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April 1st, 2010
Renesas Electronics Corporation

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

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M3T-F160-128NRD

Converter Board for Connecting FLX160 to 128-pin 0.5-mm-pitch LQFP

User's Manual

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



CAUTION

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

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1. Outline

The M3T-F160-128NRD is a converter board for connecting the 160-core flexible cable FLX160 to a foot pattern for 128-pin 0.5-mm-pitch LQFP (128P6Q-A).

2. Package Components (See Figure 1)

- (1) M3T-F160-128NRD converter board 1
- (2) YQPACK128RD (made by Tokyo Eletech Corporation) 1
- (3) NQPACK128RD (made by Tokyo Eletech Corporation) 1
- (4) YQ-GUIDE's 4
- (5) M3T-F160-128NRD User's Manual (this manual)

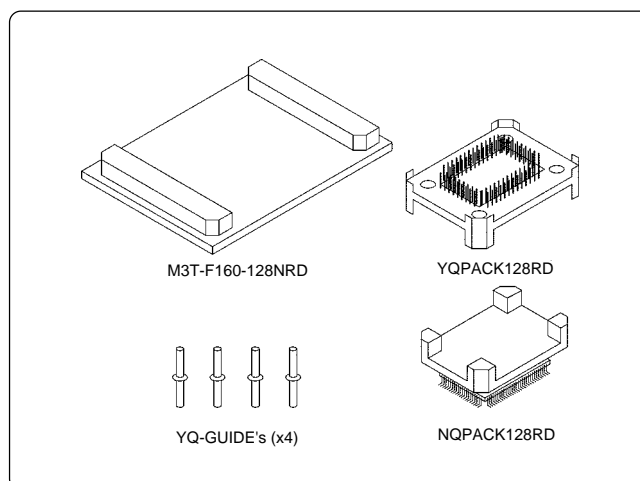


Figure 1 Package components

3. Specifications

Table 1 Specifications

Applicable package	128P6Q-A (128-pin 0.5-mm-pitch LQFP)
Insertion/removal iterations of connector	50 times guaranteed

4. Usage (See Figure 2)

The M3T-F160-128NRD can be used for debugging and board-mounted evaluation in common by mounting the NQPACK128RD on the target system.

(1) For debugging

Mount the NQPACK128RD on the foot pattern of the target system and attach the YQPACK128RD on it. And connect the probe of the emulation pod to the upper connector of the M3T-F160-128NRD. Then connect the YQPACK128RD and the M3T-F160-128NRD.

(2) For board-mounted evaluation

Mount an MCU with on-chip flash memory or one-time PROM and the HQPACK128RD (separately available) in that order on the NQPACK128RD on the target system.

Before using the M3T-F160-128NRD, be sure to read "7. Precautions" on page 4.

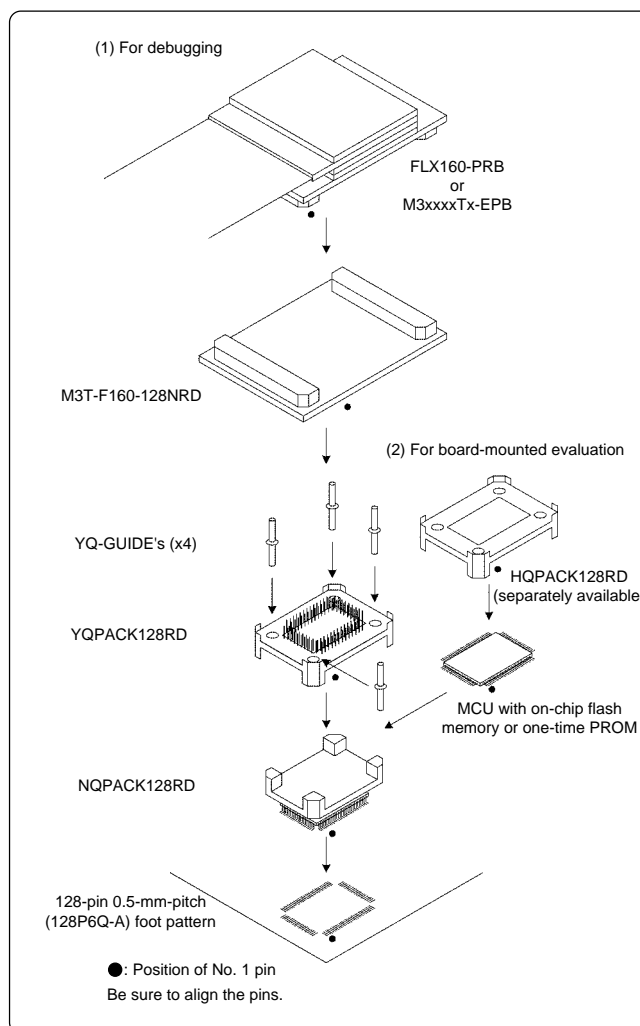


Figure 2 Usage

5. Connection Procedure (See Figure 3)

The procedure for connecting the M3T-F160-128NRD is shown below.

