

The QB-R5F10PPJ-TB is a target board used for evaluating microcontroller operations, using the E1, the Renesas Electronics on-chip debug emulator with programming function.

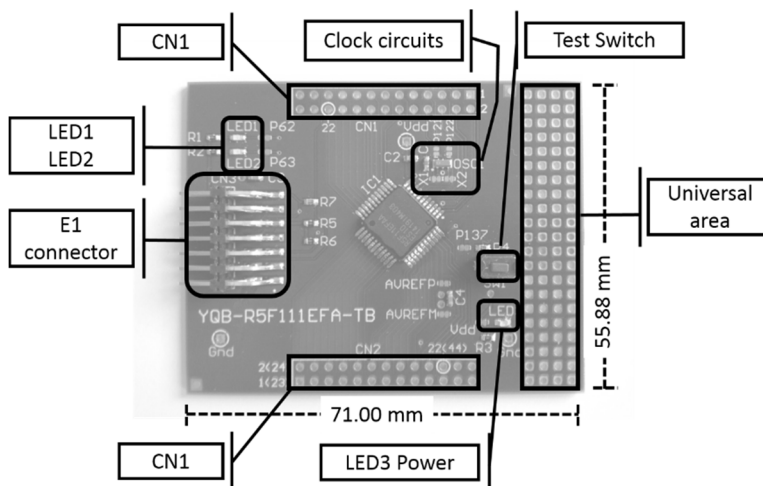
**(1) R178/G1G target board (YQB-R5F11EFA-TB) features**

- Incorporates RL78/G1G (R5F11EFAA).
- A 20MHz resonator and a 32.768kHz resonator are mounted
- Equipped with universal area (2.54 mm pitch)
- Supports both flash memory programming and on-chip debugging (using TOOL0 pin)
- Highly extendable; peripheral board connectors are equipped with microcontroller pins

**(2) Hardware specifications**

CPU R5F11EFAA	Main clock operating frequency	20MHz, part number CSTCE20M0V51-R0
	Sub clock operating frequency	32.768kHz
Embedded parts	CN1, CN2: Peripheral board connectors (2.54 mm pitch), 26-pin socket X 2 (pad only)	
	CN3: 14-pin connector (for E1 connection)	
	Power LED: Red X 1 (LED3)	
	Test LED: Yellow X 2 (LED1 connected to P62, LED2 connected to P63)	
	SW: SW1 (connected to P137)	
	Main clock (OSC1): 20 MHz resonator(connected to X1 and X2)	
Sub clock (OSC2) : 32.768kHz resonator(connected to XT1 and XT2)		

**(3) Dimensions and parts layout**



**Pattern on the board:** Splitting this wiring leaves open the relevant circuit ( ).  
To reconnect the circuit, short the circuit by soldering ( ).  
When using P66 and P67, cut off the short pad on the left side of LED. Showing of the pad on circuit diagram. open: short:

**(4) Notes on use**

- Renesas Electronics will not provide any support for this board, but the board can be exchanged with a new product only when it has an initial failure.