This manual is a user’s guide to using the GNU Tools website. It includes visual examples of all functionality throughout the site and provides insights into various topics not covered by regular navigation.
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1 General Overview

Welcome to the GNU Tools website!

This User Guide has been created keeping in mind the regular user for the website, and tries to describe the various use-case scenarios that the website may be used for.
1.1 Accessing The Website

The website may be currently accessed at the following URL: https://gcc-renesas.com/

The website uses SSL throughout its entire domain, and all HTTP requests are transferred through HTTPS, for permanent encrypted traffic and enhanced log-in security.
1.2 Accessing Content

Accessing content throughout the website may be done in multiple ways. Latest news/posts/updates will always be visible in the front-page:

There are two menus which facilitate access to the website’s functionality and features. The primary menu is the one at the top of the page and contains the most common links and topics of interest for visitors:

The second menu is the one just below the primary menu above, and contains a more detailed layout structure of the website, including links to various content which is not accessible from the primary menu:
1.3 Registration Process

The registration process for the website becomes mandatory whenever a visitor would like to either:

- post comments to any page;
- ask questions, vote up or down, add comments to the discussion forum;
- submit support requests through the Support area.

For example, to be able to download the latest version of the GCC for Renesas, here is how the page would look like:

Welcome to the GNU Tools website

GNU Tools are free, user-friendly GNU toolchains for Renesas micros with free customer support across the world.

ACTIVE TARGETS  LEGACY TARGETS  DOWNLOAD

Click here to download the latest version of the GCC for Renesas 4.8.0.201603-GNURX
Windows Toolchain (ELF)

- Active targets: refers to up-to-date toolchain versions.
- Legacy Targets: refers to the availability of older toolchain versions.
- Download: to download the latest toolchain version available for Windows.

If they attempt to log in, they will be prompted with the log in screen.
1.3.1 Logging In

If they attempt to log in, they will be prompted with the log in screen.

If the visitor does not have an account, they can click the Register link in the log in screen (see picture above) and they will be able to subscribe to our system:
Registration requires the following data to be entered: an adequate username chosen by the user, an e-mail to use throughout the website, a password, some contact details such as: the user’s telephone number, personal address, country of residence, company name, company address, company telephone number, company URL, company position.

Some technical details: host operating system, target OS, ‘if’ other target OS, target hardware and the purpose of the registration: application domain, the purpose of using CyberTHOR GNU Tools (for example non-commercial use, commercial product-development).

To complete the registration process please agree, by checking the I agree to be bound by this website’s Terms of Use box and insert the random generated code and click on the Register button.

The username is the one they will use when logging in to the site in the future. Once they complete the registration, they will receive an email with a confirmation link, to create a password and activate their account.
Chapter 1

1 General Overview

You should receive an e-mail in the following format:

[GNU Tools] Activate JaneDoe

GNU Tools <no-reply@cyberthonstudios.com>

To activate your user, please click the following link:

https://gcr-renewas.com/wp-login.php?loginkeyfile=57baf5f1b5f49f29%26f%3Dtrue%26r%3Dtrue%26w%3Dtrue%26d%3Dtrue%26t%3Dhttps://gcr-renewas.com/wp-login.php?
loggedout=true

After you activate, you will receive another email with your login.

After the activation, you will receive an email with your contact details:

[GNU Tools] Your username and password info

GNU Tools <no-reply@cyberthonstudios.com>

Welcome to the CyberTHOR Studios - GNU Tools website!

Please find your login information below:
Username: JaneDoe
Password: abracadabra

When you install software from our website, you will also need the following information:

Activation Code: xynK5G

(If you are using an older toolchain release, please use this activation code instead: ABEGUO)

To log in to your account, please visit the link below:

Thank you for signing up and we are happy to have you on board!

The CyberTHOR Studios Team

Once the user has logged in, they will be taken to the website again, however this time a permanent menu will appear at the top of the website, granting them access to various features only available to registered users:
1.3.2 Logging Out

Logging out of the website can be easily done by accessing the top right menu of the site (after logging in) and choosing the Log Out option:

![Log Out Menu](image)

1.4 Changing Language

The site has been designed and built to support multiple languages. At this moment, English and Japanese are the only two languages which have been added into the system (however, more languages can be easily supported, should they be needed).

