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FUJITSU SEMICONDUCTOR
SUPPORT SYSTEM

SS01-71013-1E

DSU-FR EMULATOR

LQFP-144P HEADER
MB2198-101

OPERATION MANUAL

FUJITSU

PREFACE

Thank you for purchasing the LQFP-144P [*1] header (model type: MB2198-101) for the DSU-FR emulator. This header is used in the adapter unit to connect a user system using the DSU-FR [*2] emulator (MB2198-01 and MB2198-10) (herein called the emulator) and MB91301 (LQFP-144P). This manual explains how to use the LQFP-144P header with the DSU-FR emulator. Before using this product, be sure to read and understand this manual.

*1: The applicable package is the FPT-144P-M12 (lead pitch: 0.4 mm, body size: 16 x 16 mm).
*2: FR is the abbreviation used for FUJITSU RISC CONTROLLER, which is a Fujitsu product.

■ Handling this product

All information about how to handle this product and the required precautions for using this product safely is given in the DSU-FR emulator hardware manual.
To use this product, follow the instructions shown in the DSU-FR Emulator MB2198-01 Hardware Manual.

⚠CAUTION

Caution 	- The method and environment for using this product must conform to the MB2198-01 specifications. - This product has parts with sharp points that are exposed. Be very careful when handling this product.

1. Checking the Delivered Product and Accessories

Before using this product, confirm that all the parts listed below were received.

- LQFP-144P header board: 1
- Header board mounting screws (*1): 4
- NQPACK144SE (*2): 1
- HQPACK144SE (*3): 1
- Operation manual (in Japanese): 1
- Operation manual (in English, this manual): 1

*1: The LQFP-144P header board is also supplied with four washers.
*2: IC socket manufactured by Tokyo Eletech Corporation and supplied with a special screwdriver and three guide pins. A socket offering higher reliability, NQPACK144SE-SL (Tokyo Eletech Corporation) (sold separately), can be used by making an IC socket mounting hole on the user system board.
*3: IC socket cover manufactured by Tokyo Eletech Corporation and supplied with four HQPACK mounting screws.

This product functions as an adapter unit when it is combined with the adapter board.

2. Handling Precautions

The adapter unit is carefully designed to provide reliable contact between the parts by using a sophisticated structure and precise dimensions. Because of this, the adapter unit is less sturdy than conventional products of this kind. Always use the adapter unit correctly in the prescribed environment. Note the following points regarding the installation and removal of the adapter board.

- During connection with the adapter unit, do not apply any stress to the NQPACK mounted in the user system.

■ Connecting to the user system

- To connect the header board to the user system, match the index mark (▲) on the NQPACK mounted on the user system with the index mark (△) on the header board, and then insert it. Next, secure the header board with four screws. (See Figure 2-1.)
- Insert each header board mounting screw in each of the four tapped holes on the header board, and then first tighten the screws in opposing corners followed by the two remaining screws.
  To tighten the screws, use the special screwdriver supplied with the NQPACK to finally tighten the four screws in sequence. Tightening the screws too tight might result in a defective contact.
- To disconnect the header board from the user system, remove all four screws, and then pull the header unit straight out of the socket.

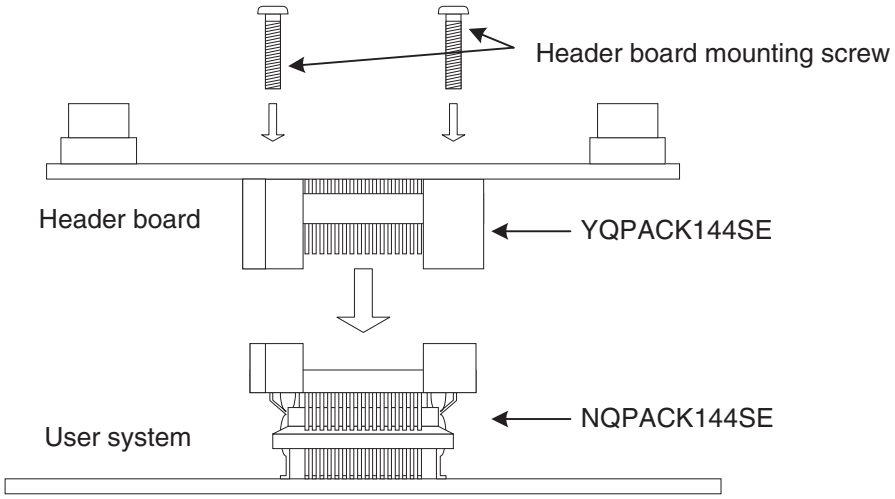


Figure 2-1 Header board connection

3. Mounting a Mass-produced MCU

- After mounting a mass-produced MCU on the user system, use the supplied IC socket cover (HQPACK144SE).
- To mount a mass-produced MCU on the user system, match the index mark (▲) on the NQPACK mounted on the user system with the index mark (●) on the mass-produced MCU. Confirm that the mass-produced MCU is correctly mounted on the NQPACK. Next, match the index mark (single part with straight marking) of the NQPACK with the index mark of the HQPACK, and insert the HQPACK. Then secure them with four screws. (See Figure 3-1.)
- Insert each HQPACK mounting screw in each of four tapped holes on the socket cover, and then first tighten the screws in opposing corners followed by the two remaining screws.
  To tighten the screws, use the special screwdriver supplied with the NQPACK to finally tighten the four screws in sequence. Tightening the screws too tight might result is a defective contact.

