

F²MC-16 FAMILY EMULATOR
QFP-100P PROBE HEADER
MB2147-580
OPERATION MANUAL

PREFACE

Thank you for purchasing the QFP-100P *1 probe header (MB2147-580) for the F²MC *2 -16 family emulator.

The QFP-100P probe header is used by the probe header to connect the F²MC-16L/LX emulator (MB2147-01), referred to as “emulator”, to a user system.

This manual explains the handling of the QFP-100P probe header for the F²MC-16L/LX emulator. Read this manual carefully before using the MB2147-580.

*1 : The lead pitch of PACKAGE (FPT-100P-M06) is 0.65mm and the body size is 14mm × 20mm.

*2 : F²MC is the abbreviation of FUJITSU Flexible Microcontroller.

■ Handling and use

The handling and use of this product and notes regarding safety are included in the hardware manual of the F²MC-16L/LX emulator.

Follow the instructions in the hardware manual “F²MC-16L/LX EMULATOR MB2147-01” for the use of this product.

■ Caution of the products described in this manual

The following precautions apply to the product described in this manual.



Indicates a potentially hazardous situation which, if not avoided appropriately, may result in minor or moderate injury and/or damage to the product or the equipment to which the product is connected, to software resources such as data, or to other properties.

Cuts	The product has some sharp-pointed or edged parts inevitably exposed, such as jumper plugs. Use meticulous care in handling the product not to get injured with such pointed parts.
Damage	When connecting the header board to the user system, correctly position the index mark (▲) on the NQPACK mounted on the user system with the index mark (△) on the header board, otherwise the emulator and user system might be damaged.
Damage	When mounting a mass production MCU, correctly position pin 1, otherwise the mass production MCU and user system might be damaged.

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1. Checking the Delivered Product

Before using the QFP-100P probe header, confirm that the following components have been included in the box:

- QFP-100P header board *1 : 1
- Screws for securing header board (M2 × 10mm, 0.4mm pitch) : 4
- Washer : 4
- NQPACK100RB179-A *2 : 1
- HQPACK100RB179 *3 : 1
- Operation manual (Japanese version) : 1
- Operation manual (English version, this manual) : 1

*1 : Probe header is mounted on IC socket, YQPACK100RB (Tokyo Eletech Corporation), referred to as “YQPACK”.

*2 : User system connector manufactured by Tokyo Eletech Corporation, referred as “NQPACK”, and supplied with a special screwdriver and three guide pins. A socket offering higher reliability, NQPACK100RB179-SL-A (Tokyo Eletech Corporation, sold separately), can be used by making an IC socket mounting hole on the user system board. For more information, contact Tokyo Eletech Corporation.

*3 : IC socket cover manufactured by Tokyo Eletech Corporation, referred to as “HQPACK”, with 4 screws for securing HQPACK (M2 × 6mm, 0.4mm pitch).

This product functions as an emulator system when it is combined with the emulator.

2. Handling Precautions

The header board is precision-manufactured to improve dimensional accuracy and to ensure reliable contact. The header board is therefore sensitive to mechanical shock. To ensure correct use of the header board in the proper environment, observe the following points regarding its insertion and removal:

- Avoid placing stress on the NQPACK mounted on the user system board while connecting the header board.

3. Notes on Designing

■ Restrictions of PC board for the user system

Once the header board is connected to the user system, the heights of parts mounted in the space around the header board are restricted.

The PC board of the user system must be designed with due consideration given to this restriction (Figure 1).

