M30262T-PTC

Converter Board for M30262

User's Manual

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.

CAUTION 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.2.00
January 16, 2005
REJ10J077-0200

RenesasTechnology
www.renesas.com

1. Outline

The M30262T-PTC is a converter board for the M30262Group for connecting an emulator for the M16C/62P to M30262 (48P6Q-A)

2. Package Components (See Figure 1)

(1) M30262T-PTC 1 pc.
(Base board M30262T-PTCB and 150mm FFC cable included)
(2) YQPACK048SD (by Tokyo Eletech Corporation) 1 pc.
(3) NQPACK048SD (by Tokyo Eletech Corporation) 1 pc.
(4) YQ-GUIDE's (4 pcs., by Tokyo Eletech Corporation) 1 pkg.
(5) M30262T-PTC User's Manual (This manual) 1 pc.

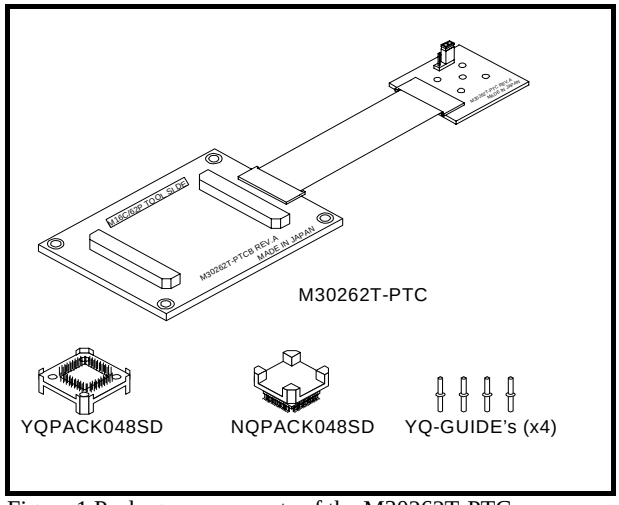

Figure 1 Package components of the M30262T-PTC

3. Specifications

Table 1 Specifications

Applicable package	48P6Q-A (48-pin 0.5-mm-pitch QFP)
Insertion/removal iterations of connector	M30262T-PTC and YQPACK048SD 100 times guaranteed
	M30262T-PTC and emulator for M16C/62P 20 times guaranteed

4. Usage (See Figure 2)

The M30262T-PTC can be used for debugging and onboard evaluation in common by mounting the NQPACK048SD on the target board.

(1) For debugging
Mount the NQPACK048SD and the YQPACK048SDin that order on the foot pattern of the target board. Then attach the YQ-GUIDE's to the YQPACK048SD to connect the M30262T-PTC. Do not use the screws included with the YQPACK048SD. Finally, connect the emulator for M16C/62P to the M30262T-PTC.

(2) For onboard evaluation
Mount the M30262 MCU and the HQPACK048SD (not included) in that order on the NQPACK048SD on the user system. Then secure the screws.

Before using the M30262T-PTC, be sure to read "9. Precautions" (page 4). And, read the user's manual of an emulator for M16C/62P.

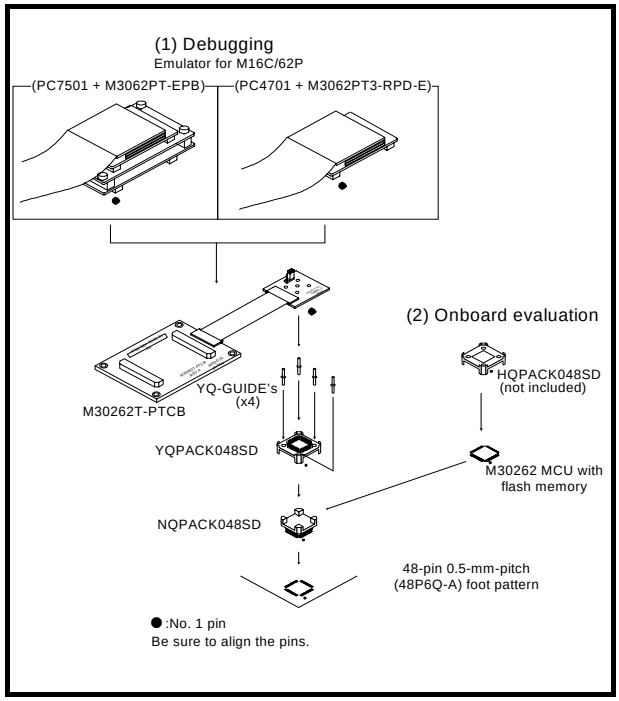

Figure 2 Usage of the M30262T-PTC

5. Hardware Configuration of the M30262T-PTC (See Figure 3)

Hardware configuration of the M30262T-PTC is shown below.

