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April 1st, 2010
Renesas Electronics Corporation

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

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M3T-F160-100NRB

Converter Board for Connecting FLX160 to 100-pin 0.65-mm-pitch QFP

User's Manual

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

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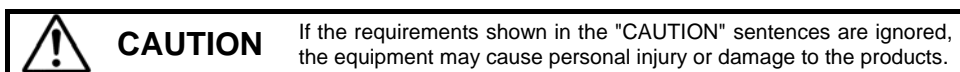
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Renesas Tools Homepage <http://www.renesas.com/en/tools>

1. Outline

The M3T-F160-100NRB is a converter board for connecting the 160-core flexible cable FLX160 to a foot pattern for 100-pin 0.65-mm-pitch QFP (PRQP0100JB-A, formerly 100P6S-A and PLQP0100JA-A, formerly 100P6A-A).

2. Package Components (See Figure 1)

- (1) M3T-F160-100NRB converter board..... 1 pc.
- (2) YQPACK100RB (made by Tokyo Eletech Corporation)..... 1 pc.
- (3) NQPACK100RB (made by Tokyo Eletech Corporation) 1 pc.
- (4) YQ-GUIDE-1 (YQ-GUIDE x 4) 1 pkg.
- (5) M3T-F160-100NRB User's Manual (This manual)

3. Specifications

Table 1 Specifications

Applicable package	PRQP0100JB-A, formerly 100P6S-A PLQP0100JA-A, formerly 100P6A-A (100-pin 0.65-mm-pitch QFP)
Insertion/removal iterations of connector	50 times guaranteed

4. Usage (See Figure 2)

The M3T-F160-100NRB can be used for debugging and board-mounted evaluation in common by mounting the NQPACK100RB on the user system.

- (1) For debugging
Mount the NQPACK100RB on the foot pattern of the user system and attach the YQPACK100RB on it. And connect the probe of the emulation pod to the upper connector of the M3T-F160-100NRB. Then connect the YQPACK100RB and the M3T-F160-100NRB.
- (2) For onboard evaluation
Mount an MCU with on-chip flash memory or one-time PROM and the HQPACK100RB168 (separately available) in that order on the HQPACK100RB1622 (separately available) on the user system.
Use the applicable HQPACK for your package.
 - PRQP0100JB-A (formerly 100P6S-A) package:
HQPACK100RB168
 - PLQP0100JA-A (formerly 100P6A-A) package:
HQPACK100RB1622

Before using the M3T-F160-100NRB, be sure to read "7. Precautions" on page 4.

