To our customers,

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

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

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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.1.00  August 16, 2004
REJ10J0390-0100Z
(1/4)
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

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

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.
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.

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

Figure 3 Connection procedure of the M30291T-64FPD

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

<table>
<thead>
<tr>
<th>CAUTION</th>
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</thead>
<tbody>
<tr>
<td>Cautions to Be Taken for This Product:</td>
</tr>
<tr>
<td>⚠ Do not pull or excessively flex the cable. The cable may cause a break.</td>
</tr>
<tr>
<td>⚠ When connecting the YQPACK064SD, be sure to use the included YQ-GUIDE's.</td>
</tr>
<tr>
<td>⚠ Do not use the screws included with the YQPACK064SD to fix it.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IMPORTANT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notes on This Product:</td>
</tr>
<tr>
<td>⚠ We cannot accept any request for repair.</td>
</tr>
<tr>
<td>⚠ For purchasing the NQPACK064SD-ND, YQPACK064SD and HQPACK064SD, contact the following:</td>
</tr>
<tr>
<td>Daimaru Kogyo Ltd.</td>
</tr>
<tr>
<td>Tokyo Eletech Corporation</td>
</tr>
<tr>
<td>⚠ For inquiries about the product or the contents of this manual, contact your local distributor.</td>
</tr>
<tr>
<td>Renesas Tools Homepage</td>
</tr>
</tbody>
</table>