

# M3T-F160-80NSD

Converter Board for Connecting FLX160 to 80-pin 0.5-mm-pitch LQFP

## 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>

# 1. Outline

The M3T-F160-80NSD is a converter board for connecting the 160-core flexible cable FLX160 to a foot pattern for 80-pin 0.5-mm-pitch LQFP (80P6Q-A).

# 2. Package Components (See Figure 1)

- (1) M3T-F160-80NSD converter board ..... 1 pc.
- (2) NQPACK080SD-ND (made by Tokyo Eletech Corporation) ..... 1 pc.
- (3) YQPACK080SD (made by Tokyo Eletech Corporation) ..... 1 pc.
- (4) YQSOCKET080SDF (made by Tokyo Eletech Corporation) ..... 1 pc.
- Pre-mounted on the converter board M3T-F160-80NSD
- (5) YQ-GUIDE's (made by Tokyo Eletech Corporation) ..... 4 pcs.
- (6) M3T-F160-80NSD User's Manual (This manual)

# 3. Specifications

Table 1 Specifications

Applicable package	80P6Q-A (80-pin 0.5-mm-pitch LQFP)
Insertion/removal iterations of connector	50 times guaranteed

# 4. Usage (See Figure 2)

The M3T-F160-80NSD can be used for debugging and board-mounted evaluation in common by mounting the NQPACK080SD-ND on the user system.

- (1) For debugging  
Mount the NQPACK080SD-ND on the foot pattern of the user system and attach the YQPACK080SD on it. And connect the probe of the emulation pod to the upper connector of the M3T-F160-80NSD. Then connect the YQPACK080SD and the M3T-F160-80NSD.
- (2) For onboard evaluation  
Mount an MCU with on-chip flash memory or one-time PROM and the HQPACK080SD (separately available) in that order on the NQPACK080SD-ND on the user system.

Before using the M3T-F160-80NSD, be sure to read "6. Precautions" on page 3.

