

FemtoClock™ 3 Wireless (RC381XX)

Programmable Clocks Live Bench Measurement Tool Step-by-Step Guide



renesas.com/clocklivebench

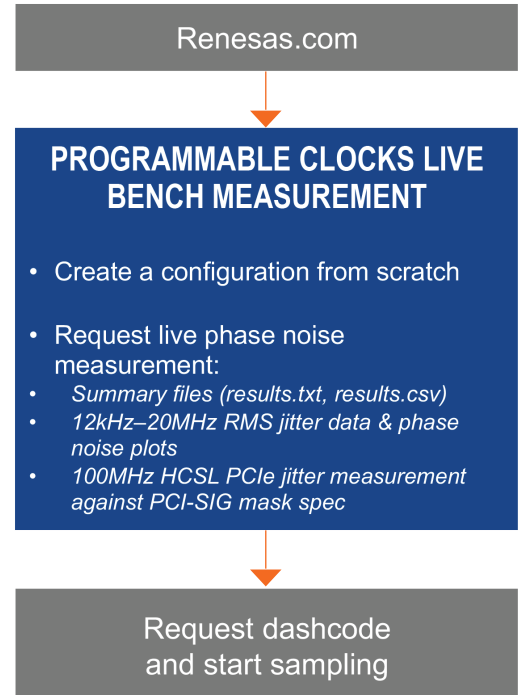
SYSTEM OVERVIEW

SYSTEM PURPOSE

- Instant access to automated jitter measurements for Renesas' flagship clock devices.
- Support PCIe Gen6/7 measurement against latest spec.

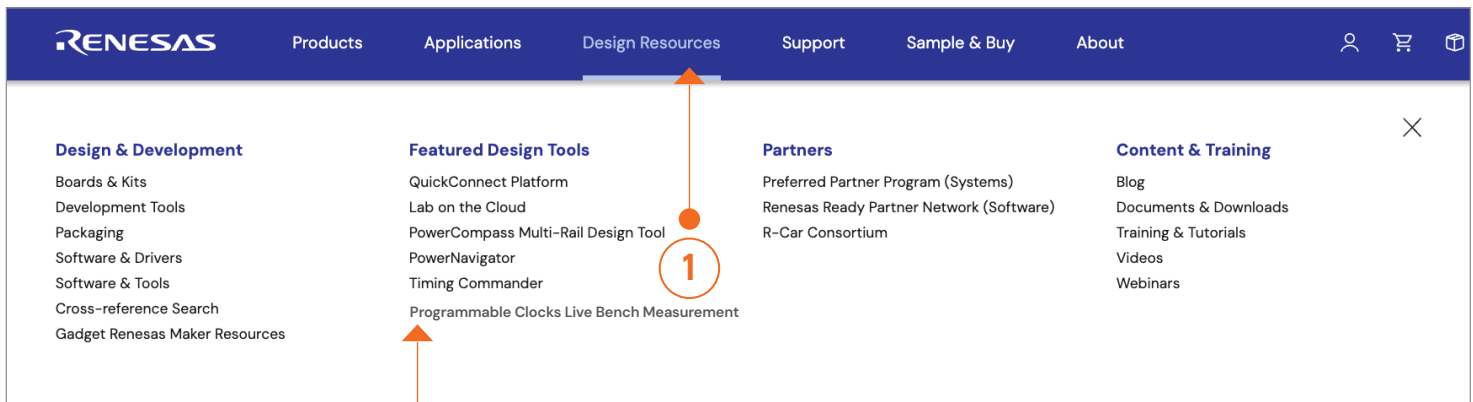
SYSTEM BENEFIT

- No EVB or lab equipment needed.
- Easy dashcode generation and sampling process.
- Most Renesas timing devices support multiple configurations, and once qualified, can be used across different platforms.