To change the language, one can proceed in various ways:

- choose the adequate language from the primary menu of the site, right at the top of the page:

![Language Menu](image)

- choose the language from the navigational menu to the right side of the screen (only available on certain pages, usually those containing content or information):

![Language Options](image)
1.4.1 Switching between languages

Switching between languages allows the visitors to view the appropriate content in their native language. For example, switching to Japanese (see Changing Language) will display all relevant content in Japanese:
Chapter 2
2 Discussion Forum

The discussion forum is a place where registered users may post questions, may read about other user’s issues and potentially respond to them, or may offer assistance with the responses provided by other people (through a built-in voting system).
2 Discussion Forum

2.1 Overview

The discussion forum is accessible in various ways, depending on the topics of interest to the user. The SUPPORT menu contains the following options:

- **About Our Support** (here you find information about our response time depending on the reported problem: bugs, bug fix);
- **New Support Query** (for technical support, you may open a new support ticket, providing some information about the type of the issue);
- **My Support Requests** (here you can manage your support requests, check their status);
- **Forum** (for technical discussions and general questions);
- if the user wishes to see all questions in the discussion forum, not pertaining to any specific category, they can choose the **Forum** option in the SUPPORT menu (part of the secondary menu) which contains:
  - Ask A Question;
  - View All Topics;
  - View All Questions;
  - Topics.
SUPPORT - Forum

Ask A Question. There are two ways to submit a query.

1. Directly from the SUPPORT - Forum - Ask A Question;

2. By clicking red Ask question button, while in one of the Topics. This can only be done while in one of the Topics (General, Toolchain Support, Binutils Support and so on).
SUPPORT - Forum - View All Topics

User can access each category for a more filtered approach to discussions on the Forum.

By selecting a category user will be accessing the section seen in the print screen below:
Additionally, once in the discussion forum, you can choose to sort the content based on category by clicking the **Sort by** button: SUPPORT - Forum - Topics - General - Sort by.

There are two ways of reaching the different categories:

1. **Support - Forum - Topics - General - Category**;

2. The **Forum** option also acts as a sub-menu for the different categories of interest to the users, in which case the user may simply choose to view only a specific topic of the discussion forum, by choosing it from the sub-menu that appears:
SUPPORT - Forum - View All Questions

- **e2 how to connect manually with r78-elf-gdb.exe to e2-server-gdb.exe**
  - 262 views
  - Andrea Felra answered November 29, 2016
  - Renesas RL78

- **Exception for GNUARM-NONEv15.01-EABI**
  - 189 views
  - GNU Tools Support edited question November 19, 2016
  - Toolchain Support

- **GNUARM-NONEv15.01-EABI Compiler Crash**
  - 690 views
  - GNU Tools Support commented on answer November 17, 2016
  - GCC Support
2.1.1 Finding User Information

To find information about the registered users who post questions, answers or comments in the forum, simply hover your mouse over their avatar:

Additional information may be found by clicking the small image avatar of that certain user:

In the **About** area (above), you can observe various statistics about the user’s reputation and statistics. A user’s reputation is computed based on his performance in the forum - reputation increases with the following activities of that registered user:

- if the user has a lot of valid responses (responses which receive many thumbs up);
- if the user has responded correctly to numerous questions;
- if the user has a lot of activity on the forum.
By the same logic, a user’s reputation will drop if they perform the opposite actions of those which are accounted for increasing the reputation.

In the same page, you can find information about how the user’s reputation was achieved, with detailed analysis, by clicking **Reputation**:

The list of questions that the user has posted is available in the Questions area:
The list of questions that the user has posted is available in the Questions area:

2.1.2 Personalizing Your Avatar

Personalizing a user’s avatar is easy. First, you need to be registered on the site and logged in. After that, you need to open the profile page of your own user (see Finding User Information):

To personalize your avatar’s image, click the upload button to the left of the circle:
After you do so, your avatar will become available:

![Avatar](image)

You can also personalize the background of your profile page, by clicking the upload button to the top left of your background image:

![Upload Button](image)

The different statistics are explained in the **Understanding Statistics** topic.

This shows the list of your active subscriptions (topics of interest):

<table>
<thead>
<tr>
<th>My subscriptions</th>
<th>Questions</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Subscription" /></td>
<td>0 answers</td>
<td>41 mins</td>
</tr>
<tr>
<td><img src="image" alt="Subscription" /></td>
<td>4 answers</td>
<td>36 mins</td>
</tr>
</tbody>
</table>
2.1.3 Understanding statistics

Each question that a user posts has various details which are relevant to analyse:

- clarity/relevance of question (through the thumbs up/down voting system);
- usefulness of the topic;
- capacity to reproduce the same issue by one or more users (through the voting & commenting system);
- last time the user who had posted the question was online (through the Active row in the Question stats information box);
- the interest in the topic (through the Views row in the Question stats information box);
- the number of answers offered by other registered users (through the Answers row in the Question stats information box);
- express interest in the topic discussed (through the Followers row in the Question stats information box);
2.2 Submitting Queries

Submitting queries in the forum is simple. After accessing the forum page (see Overview), the user can click the SUPPORT - Forum - Ask question button to ask a new question.

