

To our customers,

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## Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

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

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# M32176T-PTC

## Converter Board for In-circuit Connection (for 32176 Group)

### Function

This converter is used exclusively for debugging with the emulator M32100T5-SDI-E, M32100T3-SDI-E, M32100T2-SDI-E or M32100T-SDI-E (Discontinued product) when the target is an M32176FxxFP of M32R Family 32176 Group MCUs and is connected in-circuit with the emulator. It allows debugging such as real-time tracing. It is not only for debugging but also for evaluation by mounting on the target system.

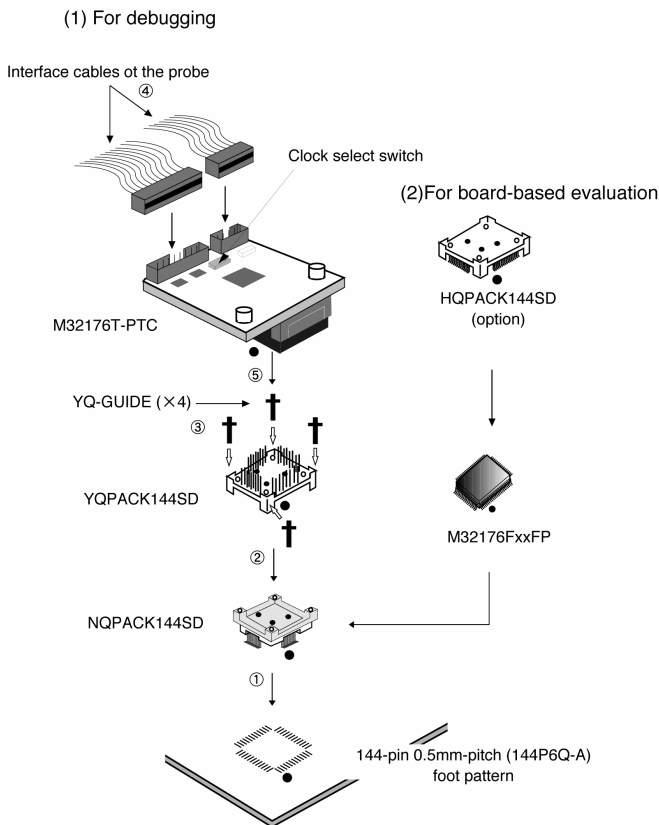
### Attaching Procedure

#### When debugging

- (1) Mount the NQPACK144SD on the foot pattern on the target system.
- (2) On top of (1), mount YQPACK144SD.
- (3) Screw down the YQPACK144SD with YQ-GUIDE's.
- (4) Connect the JTAG cables on the probe of the emulator to M32176T-PTC.
- (5) Connect YQPACK144SD and M32176T-PTC.

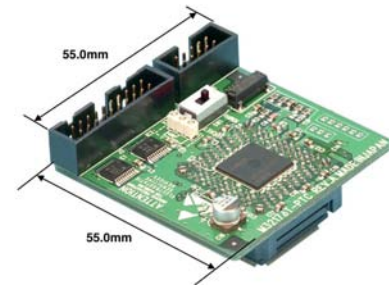
#### During board-mounted evaluation

On NQPACK144SD mounted on the target system, first put an MCU (M32176FxxFP), and then the HQPACK144SD (option).

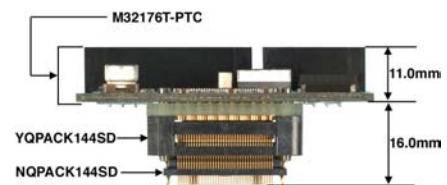


\* ① to ⑤ show the connecting procedure.  
 \* ●: No.1 pin

### External View and Dimensions



<< Side View >>

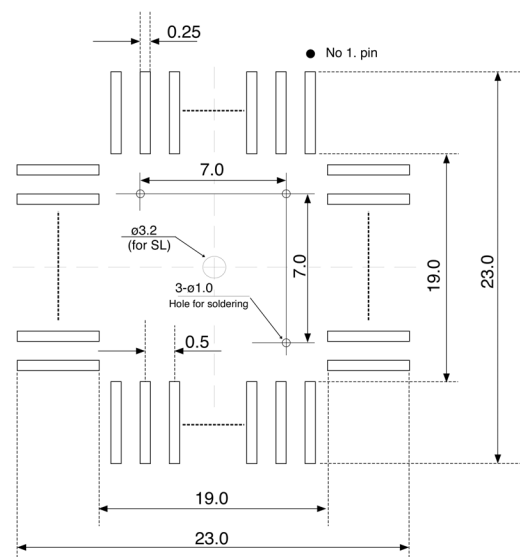


### Package Components

- M32176T-PTC converter
- YQPACK144SD (made by Tokyo Eletech Co., Ltd.)
- NQPACK144SD (made by Tokyo Eletech Co., Ltd.)
- YQ-GUIDE (× 4)
- Phillips screw driver (made by Tokyo Eletech Co., Ltd.)
- User's manual

\*Required components to connect to the target system are included with this product package. Each component made by Tokyo Eletech Co., Ltd. is optionally available alone from Tokyo Eletech Co., Ltd. See Appendix G "Contact Addresses for Partner Products".

### Recommended Foot Pattern (Unit: mm)



[Ordering Information] See Appendix H "Ordering Information".