HOW TO FIND THE TOOL

Access Programmable Clocks Live Bench Measurement Tool from Website:
Design Resources → Programmable Clocks Live Bench Measurement



SELECTING THE FAMILY AND VARIANT

Clock & Timing Solution

Lab on the Cloud – Programmable Clocks LiveBench Measurement

This system will help you:

- Create a configuration from scratch or import an existing .rbs file from RICBox
- Request a live phase noise measurement
- Request the creation of a custom orderable part number (dash code)

The system supports the device families shown to the left. Once you select the family and product, use the library icon to get a list of links to more information.

[View quick user guide](#)

Select Family *

FemtoClock3

VersaClock7

ProXO

FemtoClock3-Wireless

1 Select Product Family– FemtoClock 3 Wireless

Select Product *

RC38108A1

RC38108A2

RC38112A1

RC38112A2

2 Select FemtoClock 3 Wireless Variants

3 Click "Submit" once finished



CREATE OR LOAD A CONFIGURATION

Option 1: Importing an existing RBS file*

CONFIGURATION | OTP | RESULT

INPUTS | DPLL | OUTPUTS

Crystal

Frequency: 54MHz

Load Capacitance (pF): 8

DPLL

Operation Mode: Synthesizer

Reference Clocks

REF0: CLKIN0

REF1: CLKIN1

REF2: CLKIN2

REF3: CLKIN3

REF4: nCLKIN3

REF5: nCLKIN3

REF6: nCLKIN3

Select "Import RBS" and upload your .rbs file **1**

IMPORT RBS **SUBMIT** **2** Click "Submit"

Progress log

- driver instance is created

Error(s)

Warning(s)

Submit RBS file

Enter the file name.*

RC38108A1 Testing **3** Enter file name

This file name is available.

Save and Upload **4** **Save**

Note:

- **Save and Upload** - Generate RBS file and upload to server.
- **Save** - Only generate RBS file.

Upload your file name to the server

*RBS file is generated using Renesas RICBox GUI. For more details, please see Appendix.

CREATE OR LOAD A CONFIGURATION

Option 2: No RBS file. Create new configuration from scratch.

1 Enter requirements

2 Enter input, enable SSC (PCIe), enter output frequencies

3 Request dashcode

4 View status of test

Progress log

- driver instance is created

Error(s) 0

Warning(s) 0

INFO SUPPORT default IMPORT RBS SUBMIT

GET THE RESULTS

Results – Get the results (including the RBS file), phase noise text files, and phase noise graphs. Also include PCIe analysis if applicable.

Generate Dashcode – Redirect link to renesas.com to start the dashcode generation and sampling process.

RBS files – Save this .rbs file locally if you wish to generate dashcode later.

Click to download rbs. file

Click to download results

Count of stored results 7 / 20

Sr.No	Product	RBS Files	Results	Generate Dashcode	Action
1	RC38108A1	adam_2024setp16_0646PM.rbs	Download	GENERATE	
2	RC38108A2	adam_2024sept24_933am.rbs	Download	GENERATE	
3	RC38112A1	adam_2024oct01_826pm.rbs	Download	GENERATE	
4	RC38112A2	adam_2024oct02_1045am.rbs	Download	GENERATE	

If the result looks good, click to generate dashcode.

GENERATE DASHCODE

CONFIGURATION OTP **RESULT**

After confirming the result looks good, Click "GENERATE" to get unique dashcode 1 1 / 30

Sr.No	Family	Product	RBS Files	Results	Generate Dashcode	Action
1	FemtoClock3W	RC38108A1	RC38108A1 Testing.rbs	Download	GENERATE	

Click "CONTINUE" 2

You will be redirected to Renesas custom Part Configuration Utility for this product

CONTINUE CLOSE

RENESAS [Products](#) [Applications](#) [Design Resources](#) [Support](#) [Sample & Buy](#)

Products / Clocks & Timing / Jitter Attenuators with Frequency Translation / RC38108 / Customize

RC38108 Custom Part Configuration Utility

Use this form to upload your configuration file

rbs file *

RC38108A1 Testing.rbs (331.74 KB) Remove

Select a **RC38108A** configuration file (.rbs) from your computer.