This will allow them to enter the details of the question. If the user is not logged in, they will see a page asking them to log in:

Otherwise, if the user is already logged in, the following page will appear:

The user can choose a title for the question, a category for the forum in which to place the question, a description of the problem/issue (editable in a WYSIWYG manner), and can also choose to make the question visible to the admin/moderator only (private question). Private questions are not visible to the public, only to the user that has initially posted the question and to the site administrator/ moderator team. Once ready to post the question, user can click Post question and the question will be listed.
After submitting the question, the new question posted will appear in its own dedicated page:

In this page, the user can perform various tasks. In the picture above, the JohnDoe user has posted a private question, which is also detailed in a small grey box just below the question itself. The user can change the status of the question, from Private to Open (public) by clicking the Status link, which will show the following menu:
Marking question as *Open* will cause the display to change and the user to be notified of the change:
2.2.1 Responding to queries

Responding to queries is only possible to registered and logged in users. To respond to a certain question, user needs to click the question in the Forum and a similar page to the following will appear:

The list of answers/comments made by the other registered users will be available here. At the end of the page, there will be an option to post a response as well:
To answer, simply write the text in the edit field provided (and mark the answer as private, if it is only for the administrator/moderator to see), then click **Post answer**. After posting, the list will be updated automatically with the answer:
2.2.2 Following topics of interest

Following topics of interest is easy, however only available to registered users, after logging in. If the user is not logged in, an appropriate message telling them that they need to log in will be displayed in the site.

To follow a question/topic of interest in the forum, click the **Follow question** link in the question page:

![Follow question link](image)

After following the topic, each comment/answer posted to this question will be sent in a notification email to the registered user’s email address (the one used to register on the site):

![Follow status](image)

This allows users to be able to get instant notifications of all updates to the topics of interest for them.
2.2.3 Following activity of users

To follow all the activity that a user performs in the discussion forum, open the user’s profile thumbnail (see Finding User Information):

and click the Follow button that appears:

From this point forward, the user will be notified by e-mail of all activity that the user followed performs.
2.3 Commenting On Responses

Commenting on a question or on an answer can be done directly from the page of the question, by clicking the Comment button:

A popup will open, allowing the user to enter their comment:

After they enter it in the edit field provided, after clicking Comment the comment will immediately be visible:

If the comment is awaiting moderation (depending on the topics of interest), it will only become available to all other registered users to the forum after being approved by a moderator).
2.3.1 Voting responses

Voting responses allows registered users to express their opinions on other people’s suggestions or answers to the issues raised by other community members. This can be accomplished directly from the question page, by clicking the thumbs up/down buttons accordingly:

After voting, the vote becomes instantly visible to all other community members and site visitors:

2.3.2 Flagging questions

Flagging questions is a useful method for drawing attention to the site administrator/moderators of any inappropriate or irrelevant content posted in the forum. Flagging may be done directly from the question page, by registered users only, by clicking the ... (More action) button:

In the menu that appears, click the Flag option, after which a confirmation message will appear:
3 Support Requests

Support requests are a good way to ask for assistance from the site administrators/moderators, without exposing your code/issue to the wide public. Although a similar functionality is provided in the forum, the purpose of having separate support requests is to allow the user to track down the progress of the issue intimately and observe the various stages it goes through as it is being addressed by the administrators/moderators.

Only registered users may issue support requests.

There are two ways to issue support requests:

- the easiest way is to click the Support button, which is permanently visible throughout the website in the top right corner:

- the second approach is to select the My Support Requests option from the SUPPORT menu in the secondary menu of the site:
3.1 Overview

After opening the support request area, the user will be able to see a dashboard where they can:

- open a new ticket;
- view list of open tickets.

All ticket-pertaining operations (opening, closing, responding to tickets) are implying an instant e-mail notification of the user in question. This ensures that registered users receive feedback in real-time, as their raised issues are being addressed.
3.2 Opening a Ticket

To open a new ticket, click the Open Ticket button in the My Support Requests area of the site:

This will show a new window, where you should enter the details of the ticket:
The following information is required:

- the email of the user submitting the ticket (will be automatically populated with the email of the registered user);
- a name of the user submitting the query (required; it is not the same as the username in the Registration Process);
- the department to which this ticket is addressed to;
- the priority of the ticket (Low/Normal/High/Urgent) a subject of the ticket;
- a summary of the issue;
- any relevant attachments for the ticket (various file types are supported, and these are fully configurable in the administrator backend; file sizes of up to 256 MB are acceptable, but this is also configurable in the administrator backend);
- to add more files when uploading content, just click the Add More File button.

