information about the correct use and operating procedures to prevent incorrect operation and malfunction of the equipment.

## CAUTION

Precautions for Safe Operation of Medical Electrical Equipment  
Read the following precautions thoroughly to correctly operate the equipment.

- Users should have a thorough knowledge of the operation before using this equipment.
- Pay attention to the following when installing and storing the equipment.
  - Do not install or store in an area where the equipment will be subject to splashing water.
  - Do not install or store in an area where the environmental conditions, such as atmospheric pressure, temperature, humidity, ventilation, sunlight, dust, sodium, sulfur, will adversely affect the equipment.
  - Place the equipment on a stable surface where there is no inclination, vibration, or shock (including during transportation).
- Before operating the equipment, verify the following items.
  - Check the cable connection and polarity to ensure proper operation of the equipment.
  - Ensure that all cables are firmly and safely connected.
  - Pay special attention when the equipment is used in conjunction with other equipment as it may cause erroneous judgment and danger.
- During operation of the equipment, verify the following items.
  - Always observe the equipment and patient to ensure safe operation of the equipment.
  - If any abnormality is found on the equipment or patient, take appropriate measures such as ceasing operation of the equipment in the safest way for the patient.
  - Do not allow the patient to come in contact with the equipment.

## CAUTION

- After using the equipment, verify the following items.
  - When unplugging the cables, do not apply excessive force by pulling on the cable. Pull from the connector part of the cable.
  - Clean the accessories and cables, and keep them together in one place.
  - Keep the equipment clean to ensure proper operation for the next use.
- If the equipment is damaged and in need of repair, user should not attempt service. Label the equipment “OUT OF ORDER” and contact Fukuda Denshi.
- Do not remodel the equipment.
- Maintenance Check
  - Make sure to periodically check the equipment, accessories and cables.
  - Before reusing the equipment that has been left unused for a while, make sure that the equipment works normally and safely.

## DANGER

Connect this equipment only to the specified patient monitor. Otherwise, danger such as electric shock may result to the patient and operator.

## WARNING

- If the CC-82 / CC-83 is used under an environment not fulfilling the specified condition, not only that the equipment cannot deliver its maximum performance, the equipment may be damaged and safety cannot be ensured. Do not use the equipment under condition other than specified.

## CAUTION

- Regarding the DS-8500 System Patient Monitor, which the CC-82 / CC-83 is connected to;
  - Use only the optional accessories specified for the system. Otherwise, proper function of the system cannot be executed.
  - For quality improvement, specifications are subject to change without prior notice.
  - The system is not able to monitor multiple patients at one time.
  - The installation of the system should be performed by our service representative or a person who is well acquainted with the system.
  - If it is not used for a long period, make sure to turn OFF the power of the main unit.

For additional warnings, cautions or contraindications when using the DS-8500 system with the CC-82 / CC-83, refer to the DS-8500 operation manual.

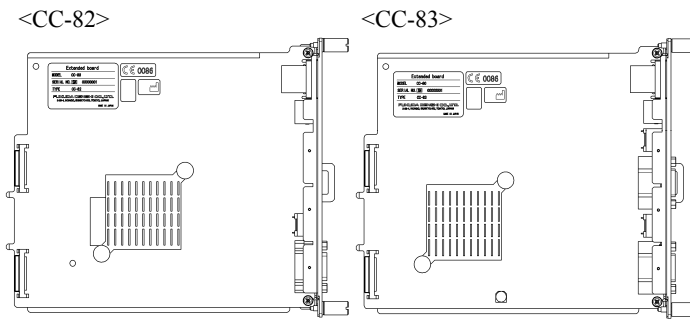
## Graphic Symbols

The following are the symbols and their meaning indicated on the equipment.

Symbol	Description
	<u>Caution; refer to accompanying documents</u> Indicates the need to refer to related accompanying documents before operation.
	<u>Year of Manufacture</u> Indicates the manufactured year.
	<u>WEEE (Waste Electrical and Electronics Equipment)</u> Indicates a separate collection for electrical and electronic equipment.

## General Description

The CC-82/83 Extension Board allows to extend the display units (CC-82 x1, CC-83 x2) and to be connected to LAN (TCP/IP). Including Video output(s), serial and LAN connectors.



