



# REDLINE™

## RAPID ENGINEERING DEVELOPMENT SYSTEMS

Modular Platforms Designed by Engineers for Engineers

### RDL-ITFPWR-001

**INTERFACE MODULE FOR POWER CONVERSION:  
12V TO 5V, 3.3V, 1.3V WITH MARGINING AND  
CONFIGURABLE RESET DELAY**

#### Overview

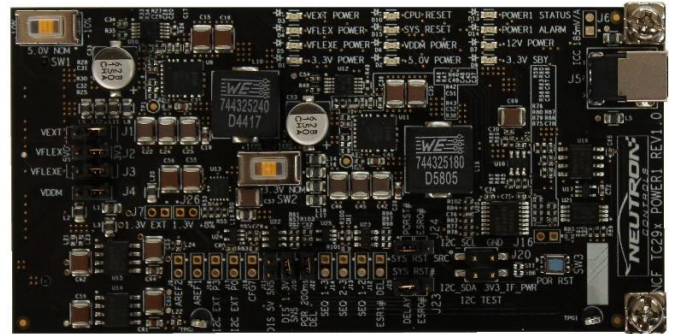
Designed for use with our REDline™ Carrier board, this Module provides the necessary power rails to supply the AURIX™ MCU Platform Module as well as other peripheral Modules and devices.

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 ESRO and ESR1 signals.

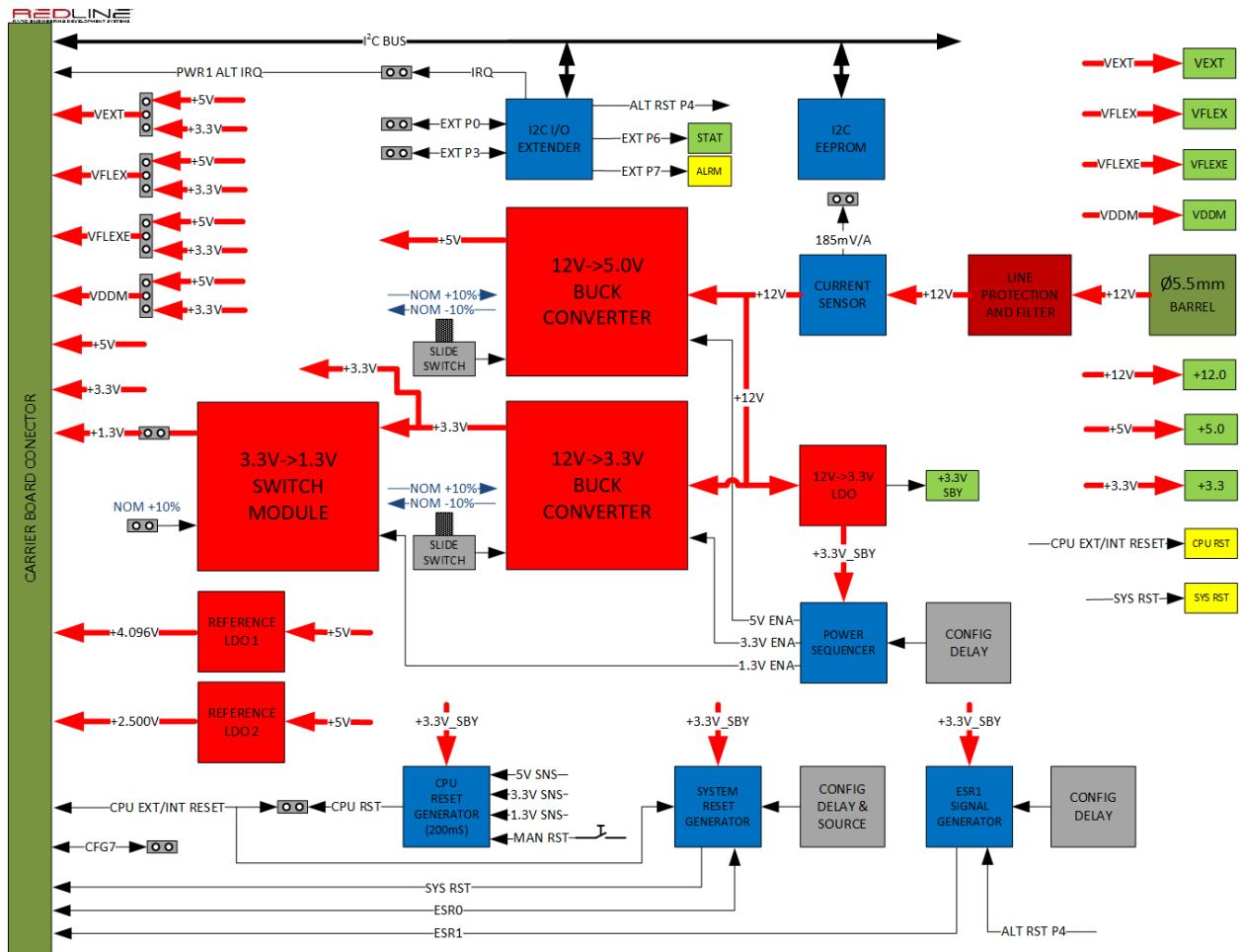
A complete hardware development support package is available including: schematics, BOM, layout, gerbers, PCB stack-up, and low EMI design rules.



#### 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

## Block Diagram



## Compatibility

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

Part Number: **RDL-DEVCDP-00x**

## Ordering Information

Module Part Number: **RDL-ITFPWR-001** (see datasheet for exact ordering options)

Supplier: Neutron Controls, 350 Palladium Drive, Suite 102 Ottawa, Ontario, Canada K2V 1A8

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