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## Strata LV DC-DC Power Board Series

Solutions Engineering Center (SEC)

Public Information



# Strata LV DC-DC Power Board Series

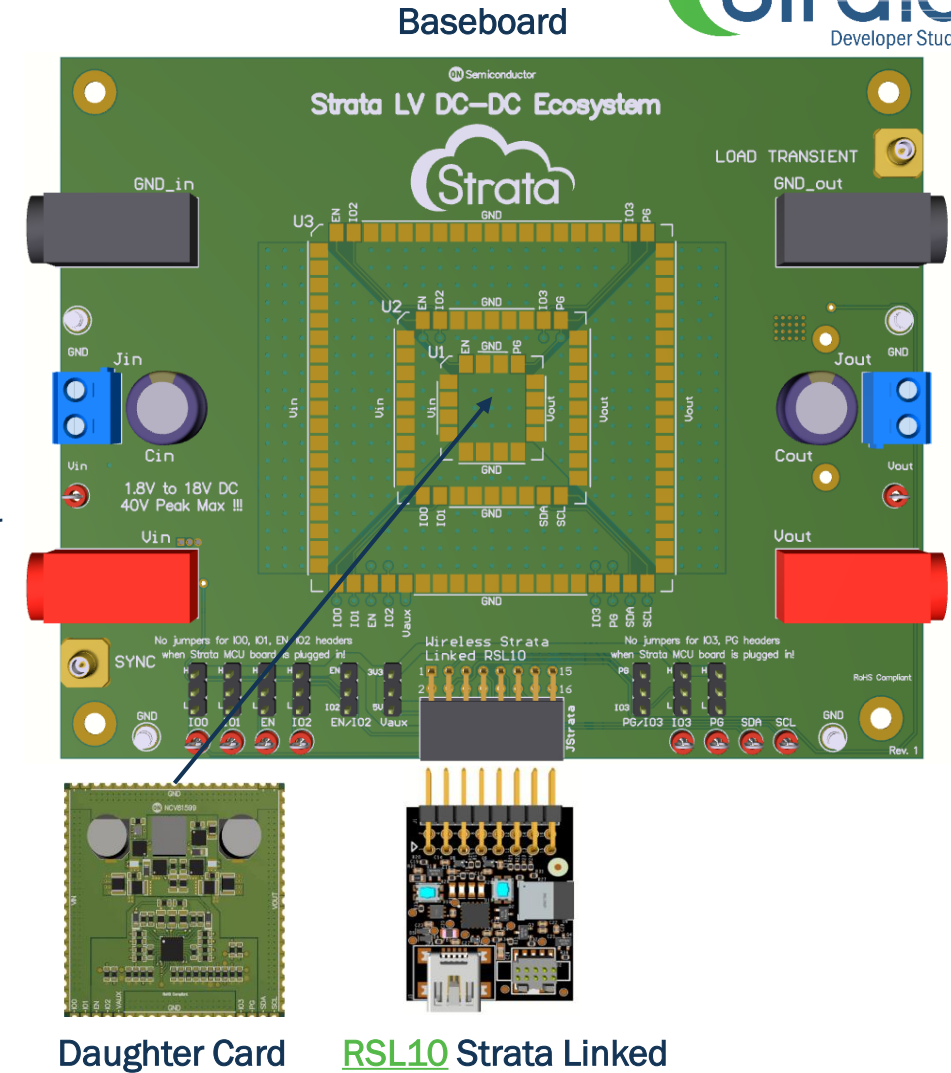


Strata LV DC-DC Power series, provides the baseboard supporting low voltage DC-DC conversion controllers, converters, and regulators daughter cards with the RSL10 Strata Linked, which acts as the gateway connection to the Strata software.

This environment supports Automotive and Industrial OPNs.

The below evaluation kits are available in Strata Developer Studio as a part of the Strata LV DC-DC power board series:

- [STR-PWRNCV890430-R0-GEVK](#): NCV890430 Automotive Buck Regulator
- [STR-PWRNCV896530-R0-GEVK](#): NCV896530 Automotive Dual Output Buck Converter
- [STR-PWRNCV48920-R0-GEVK](#): NCV48920 Automotive charge pump buck boost converter
- [STR-PWRNCV81599-R0-GEVK](#): NCV81599 Automotive enabled 4-Switch Buck Boost Controller
- [STR-PWRNCV6357-R0-GEVK](#): NCV6357 Automotive Synchronous Buck Converter
- [STR-PWRNCV6323-R0-GEVK](#): NCV6323 Automotive Synchronous Buck Converter
- [STR-PWRNCV8163-R0-GEVK](#): NCV8163 Automotive LDO Regulator
- [STR-PWRNCV330-R0-GEVK](#): NCV330 Automotive Strata enabled Controlled Load Switch with Soft-Start
- [STR-PWRNCP6922C-R0-GEVK](#): NCP6922C LDO Regulator, Dual, 4-Channel PMIC, Dual DC-DC Converters



# Strata LV DC-DC Power Board Series



The **Strata low voltage DC-DC evaluation boards** series is an evaluation environment for low voltage **DC-DC conversion controllers, converters and regulators**. The platforms are compatible with the **Strata Developer Studio™**, providing a Graphical User Interface for a hassle-free and fast device evaluation out of the box. Essential system variables values, such as input and output voltages, currents, power dissipation, temperatures and efficiencies are displayed and plotted on dynamic charts in real time, and can be exported as well. Load transients can be simulated with a signal generator. These Strata platforms can be used for **Automotive and Industrial** developments.