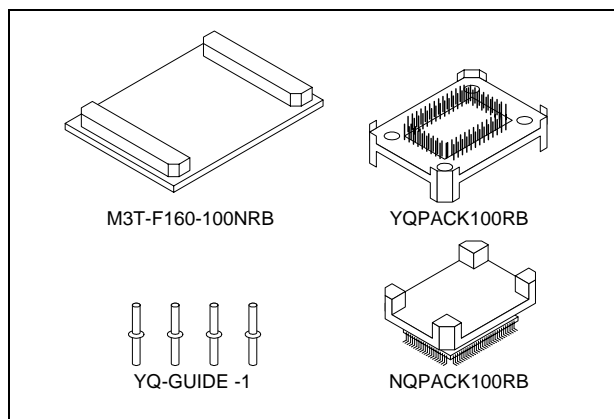


Figure 1 Package components of the M3T-F160-100NRB

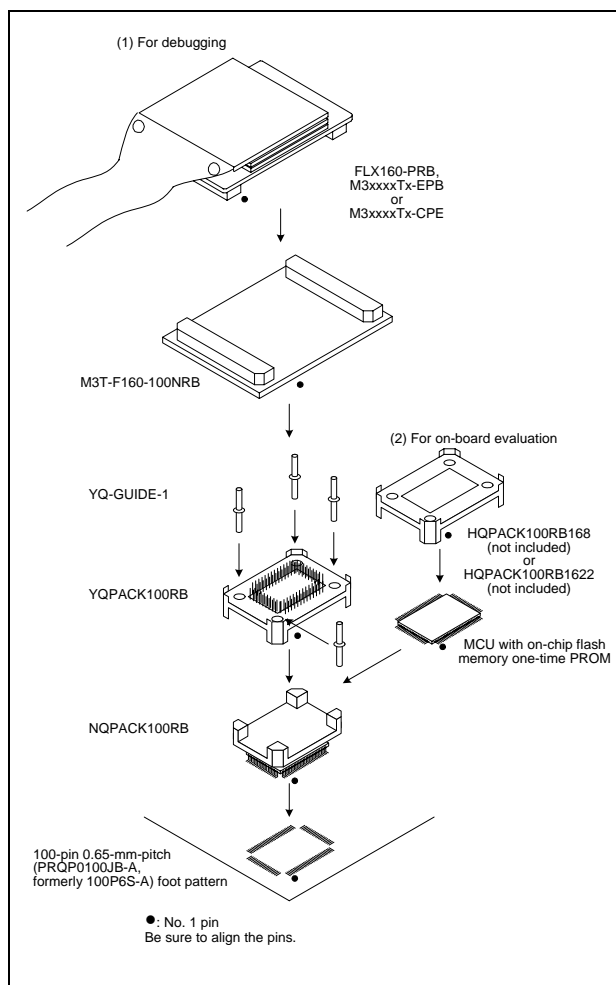


Figure 2 Usage of the M3T-F160-100NRB

5. Connection Procedure (See Figure 3)

The procedure for connecting the M3T-F160-100NRB is shown below.

- (1) Mount the NQPACK100RB on the user system.
- (2) Attach the YQPACK100RB on the NQPACK100RB.
- (3) Secure the four corners of the YQPACK100RB with the YQ-GUIDE's.

- Do not use the screws included with the YQPACK100RB for fixing the YQPACK100RB.
- Do NOT use the screwdriver included with the NQPACK100RB for fixing the YQ-GUIDE's. That is used only for the HQPACK100RB168 or HQPACK100RB1622.

- (4) Attach the probe of the emulation pod to the M3T-F160-100NRB.
- (5) Connect M3T-F160-100NRB to the emulator probe.