(1) Connector
Connector for the emulator for M16C/62P (M3062PT-EPB).
(2) Cable
Flat cable which connects the user system flexibly (Length: 150 mm).
(3) Target interface
Interface which has a connector for a user system and jumper switch JP1.

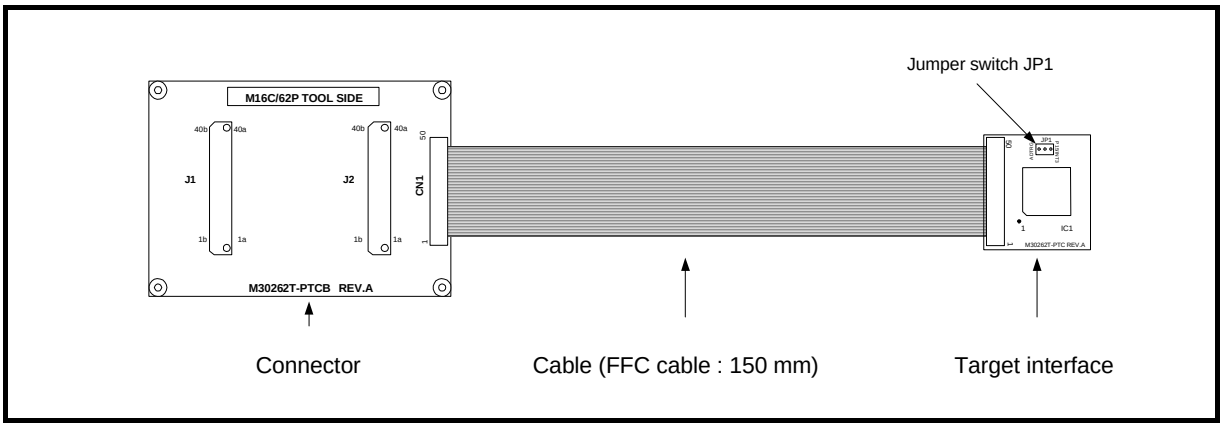

Figure 3 Hardware configuration of the M30262T-PTC

6. Connection Procedure (see Figure 4)

The procedure for connecting the M30262T-PTC is shown below.

(1) Mount the NQPACK048SD.
(2) Mount the YQPACK048SD on the NQPACK048SD.
(3) Secure the four corners of the YQPACK048SD with the YQ-GUIDE's.

> Do NOT use the screws in the YQPACK048SD package.
>
> Do NOT use the screwdriver in the NQPACK048SD package for securing YQ-GUIDE's (used for securing HQPACK048SD).

(4) Attach the M30262T-PTC to the YQPACK048SD.
(5) Connect the emulator for M16C/62P to the M30262T-PTC.

7. Switch Settings

When you use No. 36 pin (Port $P1_5$/INT_3/ADTRG), set switch JP1 according to port functions.

