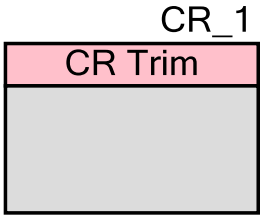
CR Trimming Functions (PDL_CR)

1.0



Features

- Frequency trimming setup
- Temperature trimming setup
- Register lock function
- Trimming data acquisition

General Description

The Peripheral Driver Library (PDL) High Speed Clock Rate Trimming (PDL_CR) component provides frequency trimming and oscillation temperature trimming. The fluctuation range of frequency accuracy due to process variation and temperature change can be reduced by configuring the trimming function. The high-speed CR trimming function consists of the frequency trimming setup unit and temperature trimming setup unit.

This component uses firmware drivers from the PDL_CR module, which is automatically added to your project after a successful build.

When to Use a PDL_CR Component

Use PDL_CR component when you need to trim clock signal.

Quick Start

1. Drag a PDL_CR component from the Component Catalog FMx/System/ folder onto your schematic. The placed instance takes the name CR_1.
2. There is no need to open Configure dialog. This component doesn't provide any parameters.
3. Build the project to verify the correctness of your design. This will add the required PDL modules to the Workspace Explorer, and generate configuration data for the CR_1 instance.
4. In the *main.c* file, set the configuration of the PDL_CR component and start the application. For detailed configuration information, refer to the Peripheral Manual Main Part, High Speed CR-trimming section.
5. Build and program the device.

Component Usage

After a successful build, firmware drivers from the PDL_CR module are added to your project in the pdl/drivers/cr folder. Pass the generated data structures to the associated PDL functions in your application initialization code to configure the peripheral.

Generated Data

Once the component is initialized, the application code should use the peripheral functions provided in the referenced PDL files. Refer to the PDL documentation for the list of provided API functions. To access this document, right-click on the component symbol on the schematic and choose "**Open API Documentation…**" option in the drop-down menu.

Code Examples and Application Notes

There are numerous code examples that include schematics and example code available online at the Cypress Code Examples web page.

Cypress also provides a number of application notes describing how FMx devices can be integrated into your design. You can access the Cypress Application Notes search web page at www.cypress.com/appnotes.

Resources

The PDL_CR component uses the CR (High-Speed CR Trimming) peripheral block.

References

- FM0+ Family of 32-bit ARM® Cortex®-M0+ Microcontrollers Peripheral Manuals
- Cypress FM0+ Family of 32-bit ARM® Cortex®-M0+ Microcontrollers

Component Changes

This section lists the major changes in the component from the previous version.

Version	Description of Changes	Reason for Changes / Impact
1.0	Initial Version	

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