

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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78K series

Tool Letter

In-Circuit Emulator IECUBE

QB-78K0KX2-ZZZ-EE

Description

The QB-78K0KX2-ZZZ-EE is a member of NEC's new in-circuit emulator series: IECUBE. This IECUBE member is used to emulate devices of the K_Line: 78K0/Kx2.

In-Circuit Emulator



USB Host Interface

- Rev. 2.0 supported

Device Emulation

- Frequency and voltage:
Same as the target device
 - max. up to 20 MHz
 - min. 1.8 V up to max. 5.5 V
- Memory capacity:
Same as the target device
 - up to 128 KB internal ROM
 - up to 7 KB internal RAM

Break Function

- Hardware - Execution: 8 points
Access: 2 points
- Software: 2000 points

Trace Functions

- Trace memory capacity of 128 K frames x 160 bit
- Trace events can be: Section, qualify, execution event and access event

Program Execution Function in Real Time

Real Time RAM Monitor Function

- Whole RAM area

Time Measurement

Clock: CPU clock or other dedicated clock
Maximum measurement: 24 hours
Maximum resolution: 20 ns
Timers used for measurement: 8
Minimum, maximum and average

Attachments

Software:

- Complete IAR Embedded Workbench™ (size limited to 16 Kbyte hex code)

Hardware:

- Power supply
- USB interface cable
- USB Flash programmer (PG-FPL3)

In-Circuit Emulator



In-Circuit Emulator IECUBE

QB-78K0KX2-ZZZ-EE

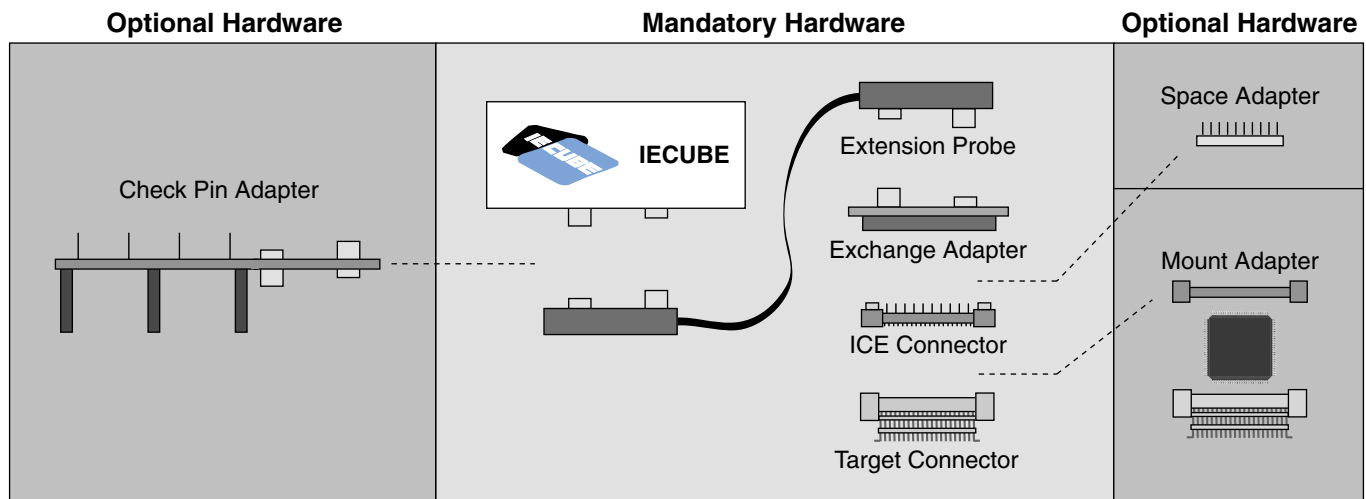
Socket Tool Configuration

	80GC	80GK	64GB	64GC	
Extension Probe	QB-80-EP-01T				Mandatory
Exchange Adapter	QB-80GC-EA-01T	QB-80GK-EA-01T	QB-64GB-EA-04T	QB-64GC-EA-03T	
ICE Connector	QB-80GC-YQ-01T	QB-80GK-YQ-01T	QB-64GB-YQ-01T	QB-64GC-YQ-01T	
Target Connector	QB-80GC-NQ-01T	QB-80GK-NQ-01T	QB-64GB-NQ-01T	QB-64GC-NQ-01T	
Mount Adapter	QB-80GC-HQ-01T	QB-80GK-HQ-01T	QB-64GB-HQ-01T	QB-64GC-HQ-01T	Optional
Check Pin Adapter	QB-144-CA-01				
Space Adapter	QB-80GC-YS-01T	QB-80GK-YS-01T	QB-64GB-YS-01T	QB-64GC-YS-01T	

	64GK	52GB	44GB	30MC	
Extension Probe	QB-80-EP-01T				Mandatory
Exchange Adapter	QB-64GK-EA-04T	QB-52GB-EA-02T	QB-44GB-EA-03T	QB-30MC-EA-02T	
ICE Connector	QB-64GK-YQ-01T	QB-52GB-YQ-01T	QB-44GB-YQ-01T	QB-30MC-YQ-01T	
Target Connector	QB-64GK-NQ-01T	QB-52GB-NQ-01T	QB-44GB-NQ-01T	QB-30MC-NQ-01T	
Mount Adapter	QB-64GK-HQ-01T*	QB-52GB-HQ-01T	QB-44GB-HQ-01T	QB-30MC-HQ-01T	Optional
	QB-64GK-HQ-02T**				
Check Pin Adapter	QB-144-CA-01				
Space Adapter	QB-64GK-YS-01T	QB-52GB-YS-01T	QB-44GB-YS-01T	QB-30MC-YS-01T	

* non OCD devices, ** for OCD device: μ PD78F0138HD

Order Number IECUBE In-Circuit Emulator: QB-78K0KX2-ZZZ-EE



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