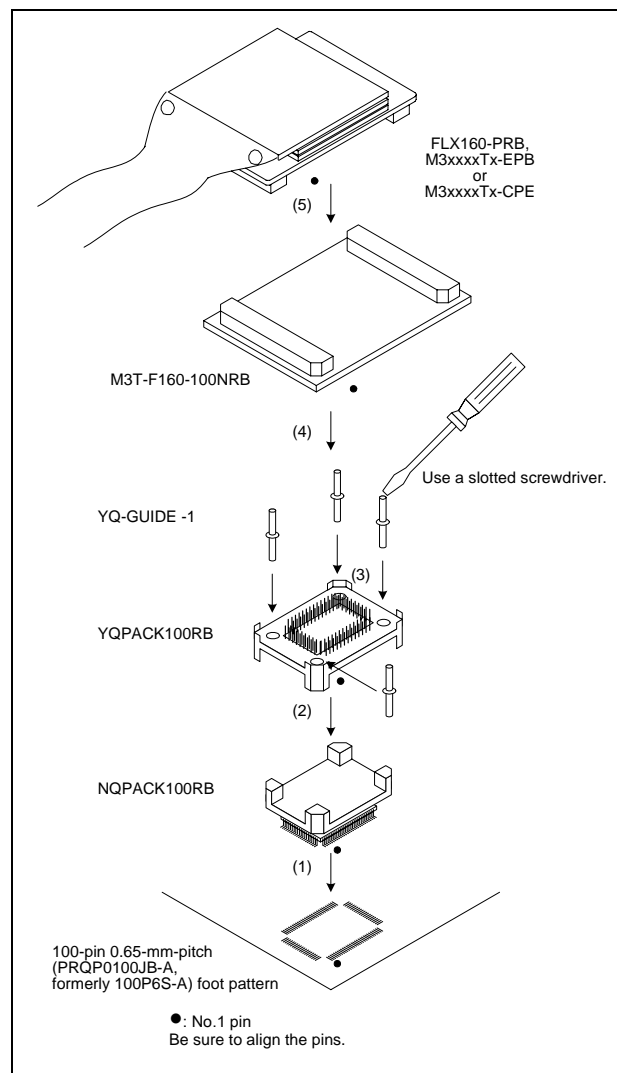


Figure 3 Connection procedure of the M3T-F160-100NRB

6. External Dimensions and a Sample Foot Pattern

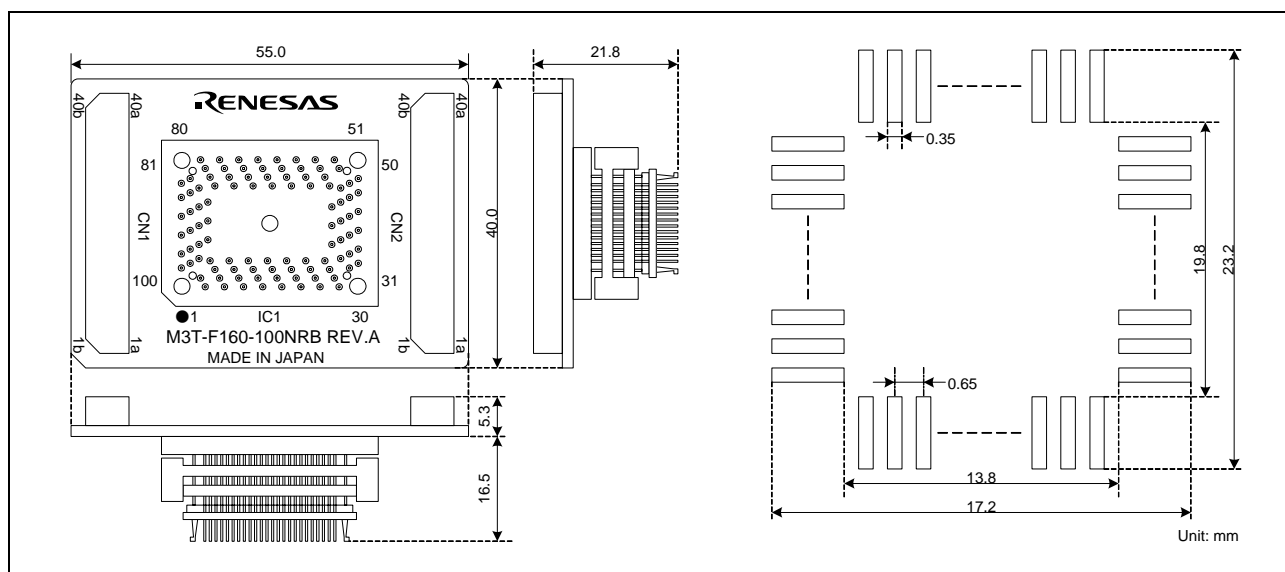


Figure 4 External dimensions and a sample foot pattern of the M3T-F160-100NRB

7. Precautions

⚠ CAUTION

Caution to Be Taken for This Product:



- When connecting the YQPACK100RB, be sure to use the included YQ-GUIDE's.
- Do NOT use the screws included with the YQPACK100RB for connecting the YQPACK100RB.
- For onboard evaluation, use the applicable HQPACK for your package as follows:
 - PRQP0100JB-A (formerly 100P6S-A) package: HQPACK100RB168
 - PLQP0100JA-A (formerly 100P6A-A) package: HQPACK100RB1622

IMPORTANT

Notes on This Product:

- We cannot accept any request for repair.
- For purchasing the NQPACK100RB, YQPACK100RB, HQPACK100RB168 and HQPACK100RB1622, contact the following:

Daimaru Kogyo Ltd. Tokyo Eletech Corporation Renesas Tools Homepage	http://www.daimarukogyo.co.jp/ http://www.tetc.co.jp/e_tet.htm http://www.renesas.com/en/tools
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- For inquiries about the product or the contents of this manual, contact your local distributor.

