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Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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M30291T-64FPD

Converter Board for 64-pin 0.5-mm-pitch LQFP

User's Manual

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Keep safety first in your circuit designs!

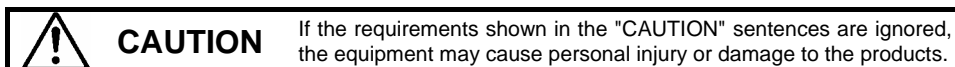
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1. Outline

The M30291T-64FPD is a converter board for connecting the emulation probe M30290T-EPB for the M16C/26A, 28, 29 Groups and the compact emulator M30290T2-CPE to a foot pattern for M16C/28, 29 Group 64-pin 0.5-mm-pitch LQFP (64P6Q-A).

2. Package Components (See Figure 1)

- (1) M30291T-64FPD (base board M30290T-PTCB and 150mm FFC cable included) 1 pc.
- (2) YQPACK064SD (made by Tokyo Eletech Corporation) 1 pc.
- (3) NQPACK064SD-ND
(made by Tokyo Eletech Corporation) 1 pc.
- (4) YQ-GUIDE (made by Tokyo Eletech Corporation) 4 pcs.
- (5) M30291T-64FPD User's Manual (This manual) 1 pc.

3. Specifications

Table 1 Specifications

Applicable package	64P6Q-A (64-pin 0.5-mm-pitch LQFP)
Insertion/removal iterations of connector	Between M30291T-64FPD and YQPACK064SD: 100 times guaranteed
	Between M30290T-EPB or M30290T2-CPE and M30291T-64FPD: 50 times guaranteed

4. Usage (See Figure 2)

The M30291T-64FPD can be used for debugging and board mounted evaluation in common by mounting the NQPACK064SD-ND on the user system.

- (1) For debugging
Mount the NQPACK064SD-ND and YQPACK064SD on the foot pattern of the user system in that order. And fix them with the YQ-GUIDE's (do not use the screws included with the YQPACK064SD).
After connecting the M30290T-EPB or M30290T2-CPE and M30291T-64FPD, connect the M30291T-64FPD to the YQPACK064SD.
- (2) For onboard evaluation
Mount an M16C/28, 29 Group MCU and HQPACK064SD (separately available) in that order on the NQPACK064SD-ND on the user system. And fix them using a screw included with the HQPACK064SD.

Before using the M30291T-64FPD, be sure to read "7. Precautions" on page 4 and the M30290T-EPB or M30290T2-CPE User's Manual.

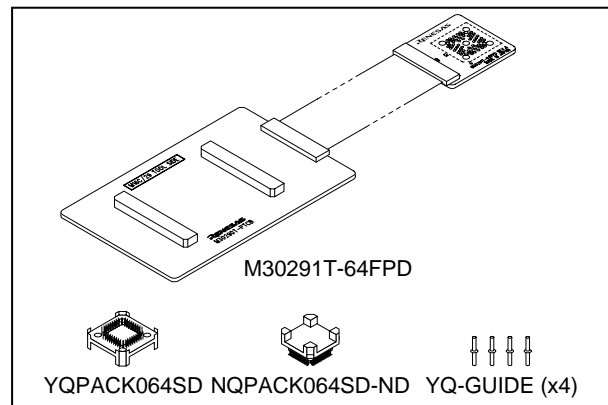


Figure 1 Package components of the M30291T-64FPD

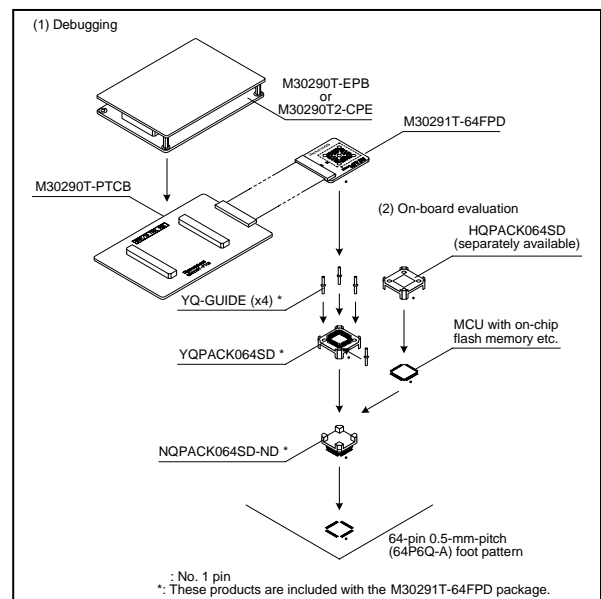


Figure 2 Usage of the M30291T-64FPD

5. Connection Procedure (See Figure 3)

The procedure for connecting the M30291T-64FPD is shown below.

- (1) Mount the NQPACK064SD-ND on the user system.
- (2) Attach the YQPACK064SD on the NQPACK064SD-ND.
- (3) Secure the four corners of the YQPACK064SD with the YQ-GUIDE's.

- Do not use the screws included with the YQPACK064SD for fixing the YQPACK064SD.
- The screwdriver included with the NQPACK064SD-ND is used for fixing the HQPACK064SD. Do not use it for fixing the YQ-GUIDE's.