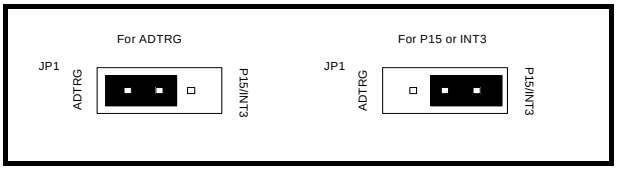

Figure 5 JP1 Settings

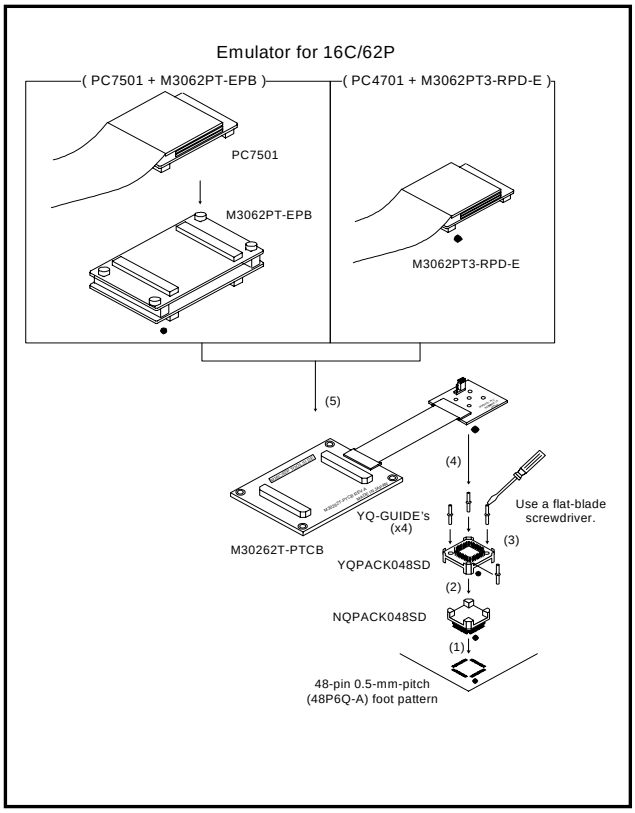

Figure 4 Connection Procedure

8. External Dimensions of the M30262T-PTC (Connector) and a Sample Foot Pattern (see Figure 6)

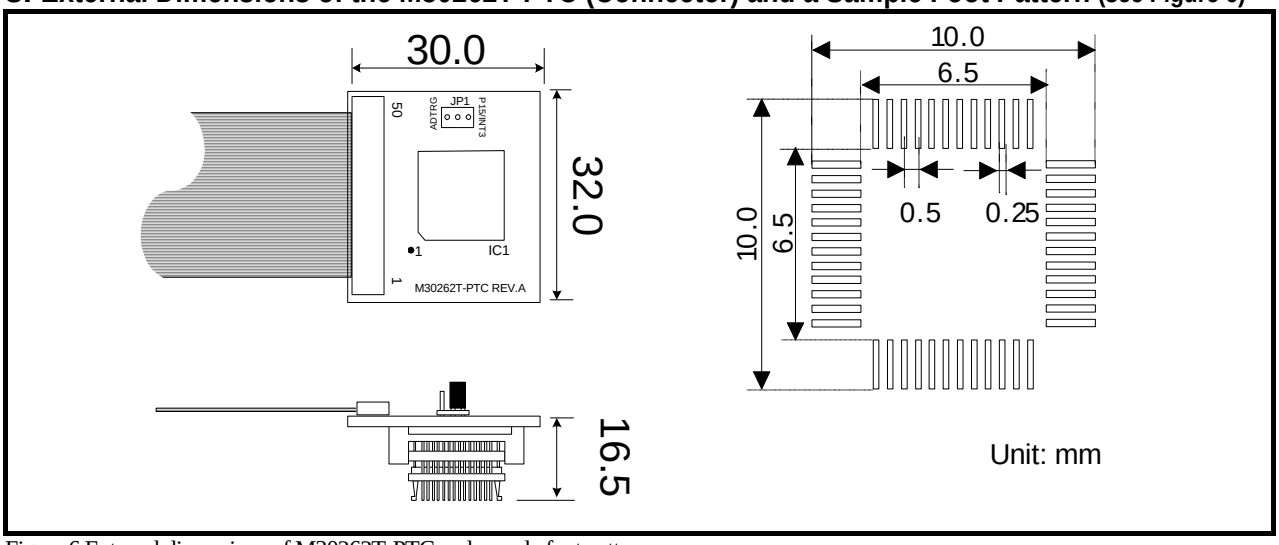

Figure 6 External dimensions of M30262T-PTC and sample foot pattern

9. Precautions

⚠ CAUTION

Cautions for Debugging M16C/262 with an Emulator for M16C/62P:

- The cautions for software development of M16C/26 using the emulator for M16C/62P (M3062PT-EPB or M3062PT3-RPD-E) are as follows.

  (1) NMI*

  M16C/26: NMI* is disabled after reset. Set the $P8_5$/NMI* function select bit (bit 4 of address $001E_{16}$) to "1" to use the NMI* interrupt.

  M16C/62P:NMI* is enabled after reset.

  (2) Port $P8_5$

  M16C/26: Port $P8_5$ has direction and pull-up control registers.

  M16C/62P: Port $P8_5$ functions only as an input port. Thus, debugging of port $P8_5$ output and pull-up functions cannot be performed with the M16C/62P tool.

  (3) Flash memory suspend mod

  M16C/62P flash memory does not support the M16C/26 suspension mode. Thus, debugging of the suspension function cannot be performed with the M16C/62P tool.

- When starting up a debugger (M3T-PD30F or M3T-PD30), select the following MCU file according to the emulator for M16C/62P.
  (1) When you start up the M3T-PD30F using the PC7501 + M3062PT-EPB, select “M16C62P.mcu”.
  (2) When you start up the M3T-PD30 using the PC4701 + M3062PT3-RPD-E, select “M3062PT3.mcu”.

IMPORTANT

Notes on This Product:

- When connecting the M30262T-PTC, be sure to use the included YQ-GUIDE's
- Do not use the screws included with the YQPACK048SD for connecting the YQPACK048SD
- We cannot accept any request for repair.
- For purchasing the NQPACK048SD, YQPACK048SD and HQPACK048SD, contact the following:
  ~~Daimaru Kogyo Ltd.http://www.daimarukogyo.co.jp/~~
  Tokyo Eletech Corporationhttp://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