- (1) Mount the NQPACK128RD on the target system.
- (2) Attach the YQPACK128RD on the NQPACK128RD.
- (3) Secure the four corners of the YQPACK128RD with the YQ-GUIDE's.

- Do NOT use the screws included with the YQPACK128RD.
- Do NOT use the screwdriver included with the NQPACK128RD that is used only for the HQPACK128RD.

- (4) Attach the probe of the emulation pod to the M3T-F160-128NRD.
- (5) Attach the M3T-F160-128NRD on the YQPACK128RD.

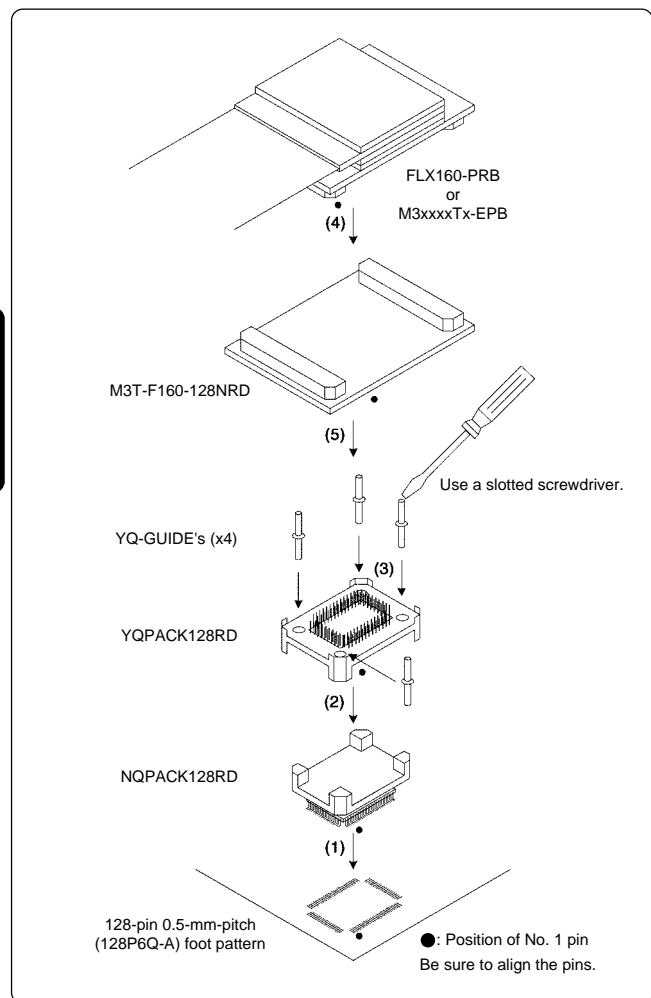


Figure 3 Connection procedure

6. External Dimensions and a Sample Foot Pattern

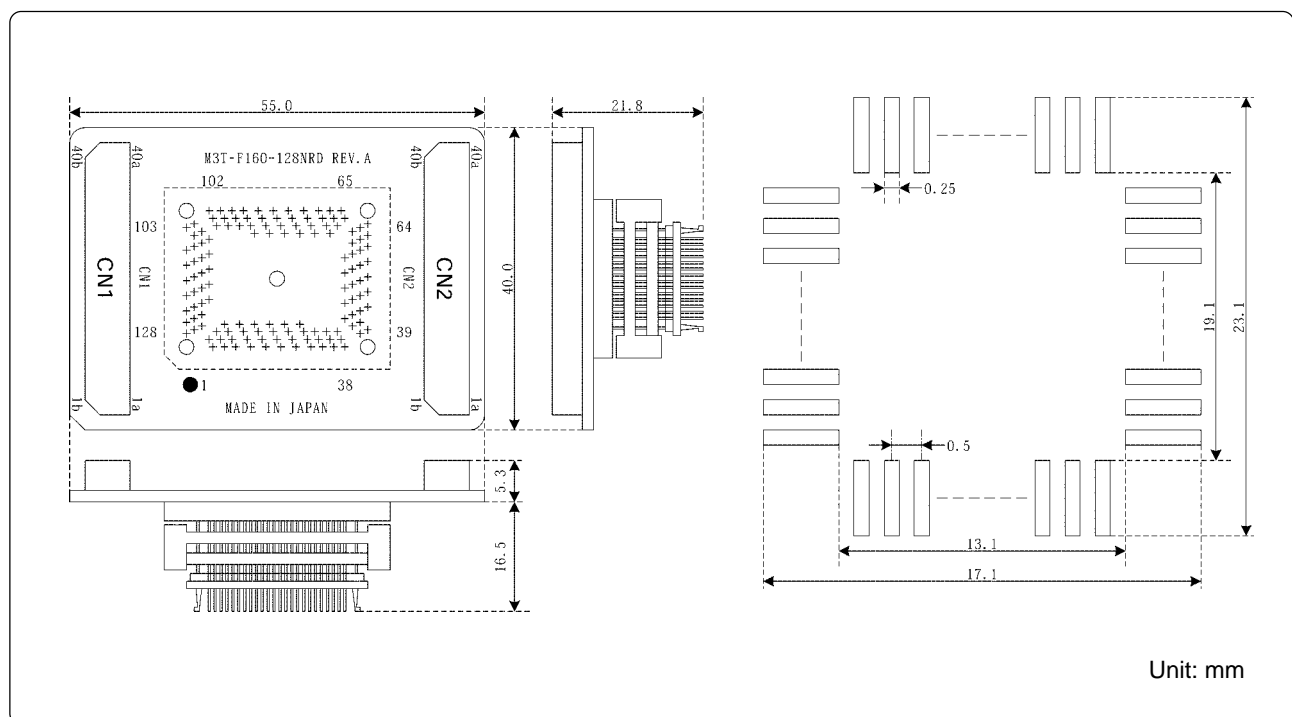


Figure 4 External dimensions and a sample foot pattern

7. Precautions

CAUTION

Cautions to Be Taken for This Product:



- To connect the YQPACK128RD, be sure to use the included YQ-GUIDE's.
- Do NOT use the screws included with the YQPACK128RD in order to connect the YQPACK128RD.

IMPORTANT

Notes on This Product:

- We cannot accept any request for repair.
- For purchasing the NQPACK128RD, YQPACK128RD, HQPACK128RD, contact the following:
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>

8. Correspondence of the Connectors CN1 and CN2

Table 2 Correspondence of the connectors