Supplied Addendum

RC38108A1_datasheet_addendum.pdf (257.41 KB) Remove

OPTIONAL: Select a **RC38108A** addendum file (.pdf) from your computer.

The RBS file and addendum will be automatically uploaded to the website

GENERATE DASHCODE

Customer Name	Kiki
Company	Renesas
Project Name	Testing
Application	Sample
Sample Schedule	Sample

Comments / Special Requests

Upload Clear and start over

Enter project informations

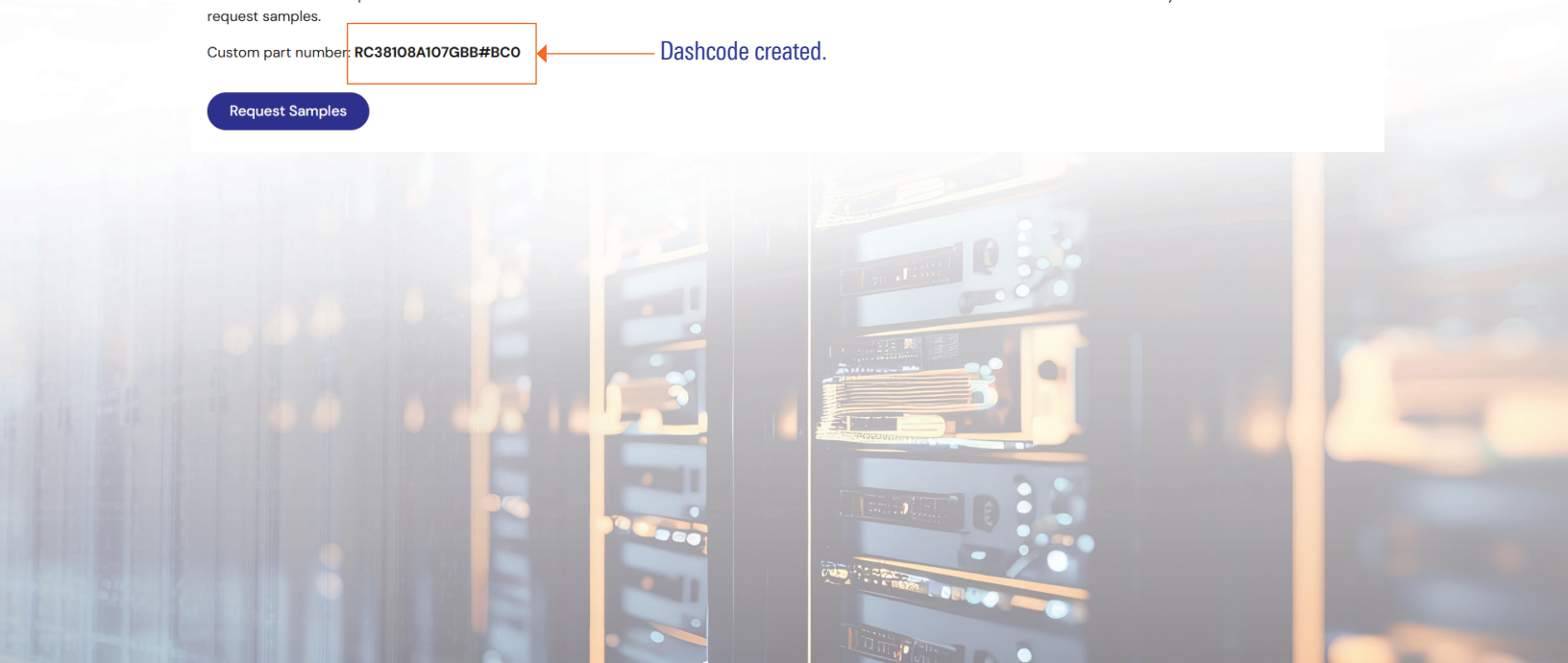
Click "Upload" to generate unique dashcode

RC38108 Custom Part Configuration Utility

Success! Your custom part number RC38108A107GBB#BCO and documentation has been created. The information below has been emailed to you. Click the link below to request samples.