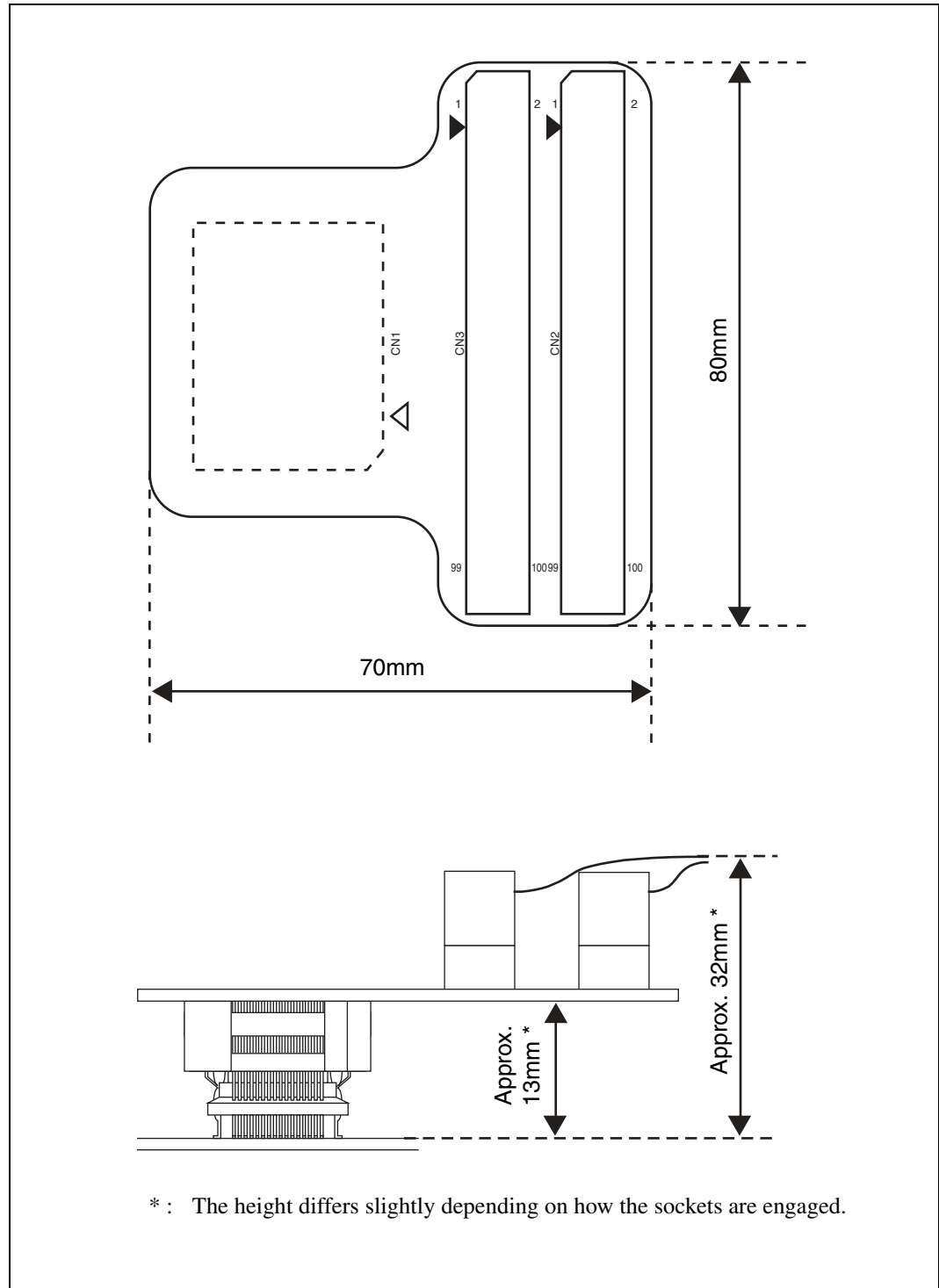


Figure 1 Header board dimensions

4. Procedure for connecting the user system

■ Connection

1. 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).

The pin of YQPACK is thin and easy to bend. Insert NQPACK after confirm that the pin of YQPACK is not bent.

2. Insert each header board mounting screw for header board in each of the four tapped holes on the header board through a washer, 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.

