
PeakRDL-Markdown

Marek Pikuła

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This package implements a Markdown exporter for the PeakRDL toolchain.

INSTALLING

Install from [PyPi](#) using pip:

```
python3 -m pip install peakrdl-markdown
```


QUICK START

2.1 Exporting to Python interface

The module integrates with PeakRDL CLI interface:

```
peakrdl markdown input_file.rdl -o output_file.md
```


LINKS

- [Source repository](#)
- [Release Notes](#)
- [Issue tracker](#)
- [PyPi](#)

3.1 Using with Sphinx

This PeakRDL extension can be used to include the SystemRDL description in Sphinx documentation. For now, there is no direct support for reStructuredText (will be added in future versions), but you can use `m2r2` Sphinx extension to import Markdown files. You can find a complete guide how to install and enable `m2r2` extension on the [project's website](#).

3.1.1 Example

As an example, we can use the following SystemRDL source:

```
addrmap some_register_map {  
  
    name = "RDL Example Registers";  
    desc = "This address map contains some example registers to show  
           how RDL can be utilized in various situations.";  
  
    reg {  
        name = "This chip part number and revision #";  
        desc = "This register cotains the part # and revision # for XYZ ASIC";  
  
        field {  
            hw    = w;  
            sw    = r;  
            desc = "This field represents the chips part number";  
        } part_num[31:4] = 28'h12_34_56_7;  
  
        field {  
            hw    = na;  
            sw    = r;  
            desc = "This field represents the chips revision number";  
        }  
    }  
}
```

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```

    } rev_num[3:0] = 4'b00_01;
} chip_id_reg @ 0x0;

reg {
    name = "Enable register";
    desc = "Toggle the peripheral enable on write";

    field {
        name = "Enable toggle";
        hw = r;
        sw = w;
        onwrite = wot;
    } enable[0:0];
} enable @ 0x4;
};

```

The generated Markdown file can be included with the following Sphinx statement:

```
.. mdinclude:: minimal_example.md
```

It generates the following output:

3.1.2 some_register_map address map

- Absolute Address: 0x0
- Base Offset: 0x0
- Size: 0x8

| Offset | Identifier | Name |
|--------|-------------|--------------------------------------|
| 0x0 | chip_id_reg | This chip part number and revision # |
| 0x4 | enable | Enable register |

chip_id_reg register

- Absolute Address: 0x0
- Base Offset: 0x0
- Size: 0x4

| Bits | Identifier | Access | Reset | Name |
|------|------------|--------|-----------|------|
| 3:0 | rev_num | r | 0x1 | — |
| 31:4 | part_num | r | 0x1234567 | — |

rev_num field

part_num field

enable register

- Absolute Address: 0x4
- Base Offset: 0x4
- Size: 0x4

| Bits | Identifier | Access | Reset | Name |
|------|------------|--------|-------|---------------|
| 0 | enable | w, wot | — | Enable toggle |

3.2 Changelog

All notable changes to this project will be documented in this file.

The format is based on [Keep a Changelog](#), and this project adheres to [Semantic Versioning](#).

3.2.1 Unreleased

3.2.2 0.1.2

Added

- Add option to generate addrmap up to given depth.

Changed

- Add node type to headings.

Fixed

- Fix *Generated from* section construction.

3.2.3 0.1.1

Changed

- Don't start writing to the file until it's generated.

Fixed

- Fix error on no supported members.

3.2.4 0.1.0

Added

- Basic SystemRDL Markdown exporter.