Custom part number: RC38108A107GBB#BCO ← Dashcode created.

Request Samples



NOTE

Storage Limit

- Max 20 test results per user
- Delete older results when full (check counter on results screen)

RBS File Matching

- Imported RBS must match the selected device

Test Queueing

- Requests run one at a time
- Multiple submissions will be queued

Support Scope

- System measures provided configurations only
- For optimization, an application engineer is still needed

GETTING HELP WITH SYSTEM

For manual jitter requests or system issues, please submit on JIRA at:
<https://clocking.atlassian.net/servicedesk/customer/portals> → Renesas Timing Support → TPD Support
→ Product Family "FemtoClock 3 Wireless (RC383xx)"

The screenshot displays the TPD Help Desk interface. At the top, there is a search bar with the text "Search for information". Below this is a "Contact Us" section with a link to "TPD PLM/Apps product owners" and a note for EVB users. The "Featured portals" section contains two cards: "Renesas Timing Support" (highlighted with a red box and a circled '1') and "TPD Supply Escalation". Below the featured portals is a "Direct Contact Info" section with a link to the contact page. At the bottom, there is a "What can we help you with?" section with a "TPD Support" card (highlighted with a red box and a circled '2').

Welcome to the TPD Help Desk

Search for information

Contact Us
Direct person contact or feedback on particular product or services: [TPD PLM/Apps product owners](#).
For EVB please proceed to [link](#) for sample request or order through distribution.

Featured portals

1

Renesas Timing Support
Please submit Applications Engineering technical support requests here.

TPD Supply Escalation
We no longer support escalation from this portal.
For your request, please use the Escalation tool.

Direct Contact Info
<https://renesasgroup.sharepoint.com/sites/IIBU-TPD/SitePages/Contacts.aspx>

TPD Help Desk / Renesas Timing Support

Renesas Timing Support
Please submit Applications Engineering technical support requests here.

What can we help you with?

2

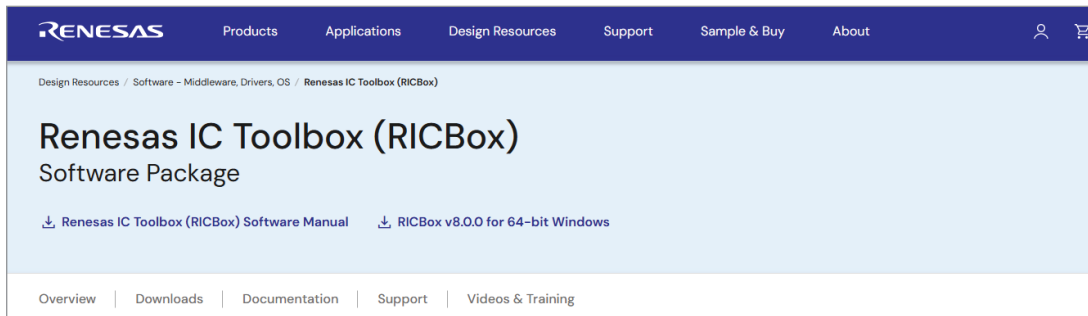
TPD Support

APPENDIX

WHAT IS RICBox?

Renesas IC Toolbox (RICBox) is a software platform that lets users:

- Configure Renesas devices via evaluation kits connected to a PC
- Build configuration profiles for devices with non-volatile memory
- Ensure correct startup behavior, especially for clock devices needing pre-set configurations
- Especially useful when you want your device to boot up with a specific setup automatically



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