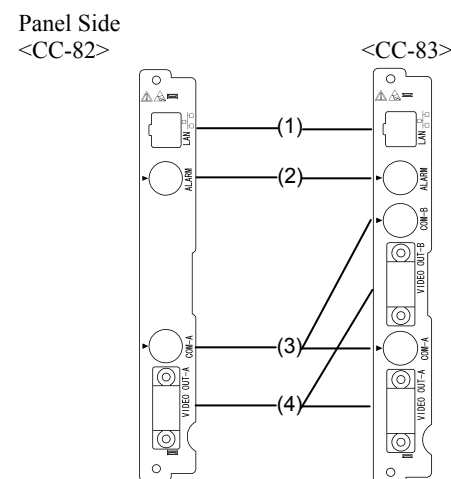
### CAUTION

The DS-8500 System is intended for measuring parameters such as ECG, respiration, BP, NIBP, SpO<sub>2</sub>, temperature, CO, respiration gas (concentration of CO<sub>2</sub>, NO<sub>2</sub>, volatile anesthetic agent, O<sub>2</sub>), and monitors patient condition by displaying/recording the measurement data on the main screen or central monitor and generates alarm as required. Direct use in MRI environment, hyperbaric oxygen therapy chamber, outdoors, home-care, or ambulance vehicle is not permitted.

## Name of Parts and Their Functions

### WARNING

Do not connect a unit or cable not authorized by Fukuda Denshi to any I/O connector. If done so by mistake, the DS-8500 System cannot deliver its maximum performance and the connected units may be damaged, resulting in a safety hazard.



- (1) LAN Connector (TCP/IP)  
Connects the specified laser printer or other specified devices.
- (2) I/O Connector (ALARM)  
Connects the specified equipment.
- (3) Serial Connector (COM A/B)  
Using the Relay Cable CJ-726, connects the Serial Connector (COM A/B) to the touch panel I/F of the specified display.
- (4) Extended Display Connector (VIDEO OUT A/B)  
Connects the specified display unit.

## Installation

### CAUTION

Precautions about the Operating Environment

- The following environmental conditions should be observed when operating the equipment.  
Ambient Temperature: 10 to 40°C  
Relative Humidity: 30 to 85% (non-condensing)  
Ambient Pressure: 700 to 1060hPa
- The power is supplied from the DSC-8500 series Main Unit. Read the operation manual of the DS-8500 System and connect properly.

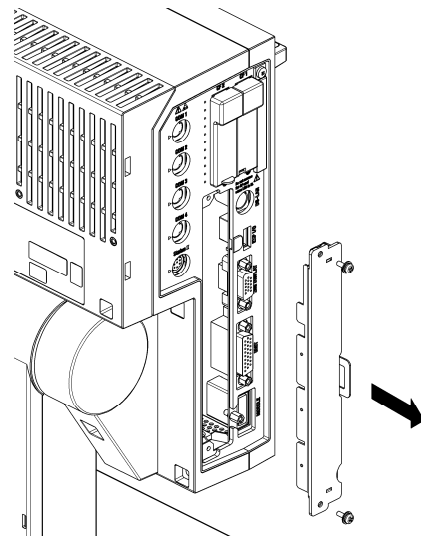
### How to Install the extended board to the DSC-8500 Series Main Unit

### CAUTION

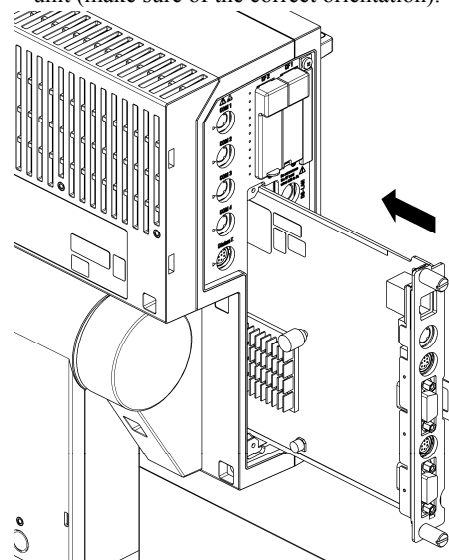
- Make sure that the power of the DSC-8500 Main Unit is turned OFF and that the power cable is removed before installation.

- Tools for the installation
  - Phillips Screwdriver (Large)

- 1 Remove the dummy panel on the left side of the DSC-8500 series main unit (2x screws).

