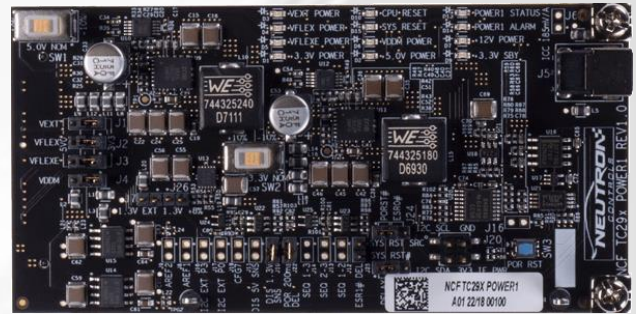




**Designed by Engineers for Engineers**

## Power Conversion Module

Interface Module for Power Conversion: 12V to 5V, 3.3V, 1.3V with margining and configurable reset delay



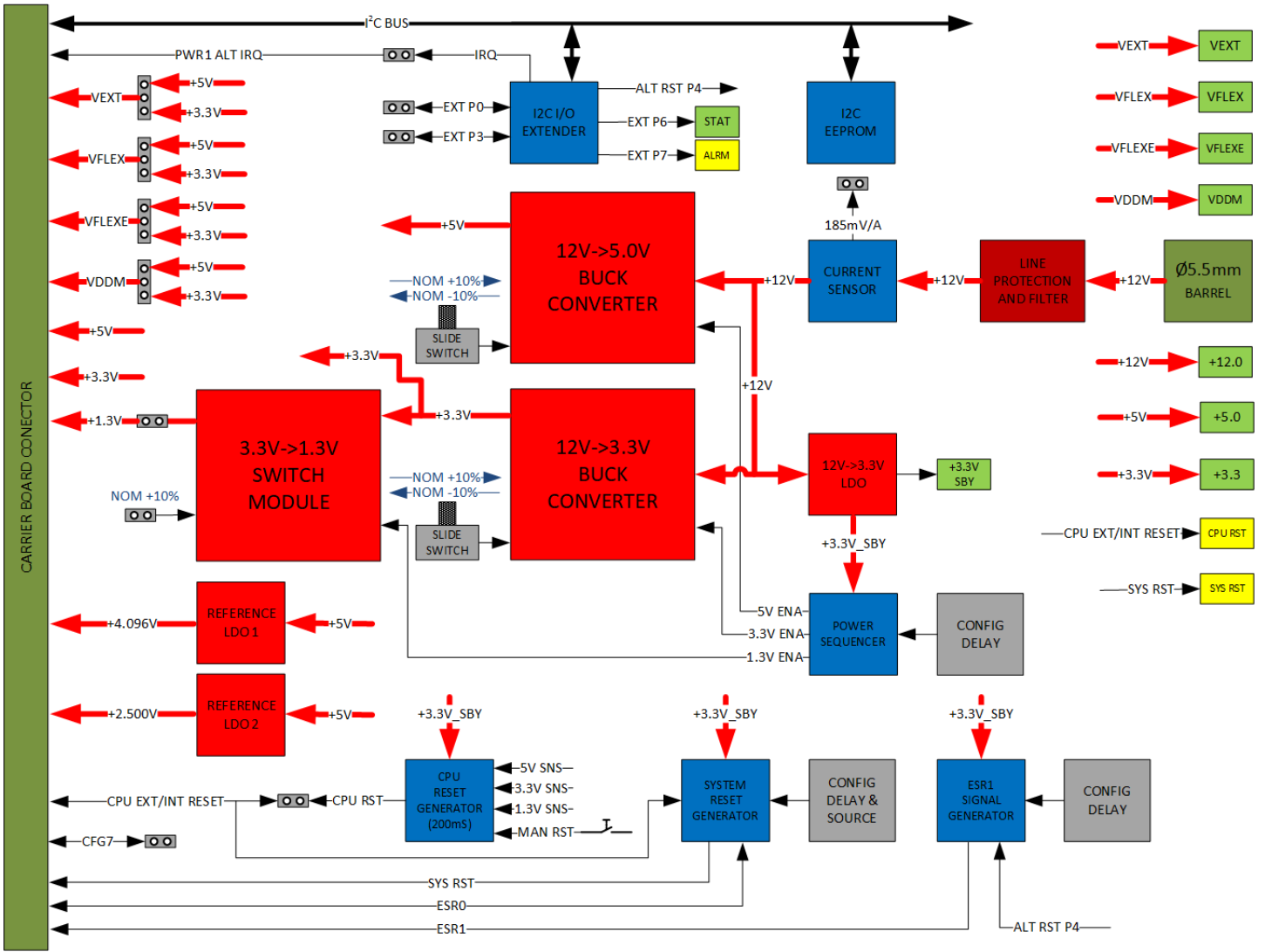
### Overview

- Designed for use with our REDline™ Carrier board, this Module provides the necessary power rails to supply the AURIX™ MCU Platform Module as well as other peripheral Modules and devices.
- The Module sources +5V, +3.3V and +1.3V from an externally connected +12V power supply. The +5V and +3.3V rails have a selectable  $\pm 10\%$  margining capability providing means for thermal and functional qualification.
- Two high-precision voltage sources provide low-noise and very low drift references for all available AURIX™ ADC peripherals.
- Multiple options available to configure power rails' sequencing, MCU and System reset delays as well as reset sources. A separate circuit allows simulation of ESR0 and ESR1 signals.
- A complete hardware development support package is available including: schematics, BOM, layout, gerbers, PCB stack-up, and low EMI design rules.

### Features

- +12V to +5V and +12V to +3.3V switching DC/DC regulators based on Infineon IR3839 SupIRBuck™ integrated regulator with 96% Maximum Efficiency.
- Up to 6A continuous current output on +5V and +3.3V, adjustable switching frequency from 250kHz to 1.5MHz (600kHz by default)
- Complete overcurrent and thermal protection
- $\pm 10\%$  margining is easily applied by sliding switches while the Module is powered on.
- Jumper selectable sources for: VFLEX, VFLEXE, VDDM and VEXT MCU supply rails.
- Optional +1.3V core voltage supply, with selectable +10% margining, can be used for AURIX™ MCU qualification and testing.
- Non-invasive accurate system current measurement using Hall Current Sensor
- Low noise and very low drift +4.096V and +2.500V voltage references for use with ADC
- Versatile Reset sequence circuitry with adjustable delay and CPU reset source; System reset and NMI signal emulation.
- LED indication on all supply rails and reset signals.

# Power Conversion Module



## Compatibility

- The Module is designed to work with AURIX™ Base Carrier Development Platform

## Ordering Information

- Module Part Number: **RDL-ITFPWR-001**