## Features

- **Monitoring and setting of system variables via Strata GUI:**
  - Input and output voltages
  - Input and output currents
  - Power dissipation
  - Switching frequency
  - PWM adjustment
- **Load transient** generation from GUI
- **Fast evaluation with Strata Developer Studio**
- **Hardware**
  - Spacious layout with multiple test points for measurement
  - Operating temperature  $-40^{\circ}\text{C}$  or  $+125^{\circ}\text{C}$

## Applications

- Automotive low voltage DC-DC converters
- ADAS, Infotainment power management.
- Industrial imaging power management
- Industrial low voltage DC-DC conversion

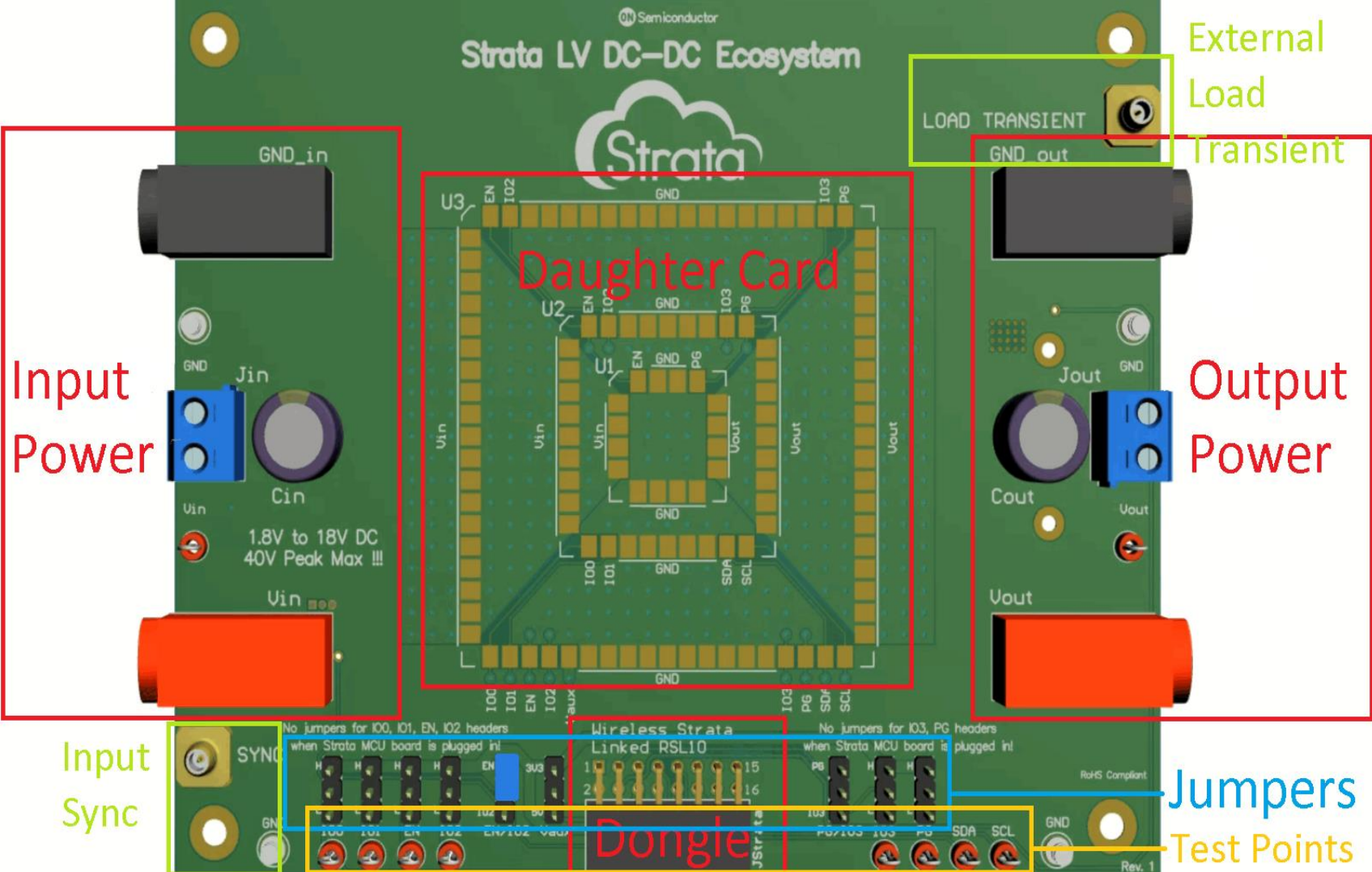
## Benefits

- Out of the box and fast evaluation and characterization of DC-DC ICs
- Speeds up development cycles and reduces time-to-market.
- All related collateral available at [Strata Developer Studio](#)
- AEC-Q qualified parts