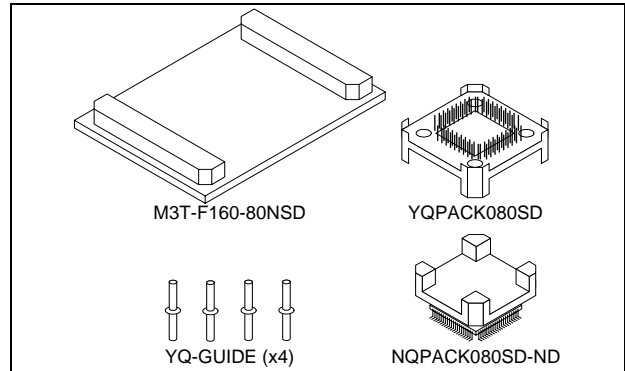


Figure 1 Package components of the M3T-F160-80NSD

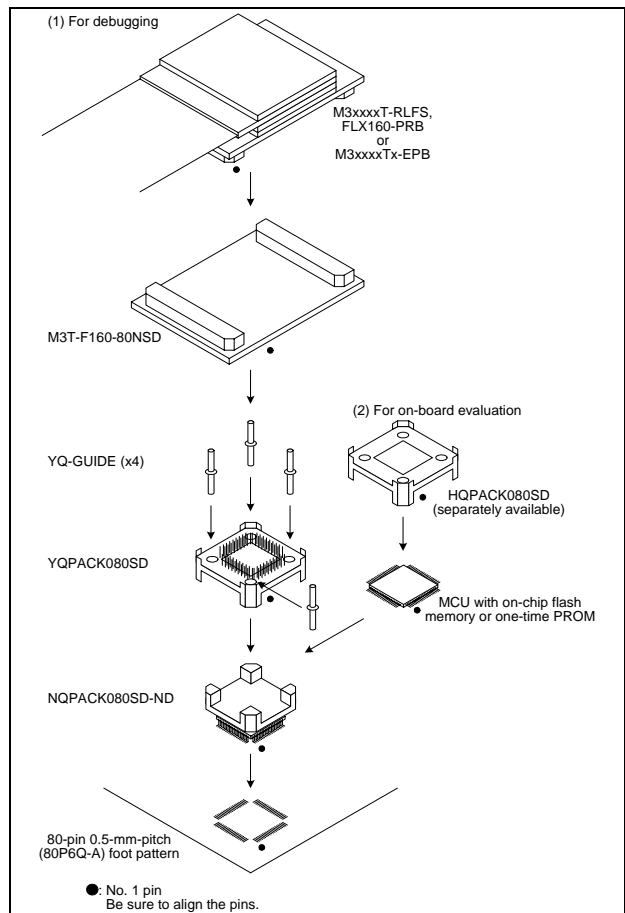


Figure 2 Usage of the M3T-F160-80NSD

## 5. External Dimensions and a Sample Foot Pattern

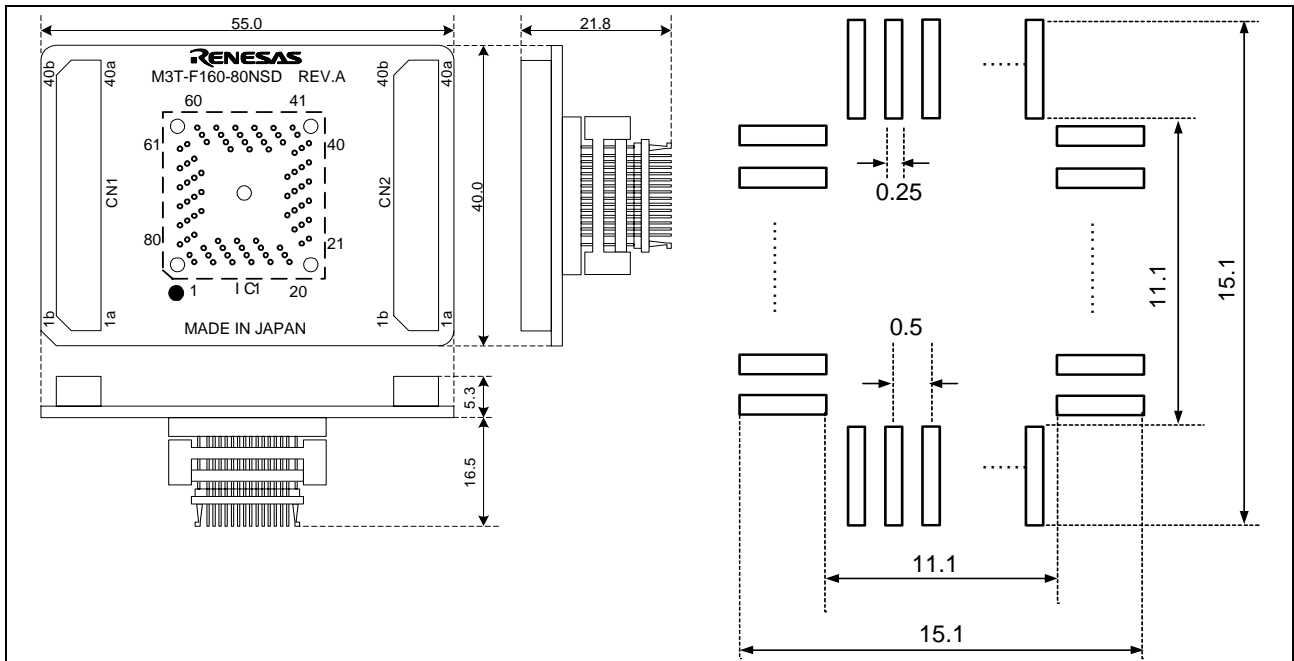


Figure 3 External dimensions and a sample foot pattern of the M3T-F160-80NSD

## 6. Precautions

### ⚠ CAUTION

#### Caution to Be Taken for This Product:



- When connecting the YQPACK080SD, be sure to use the included YQ-GUIDE's.
- Do NOT use the screws included with the YQPACK080SD for connecting the YQPACK080SD.

### IMPORTANT

#### Notes on This Product:

- We cannot accept any request for repair.
- For purchasing the NQPACK080SD-ND, YQPACK080SD, HQPACK080SD, contact the following:
 

Tokyo Eletech Corporation	<a href="http://www.tetc.co.jp/e_tet.htm">http://www.tetc.co.jp/e_tet.htm</a>
<del>Daimaru Kogyo Ltd.</del>	<del><a href="http://www.daimarukogyo.co.jp/">http://www.daimarukogyo.co.jp/</a></del>
- For inquiries about the product or the contents of this manual, contact your local distributor.
 

Renesas Tools Homepage	<a href="http://www.renesas.com/en/tools">http://www.renesas.com/en/tools</a>
------------------------	---

## 7. Correspondence of Connectors CN1 and CN2

Table 2 Correspondence of the connectors

CN1	IC1	CN1	IC1	CN2	IC1	CN2	IC1
1a	-	1b	6	1a	-	1b	7
2a	5	2b	4	2a	8	2b	9
3a	3	3b	-	3a	10	3b	11
4a	-	4b	-	4a	12	4b	13
5a	-	5b	-	5a	14	5b	15
6a	-	6b	-	6a	16	6b	17
7a	2	7b	1	7a	18	7b	19
8a	80	8b	79	8a	20	8b	21
9a	-	9b	-	9a	22	9b	-
10a	-	10b	-	10a	-	10b	-
11a	-	11b	-	11a	-	11b	-
12a	-	12b	78	12a	-	12b	-
13a	77	13b	76	13a	-	13b	-
14a	75	14b	74	14a	23	14b	24
15a	73	15b	72	15a	25	15b	26
16a	71	16b	70	16a	27	16b	28
17a	69	17b	-	17a	-	17b	-
18a	-	18b	-	18a	-	18b	-
19a	-	19b	-	19a	29	19b	30
20a	-	20b	-	20a	31	20b	-
21a	-	21b	-	21a	-	21b	32
22a	-	22b	-	22a	-	22b	-
23a	-	23b	68	23a	-	23b	-
24a	67	24b	66	24a	-	24b	-
25a	65	25b	-	25a	33	25b	34
26a	-	26b	-	26a	35	26b	36
27a	-	27b	-	27a	-	27b	-
28a	64	28b	63	28a	-	28b	37
29a	-	29b	-	29a	38	29b	-
30a	-	30b	-	30a	-	30b	-
31a	-	31b	-	31a	-	31b	-
32a	-	32b	62	32a	-	32b	-
33a	61	33b	60	33a	-	33b	-
34a	59	34b	58	34a	39	34b	40
35a	57	35b	56	35a	41	35b	42
36a	55	36b	54	36a	43	36b	44
37a	53	37b	52	37a	45	37b	46
38a	51	38b	50	38a	-	38b	-
39a	49	39b	48	39a	-	39b	-
40a	47	40b	-	40a	-	40b	-

("-": No connection)