CN1	IC1	CN1	IC1	CN2	IC1	CN2	IC1
1a	-	1b	16	1a	-	1b	17
2a	15	2b	14	2a	18	2b	19
3a	13	3b	12	3a	20	3b	21
4a	11	4b	-	4a	22	4b	23
5a	-	5b	-	5a	24	5b	25
6a	-	6b	-	6a	26	6b	27
7a	10	7b	9	7a	28	7b	29
8a	8	8b	7	8a	30	8b	31
9a	6	9b	5	9a	32	9b	33
10a	4	10b	-	10a	34	10b	-
11a	-	11b	3	11a	-	11b	35
12a	2	12b	1	12a	36	12b	37
13a	128	13b	127	13a	38	13b	39
14a	126	14b	125	14a	40	14b	41
15a	124	15b	123	15a	42	15b	43
16a	122	16b	121	16a	44	16b	45
17a	120	17b	-	17a	46	17b	47
18a	119	18b	-	18a	48	18b	49
19a	118	19b	117	19a	50	19b	51
20a	116	20b	-	20a	52	20b	-
21a	-	21b	115	21a	-	21b	53
22a	114	22b	113	22a	54	22b	-
23a	112	23b	111	23a	55	23b	-
24a	110	24b	109	24a	56	24b	57
25a	108	25b	-	25a	58	25b	59
26a	-	26b	-	26a	60	26b	61
27a	-	27b	-	27a	62	27b	63
28a	107	28b	106	28a	64	28b	65
29a	105	29b	104	29a	66	29b	67
30a	103	30b	-	30a	68	30b	-
31a	-	31b	102	31a	-	31b	69
32a	101	32b	100	32a	-	32b	70
33a	99	33b	98	33a	-	33b	71
34a	97	34b	96	34a	72	34b	73
35a	95	35b	94	35a	74	35b	75
36a	93	36b	92	36a	76	36b	77
37a	91	37b	90	37a	78	37b	79
38a	89	38b	88	38a	80	38b	81
39a	87	39b	86	39a	82	39b	83
40a	85	40b	-	40a	84	40b	-

("-": No connection)

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