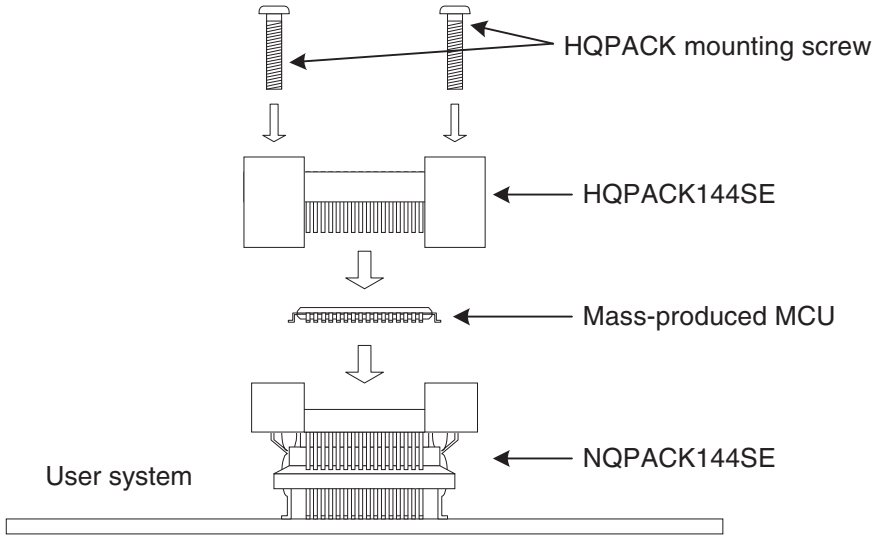


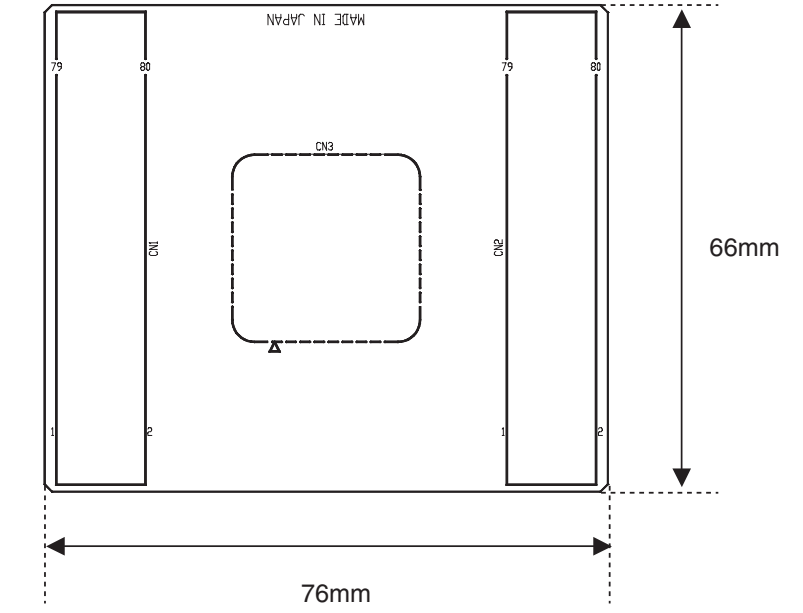
Figure 3-1 Mounting a mass-produced MCU

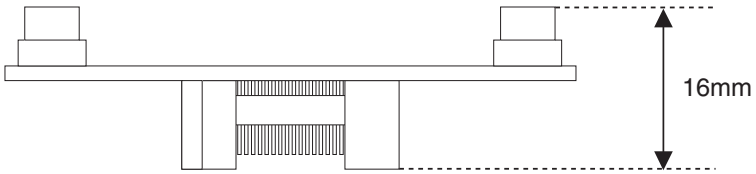
⚠CAUTION

Caution

When mounting a mass-produced MCU, correctly position pin 1, otherwise the mass-produced MCU and user system might be damaged.

4. Header Board Dimensions





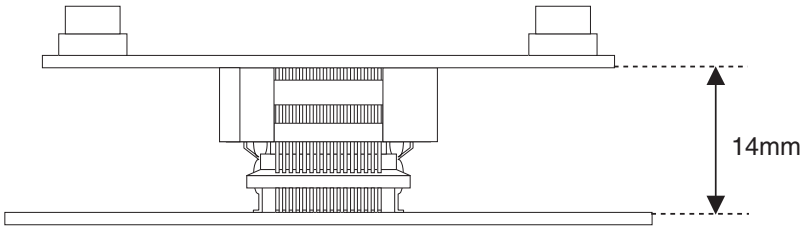


Figure 4-1 Header board dimensions

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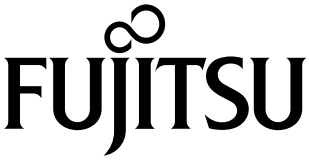
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