

# OpenCPI

## SI5338 Component Data Sheet

OpenCPI Release: v2.4.6

## Summary - SI5338

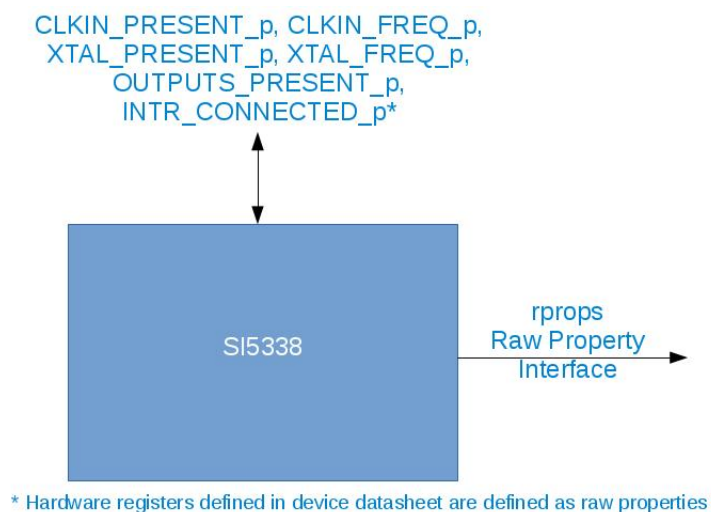
|                   |                     |
|-------------------|---------------------|
| Name              | si5338              |
| Worker Type       | Device              |
| OpenCPI Release   | v2.4.6              |
| Last Update       | 4/2019              |
| Component Library | ocpi.assets.devices |
| Workers           | si5338.hdl          |
| Tested Platforms  | Matchstiq-Z1(PL)    |

## Worker Implementation Details

The SI5338 device worker uses the raw property interface to expose the features and hardware registers of the SI5338 IC to the OpenCPI framework.

## Block Diagrams

### Top level



## Source Dependencies

### si5338.hdl

- assets/hdl/devices/si5338.hdl/si5338.vhd

## Component Spec Properties

| Name              | Type  | SequenceLength | ArrayDimensions | Accessibility       | Valid Range | Default | Usage                                       |
|-------------------|-------|----------------|-----------------|---------------------|-------------|---------|---------------------------------------------|
| CLKIN_PRESENT_p   | Bool  | -              | -               | Readable, Parameter | -           | 0       | Input Clock Presence Parameter              |
| CLKIN_FREQ_p      | Float | -              | -               | Readable, Parameter | -           | 0       | Input Clock Frequency                       |
| XTAL_PRESENT_p    | Bool  | -              | -               | Readable, Parameter | -           | 0       | Crystal Oscillator Input Presence Parameter |
| XTAL_FREQ_p       | Float | -              | -               | Readable, Parameter | -           | 0       | Crystal Oscillator Input Frequency          |
| OUTPUTS_PRESENT_p | Bool  | -              | 4               | Readable, Parameter | -           | 0       | Output Connection Presence Parameter        |
| INTR_CONNECTED_p  | Bool  | -              | -               | Readable, Parameter | -           | 0       | Interrupt Connection Presence Parameter     |

All other properties in the Component Spec are Raw Properties and were derived from the device datasheet[1]. The Raw Properties are intended to match the ICs hardware registers exactly.

## Worker Interfaces

### si5338.hdl

| Type             | Name   | DataWidth | Advanced       | Usage                                                                                                                                              |
|------------------|--------|-----------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| RawProp          | rprops | -         | Master=true    | Raw properties connection for slave I2C device worker                                                                                              |
| ControlInterface | -      | -         | Timeout=131072 | Control clock cycles required to complete property read/write. I2C transactions require additional clock cycles to complete than the default of 16 |

## Control Timing and Signals

The SI5338 HDL device worker uses the clock from the Control Plane and standard Control Plane signals.

## Worker Configuration Parameters

si5338.hdl

## Performance and Resource Utilization

si5338.hdl

## Test and Verification

There is no unit test for this device worker. The test and verification of this worker is covered in the Matchstiq I2C device worker. See the component datasheet of this worker for more details.

## References

- [1] SI5338 Product Data Sheet  
<https://www.silabs.com/documents/public/data-sheets/Si5338.pdf>