



# M30291T-64FPD

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

# **User's Manual**

\* NQPACK, YQPACK, YQSOCKET, YQ-GUIDE, HQPACK, TQPACK and TQSOCKET are trademarks of Tokyo Eletech Corporation.

#### Keep safety first in your circuit designs!

• Renesas Technology Corporation and Renesas Solutions Corporation put the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage. Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of nonflammable material or (iii) prevention against any malfunction or mishap.

#### Notes regarding these materials

- These materials are intended as a reference to assist our customers in the selection of the Renesas Technology product best suited to the customer's application; they do not convey any license under any intellectual property rights, or any other rights, belonging to Renesas Technology Corporation, Renesas Solutions Corporation or a third party.
- Renesas Technology Corporation and Renesas Solutions Corporation assume no responsibility for any damage, or infringement of
  any third-party's rights, originating in the use of any product data, diagrams, charts, programs, algorithms, or circuit application
  examples contained in these materials.
- All information contained in these materials, including product data, diagrams, charts, programs and algorithms represents information on products at the time of publication of these materials, and are subject to change by Renesas Technology Corporation and Renesas Solutions Corporation without notice due to product improvements or other reasons. It is therefore recommended that customers contact Renesas Technology Corporation, Renesas Solutions Corporation or an authorized Renesas Technology product distributor for the latest product information before purchasing a product listed herein. The information described here may contain technical inaccuracies or typographical errors. Renesas Technology Corporation and Renesas Solutions Corporation assume no responsibility for any damage, liability, or other loss rising from these inaccuracies or errors. Please also pay attention to information published by Renesas Technology Corporation and Renesas Solutions Corporation by various means, including the Renesas home page (http://www.renesas.com).
- When using any or all of the information contained in these materials, including product data, diagrams, charts, programs, and algorithms, please be sure to evaluate all information as a total system before making a final decision on the applicability of the information and products. Renesas Technology Corporation and Renesas Solutions Corporation assume no responsibility for any damage, liability or other loss resulting from the information contained herein.
- Renesas Technology semiconductors are not designed or manufactured for use in a device or system that is used under circumstances in which human life is potentially at stake. Please contact Renesas Technology Corporation, Renesas Solutions Corporation or an authorized Renesas Technology product distributor when considering the use of a product contained herein for any specific purposes, such as apparatus or systems for transportation, vehicular, medical, aerospace, nuclear, or undersea repeater use.
- The prior written approval of Renesas Technology Corporation and Renesas Solutions Corporation is necessary to reprint or reproduce in whole or in part these materials.
- If these products or technologies are subject to the Japanese export control restrictions, they must be exported under a license from
  the Japanese government and cannot be imported into a country other than the approved destination. Any diversion or reexport
  contrary to the export control laws and regulations of Japan and/or the country of destination is prohibited.
- Please contact Renesas Technology Corporation or Renesas Solutions Corporation for further details on these materials or the products contained therein.

#### Precautions to be taken when using this product

- This product is a development supporting unit for use in your program development and evaluation stages. In mass-producing your program you have finished developing, be sure to make a judgment on your own risk that it can be put to practical use by performing integration test, evaluation, or some experiment else.
- In no event shall Renesas Solutions Corporation be liable for any consequence arising from the use of this product.
- Renesas Solutions Corporation strives to renovate or provide a workaround for product malfunction at some charge or without charge.
   However, this does not necessarily mean that Renesas Solutions Corporation guarantees the renovation or the provision under any circumstances.
- This product has been developed by assuming its use for program development and evaluation in laboratories. Therefore, it does not
  fall under the application of Electrical Appliance and Material Safety Law and protection against electromagnetic interference when
  used in Japan.



If the requirements shown in the "CAUTION" sentences are ignored, the equipment may cause personal injury or damage to the products.

Renesas Tools Homepage http://www.renesas.com/en/tools

Rev.1.00 August 16, 2004 REJ10J0390-0100Z

#### 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)
	Between M30291T-64FPD and
	YQPACK064SD:
Insertion/removal	100 times guaranteed
iterations of	Between M30290T-EPB or
connector	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 fox 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.

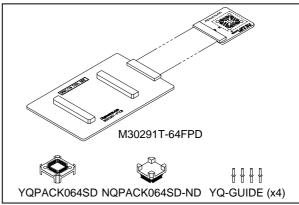


Figure 1 Package components of the M30291T-64FPD

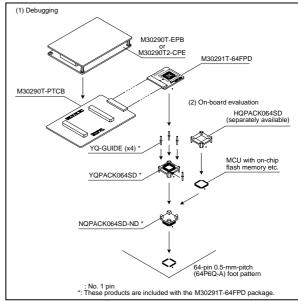


Figure 2 Usage of the M30291T-64FPD

#### 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 if 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.

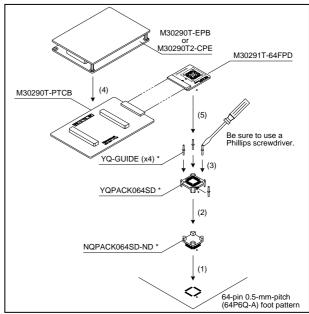


Figure 3 Connection procedure of the M30291T-64FPD

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

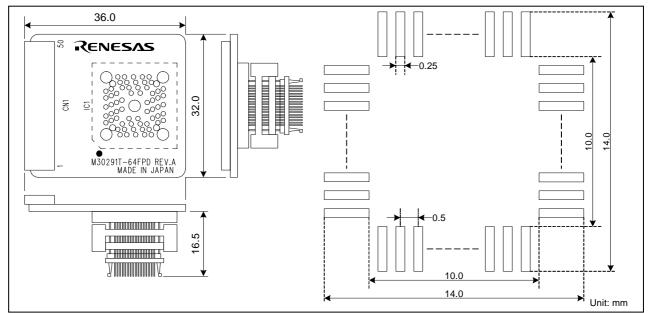


Figure 4 External dimensions and a sample foot pattern of the M30291T-64FPD

#### 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

Free Manuals Download Website

http://myh66.com

http://usermanuals.us

http://www.somanuals.com

http://www.4manuals.cc

http://www.manual-lib.com

http://www.404manual.com

http://www.luxmanual.com

http://aubethermostatmanual.com

Golf course search by state

http://golfingnear.com

Email search by domain

http://emailbydomain.com

Auto manuals search

http://auto.somanuals.com

TV manuals search

http://tv.somanuals.com