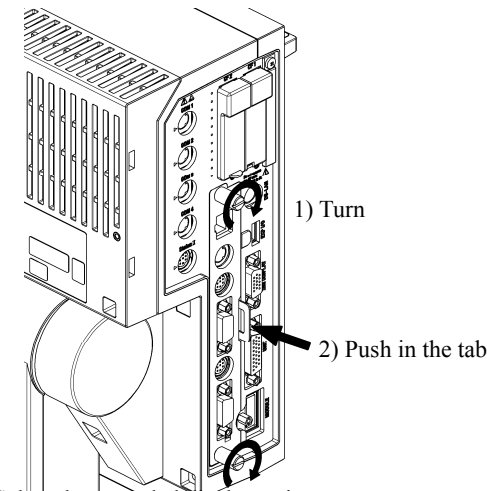


2. Insert the CC-82/CC-83 board along the guide inside the main unit (make sure of the correct orientation).



### How to Install the extended board to the DSC-8500 series Main Unit

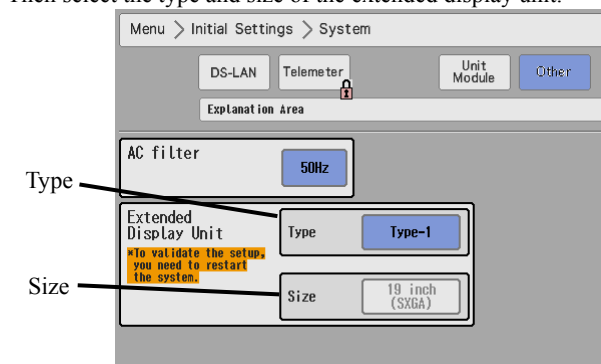
3. Push the tab of the extended board (82 or 83) in after fixing the finger screw to secure the extended board.



Press the following keys:

[Menu], [Initial Settings], [System], [Other]

Then select the type and size of the extended display unit.



Type:  
Type-1 (Eizo) / Type-2 (Tyco)

Size:  
19inch (SXGA) / 15inch (XGA, Type-2 only)

5. Adjust the touch panel on the Setup Menu of the Extended Display Unit. Select Video OUT A or Video OUT B according to the display that it is connected to.

Video OUT A

Press the following keys:

[Menu], [Maintenance], [Test Menu], [Ext.1 Test Menu], [Touch Panel Adjustment]

Video OUT B

Press the following keys:

[Menu], [Maintenance], [Test Menu], [Ext.2 Test Menu], [Touch Panel Adjustment]

### NOTE

- For proper operation, adjust the touch panel first.
- To validate the setup, the system needs to be restarted. The change (type) will become effective only after the system is restarted.
- If the type is not correctly set, touch panel operation cannot be performed from the extended display unit.

### Troubleshooting

For troubleshooting, refer to the operation manual of the DS-8500 System.

## Maintenance

### Maintenance Check

To ensure safety reliability and high performance of the CC-82 / CC-83, make sure to perform a daily check according to the Daily Check List on the operation manual of the DS-8500 System.

### WARNING

Please be aware that Fukuda Denshi is not liable of any accidents arising from lack of daily check.

## Cleaning

### Cleaning the Housing

- 1 Wipe the housing using a tightly squeezed cloth that is soaked with a neutral liquid detergent or water.
- 2 Clean using a cloth dampened with alcohol.
- 3 Wipe the housing using a smooth cloth and then dry it completely.

### CAUTION

- Clean the equipment frequently so stains can be removed easily.
- To prevent injury, it is recommended to wear gloves when cleaning the equipment.
- Do not open the housing.
- Do not allow liquids or cleaning solution to enter the equipment or connectors.
- Do not use organic solvents, thinner, toluene or benzene to avoid damaging the resin case.
- Do not polish the housing with abrasive or chemical cleaner.
- When sterilizing the entire room using a spray solution, pay close attention not to have liquids get into the equipment or connectors.
- Use only neutral detergent to clean the housing. The surface resin coating may be damaged, resulting in discoloration, scratches, and other problems.  
Do not use chemical cloth, scrub brush, abrasive, polishing powder, hot water, volatile solvent and chemicals (cleanser, thinner, benzene, benzol, and synthetic detergent for house and furniture), or sharp-edged tools.

## Specification

### Size

23(W) x 167(H) x 185(D) mm (not including the protrusion)

### Weight

0.3kg

### Environmental Conditions

Operation Temperature	: 10 to 40°C
Operation Humidity	: 30 to 85% (non-condensing)
Operation Ambient Pressure	: 700 to 1060hPa
Transport/Storage Temperature	: -10 to 60°C
Transport/Storage Humidity	: 10 to 95% (at 40°C) (non-condensing)
Storage Ambient Pressure	: 700 to 1060hPa