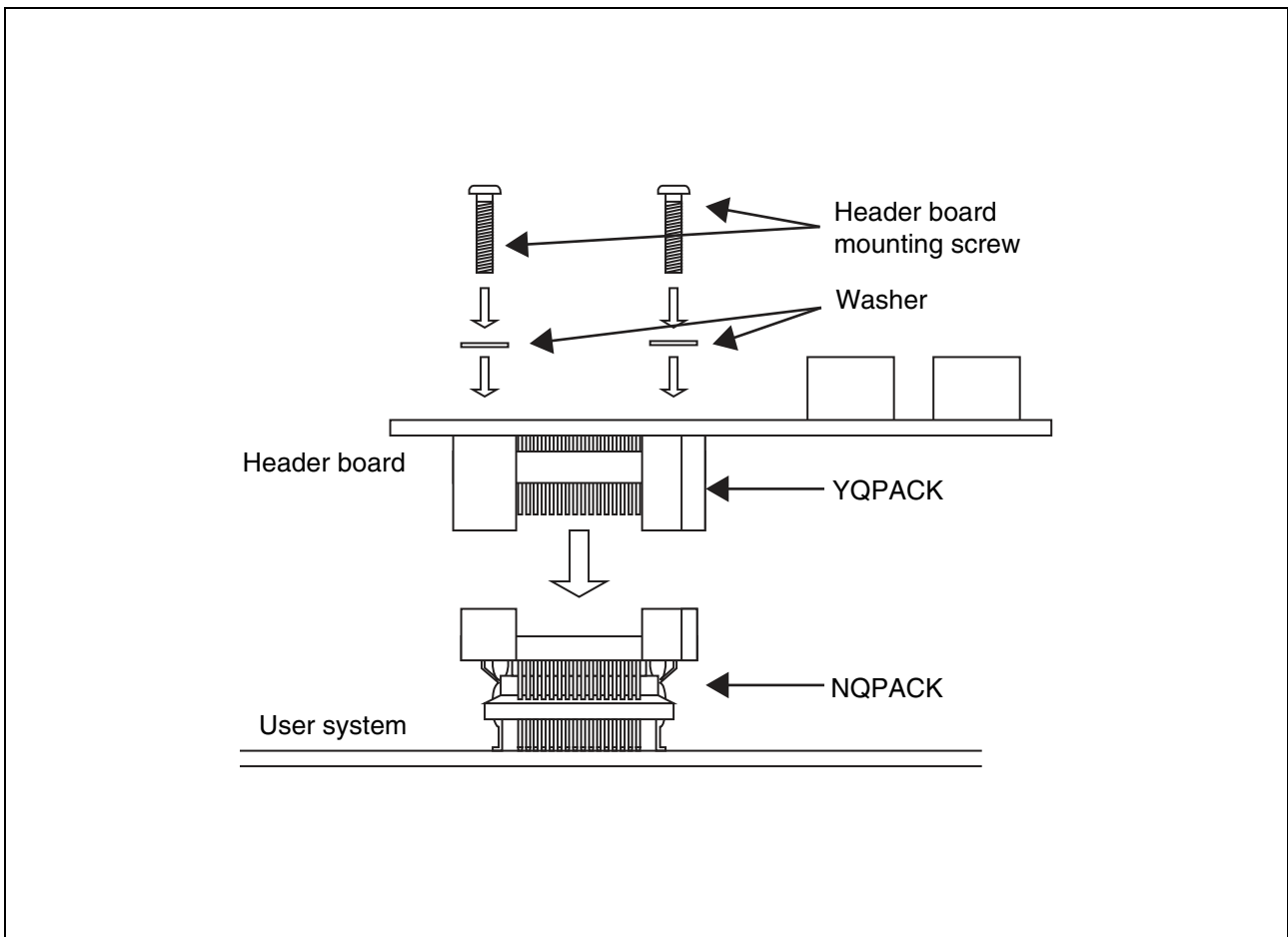


Figure 2 Header board connection

■ Disconnection

To disconnect the header board from the user system, remove all four screws, and then pull the header unit straight out of the socket.

5. Mounting Mass-production MCUs

■ Mounting

After mounting a mass production MCU on the user system, use the supplied IC socket cover.

1. To mount a mass production MCU on the user system, match the index mark (▲) on the NQPACK mounted on the user system with the index mark (●) on the mass production MCU.
2. Confirm that the mass production MCU is correctly mounted on the NQPACK. Next, insert the HQPACK into a NQPACK matching the notch of HQPACK to that of NQPACK. Then, secure with four screws.

The pin of HQPACK is thin and easy to bend. Insert NQPACK after confirm that the pin of HQPACK is not bent.

3. Insert each HQPACK screw for securing 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 in a defective contact.

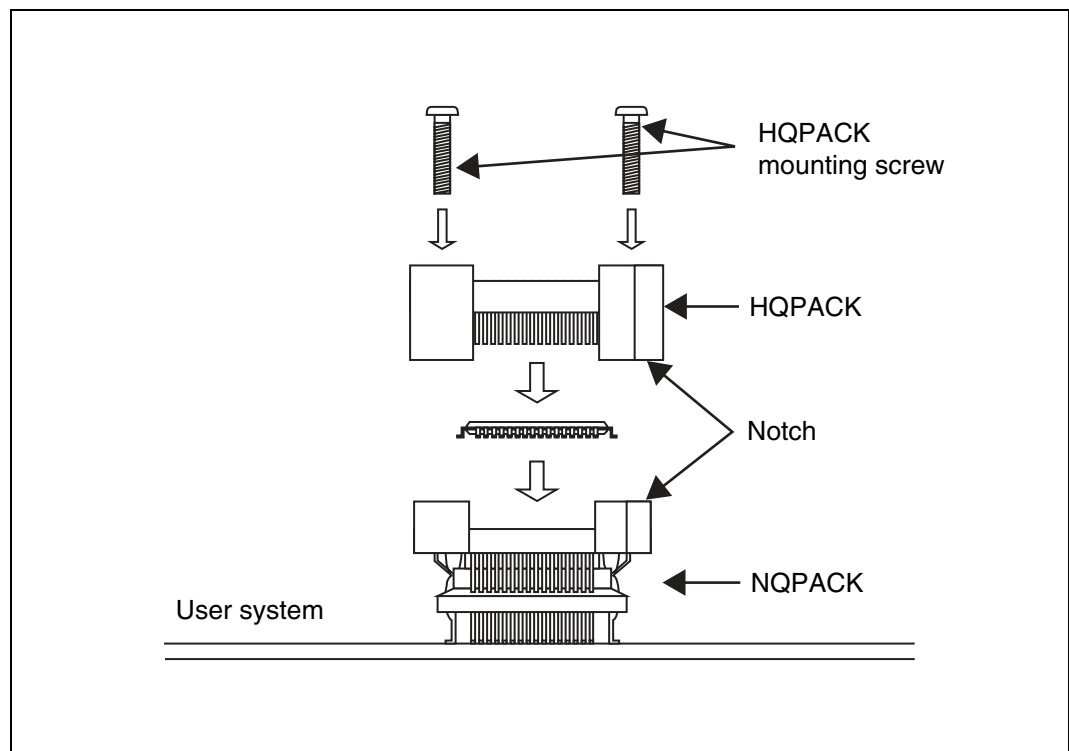


Figure 3 Mounting a mass-produced MCU

■ Disconnection

To remove the HQPACK, remove all four screws, and pull out the header vertically.

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