8. Correspondence of Connectors CN1 and CN2

Table 2 Correspondence of the connectors

CN1	IC1	CN1	IC1	CN2	IC1	CN2	IC1
CN1-01a	NC	CN1-01b	11	CN2-01a	NC	CN2-01b	12
CN1-02a	10	CN1-02b	9	CN2-02a	13	CN2-02b	14,64
CN1-03a	8	CN1-03b	NC	CN2-03a	15	CN2-03b	16
CN1-04a	NC	CN1-04b	NC	CN2-04a	17	CN2-04b	18
CN1-05a	NC	CN1-05b	NC	CN2-05a	19	CN2-05b	20
CN1-06a	NC	CN1-06b	NC	CN2-06a	21	CN2-06b	22
CN1-07a	7	CN1-07b	6	CN2-07a	23	CN2-07b	24
CN1-08a	5	CN1-08b	4	CN2-08a	25	CN2-08b	26
CN1-09a	3	CN1-09b	2	CN2-09a	27	CN2-09b	28
CN1-10a	1	CN1-10b	NC	CN2-10a	29	CN2-10b	NC
CN1-11a	NC	CN1-11b	100	CN2-11a	NC	CN2-11b	30
CN1-12a	99	CN1-12b	98	CN2-12a	31	CN2-12b	16
CN1-13a	97	CN1-13b	96	CN2-13a	32	CN2-13b	14,64
CN1-14a	95	CN1-14b	94	CN2-14a	33	CN2-14b	34
CN1-15a	93	CN1-15b	92	CN2-15a	35	CN2-15b	36
CN1-16a	91	CN1-16b	90	CN2-16a	37	CN2-16b	38
CN1-17a	89	CN1-17b	62	CN2-17a	NC	CN2-17b	NC
CN1-18a	NC	CN1-18b	14,64	CN2-18a	NC	CN2-18b	NC
CN1-19a	NC	CN1-19b	NC	CN2-19a	39	CN2-19b	40
CN1-20a	NC	CN1-20b	NC	CN2-20a	41	CN2-20b	NC
CN1-21a	NC	CN1-21b	NC	CN2-21a	NC	CN2-21b	42
CN1-22a	NC	CN1-22b	NC	CN2-22a	NC	CN2-22b	14,64
CN1-23a	NC	CN1-23b	88	CN2-23a	NC	CN2-23b	16
CN1-24a	87	CN1-24b	86	CN2-24a	NC	CN2-24b	NC
CN1-25a	85	CN1-25b	NC	CN2-25a	43	CN2-25b	44
CN1-26a	NC	CN1-26b	NC	CN2-26a	45	CN2-26b	46
CN1-27a	NC	CN1-27b	NC	CN2-27a	NC	CN2-27b	NC
CN1-28a	84	CN1-28b	83	CN2-28a	NC	CN2-28b	47
CN1-29a	82	CN1-29b	81	CN2-29a	48	CN2-29b	49
CN1-30a	80	CN1-30b	NC	CN2-30a	50	CN2-30b	NC
CN1-31a	NC	CN1-31b	79	CN2-31a	NC	CN2-31b	51
CN1-32a	78	CN1-32b	77	CN2-32a	16	CN2-32b	52
CN1-33a	76	CN1-33b	75	CN2-33a	14,64	CN2-33b	53
CN1-34a	74	CN1-34b	73	CN2-34a	54	CN2-34b	55
CN1-35a	72	CN1-35b	71	CN2-35a	56	CN2-35b	57
CN1-36a	70	CN1-36b	69	CN2-36a	58	CN2-36b	59
CN1-37a	68	CN1-37b	67	CN2-37a	60	CN2-37b	61
CN1-38a	66	CN1-38b	65	CN2-38a	NC	CN2-38b	NC
CN1-39a	14,64	CN1-39b	63	CN2-39a	NC	CN2-39b	NC
CN1-40a	62	CN1-40b	NC	CN2-40a	NC	CN2-40b	NC

(NC: No connection)

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