- (4) Attach the M30290T-EPB or M30290T2-CPE and the M30290T-PTCB.
- (5) Attach the M30291T-64FPD to the NQPACK064SD-ND.

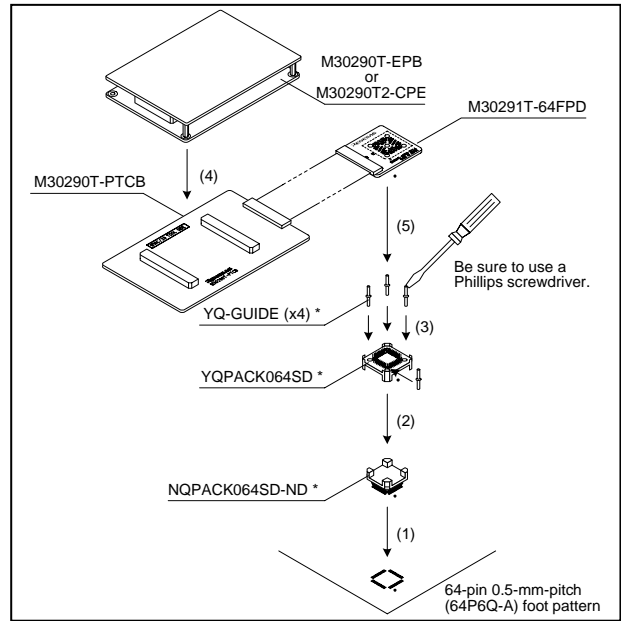


Figure 3 Connection procedure of the M30291T-64FPD

6. External Dimensions and a Sample Foot Pattern (See Figure 4)

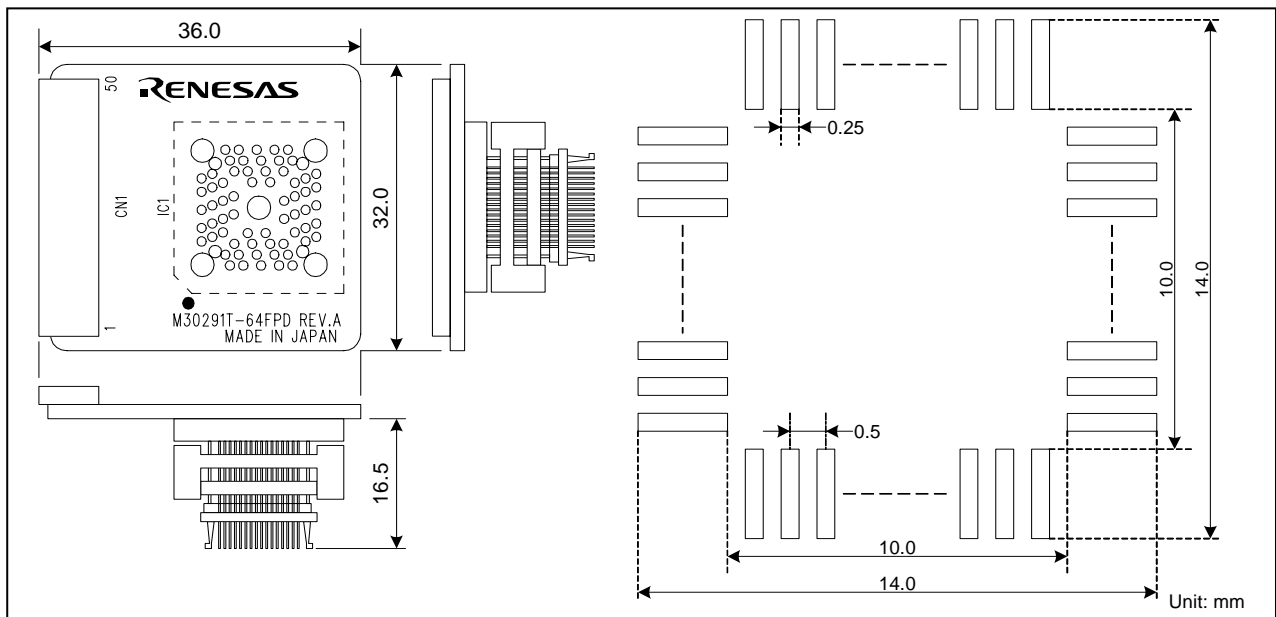


Figure 4 External dimensions and a sample foot pattern of the M30291T-64FPD

7. Precautions

CAUTION

Cautions to Be Taken for This Product:



- Do not pull or excessively flex the cable. The cable may cause a break.
- When connecting the YQPACK064SD, be sure to use the included YQ-GUIDE's.
- Do not use the screws included with the YQPACK064SD to fix it.

IMPORTANT

Notes on This Product:

- We cannot accept any request for repair.
- For purchasing the NQPACK064SD-ND, YQPACK064SD and HQPACK064SD, contact the following:
 - Daimaru Kogyo Ltd. <http://www.daimarukogyo.co.jp/>
 - Tokyo Eletech Corporation http://www.tetc.co.jp/e_tet.htm
- For inquiries about the product or the contents of this manual, contact your local distributor.
 - Renesas Tools Homepage <http://www.renesas.com/en/tools>