Once the user has finished writing the relevant information, they must press the Save Ticket button to create the ticket. The ticket will become immediately available in the list of open tickets for that user.
3.2.1 Responding To Tickets

To respond to a ticket, click the subject line of that ticket:

This will show a window where you can see the entire feedback for your ticket:
At the bottom of the page for that ticket, there is the reply option:

Replies can also contain attachments. To close the ticket after replying, check the Close on reply box accordingly, then click Post Reply.
3.2.2 Closing a ticket

Closing a ticket can be done in two ways:

- by closing the ticket with a reply (see Responding To Tickets);
- by closing the ticket directly from the list of tickets open.

To close a ticket directly without replying, first click the ticket’s subject line in question:

Next, in the ticket window, click the Close Ticket option to the right of the ticket status:

After closing the ticket, it will be visible in the Closed tickets area of the My Support Requests page:
3.3 Viewing and searching tickets

The list of tickets may be access by clicking the My Tickets button in the My Support Requests area of the site:

This will open up a window similar to the following:

This page allows the user to quickly access the open tickets (Open), the closed ones (Closed), those which have been answered already (Answered), or all tickets in the system (My Tickets).
Each ticket may be sorted by subject (Subject column), priority (Priority column), ticket ID (Ticket ID column), answer status (Status column) and time of submission (Created column). Additionally, it shows the current status of the tickets:

To search tickets by ticket ID, subject, email or subject, use the search feature at the top:

If you click the + button to expand the contents, you will be able to perform advanced searches (based on ticket ID, from/email fields, department, priority, subject, starting and ending dates):

To reset the search form, click the Reset button. To begin the search and list all relevant tickets, click Search.
Chapter 4
4 Toolchains

4.1 GNU Renesas toolchains use the GPL License

GNU Tools, GNU toolchains for Renesas microcontrollers are free, user-friendly products and they use the GNU General Public License (GPL).

For more information about the GPL license terms, please click on the links below:

- **Licenses**: https://www.gnu.org/licenses/licenses.en.html
- **GNU General Public License version 3**: https://opensource.org/licenses/GPL-3.0
- **FAQ**: https://www.gnu.org/licenses/gpl-faq.html

Terms of Use of GNU Tools website

At registration please read carefully the website’s (gcc-renesas.com) Terms of Use: https://gcc-renesas.com/privacy-policy/
4 Toolchains

4.2 Activation code

You may find the toolchain activation code at GNU Tools - Dashboard.

Note: Please be sure you are logged in, otherwise log in at: https://gcc-renesas.com/wp-login.php.

Here you can find the new and the legacy activation code in order to install the toolchains. If the new activation code does not work, then please use the legacy one to install the toolchains or contact us.

For more information about the activation code, you may find the FAQ section at gcc-renesas.com: Help - FAQ, https://gcc-renesas.com/help/faq/.
4.3 Toolchain installation

Download the toolchains from: gcc-renesas.com

To download the latest toolchains, for example the latest RX toolchains, go to: 
Products - RX - Download toolchains - Latest toolchains.

The toolchains are available for Windows and Linux OS.

Download the latest RX Windows Toolchain: GCC for Renesas 4.8.4.201701-
GNURX Toolchain

Note: you can also download some older legacy toolchains too: Products - RX -
Download toolchains - Legacy toolchains.

Install the toolchain:
Chapter 4

4 Toolchains

If you are not a registered user, please click on the Register button:

If you are a registered user, check the “I am a registered user” checkbox.

Introduce your authentication information:
Read and accept the Terms of Use:

Select the toolchain’s installation location:

You may select the components you want to install:
Select Start Menu Folder:

![Select Start Menu Folder](image1)

Ready to install:

![Ready to Install](image2)

Installing...

![Installing](image3)
Here you can find the toolchain’s Release Notes:

After the toolchain’s installation:
After the toolchain’s installation go to the Start Menu and checkout the installed components:
4.4 Toolchain integration in e2studio IDE

In the screenshot below, there are two newly installed toolchains which can be integrated in e2studio.

To create a simple new project in e2studio, go to: Help - Cheat Sheets - e2studio development - Create project using GCC Compiler - GCC Compiler for RX and follow the project generation steps.