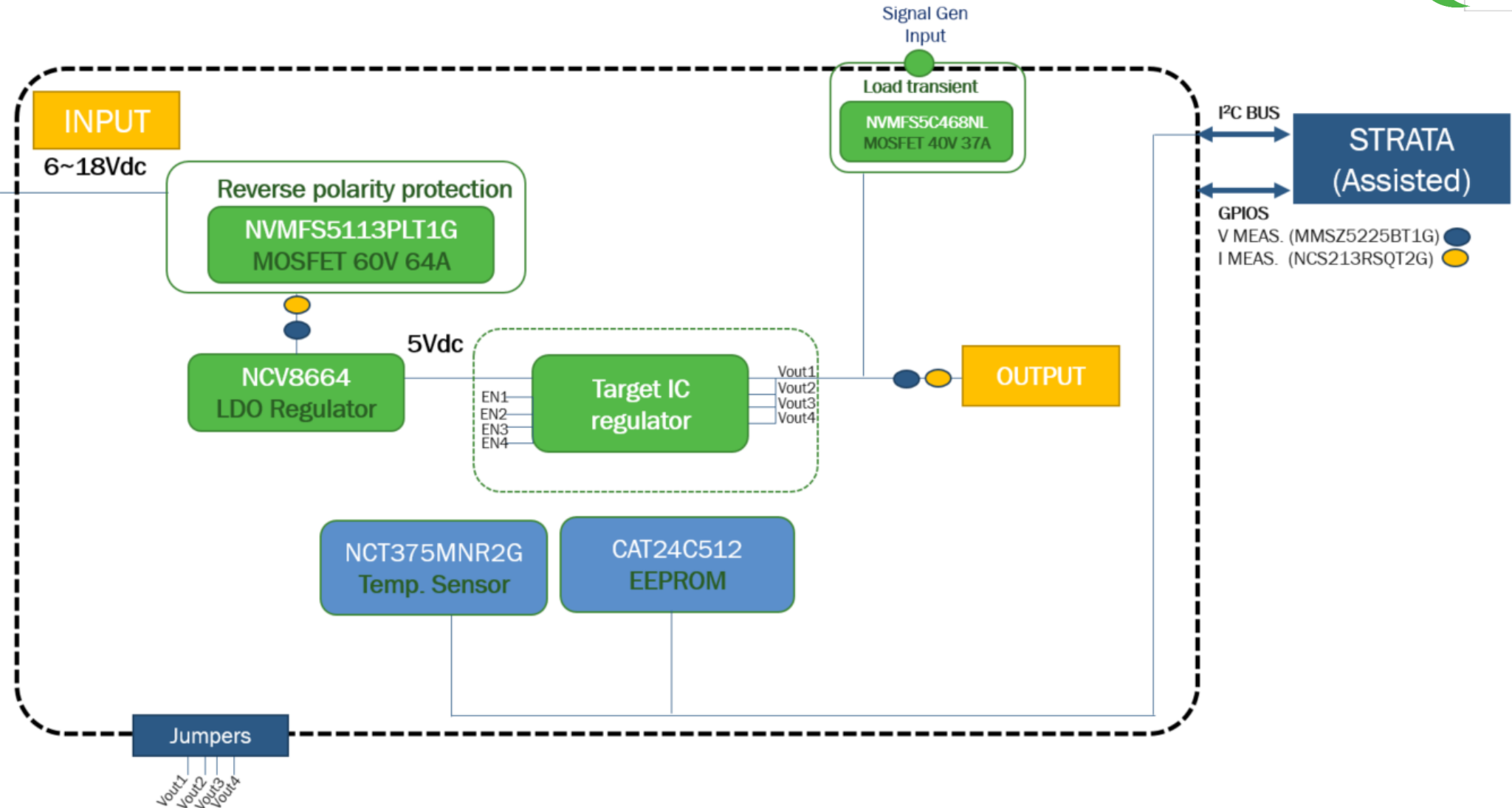




# Strata LV DC-DC Power Board Series



# Strata LV DC-DC Power Board Series Block Diagram



# Strata LV DC-DC Power Board Series UI Control



ON Semiconductor Strata Developer Studio

Platform Selector Unknown Platform

Basic Advanced Real-time Trend Analysis Load Transient Core Messages

## NCV81599 Automotive Buck Boost Controller

**Input**

VIN Ready

Max. input voltage 10V

5.010 V

1.402 A

**Output**

EN

N/A

N/A

PG

8.800 V

0.657 A

ON Semiconductor Strata Developer Studio

Platform Selector Unknown Platform

Basic Advanced Real-time Trend Analysis Load Transient Core Messages

## NCV81599 Automotive Buck Boost Controller

**Input**

VIN Ready

Max. input voltage 10V

5.010 V

1.405 A

**Output**

EN

N/A

N/A

PG

8.810 V

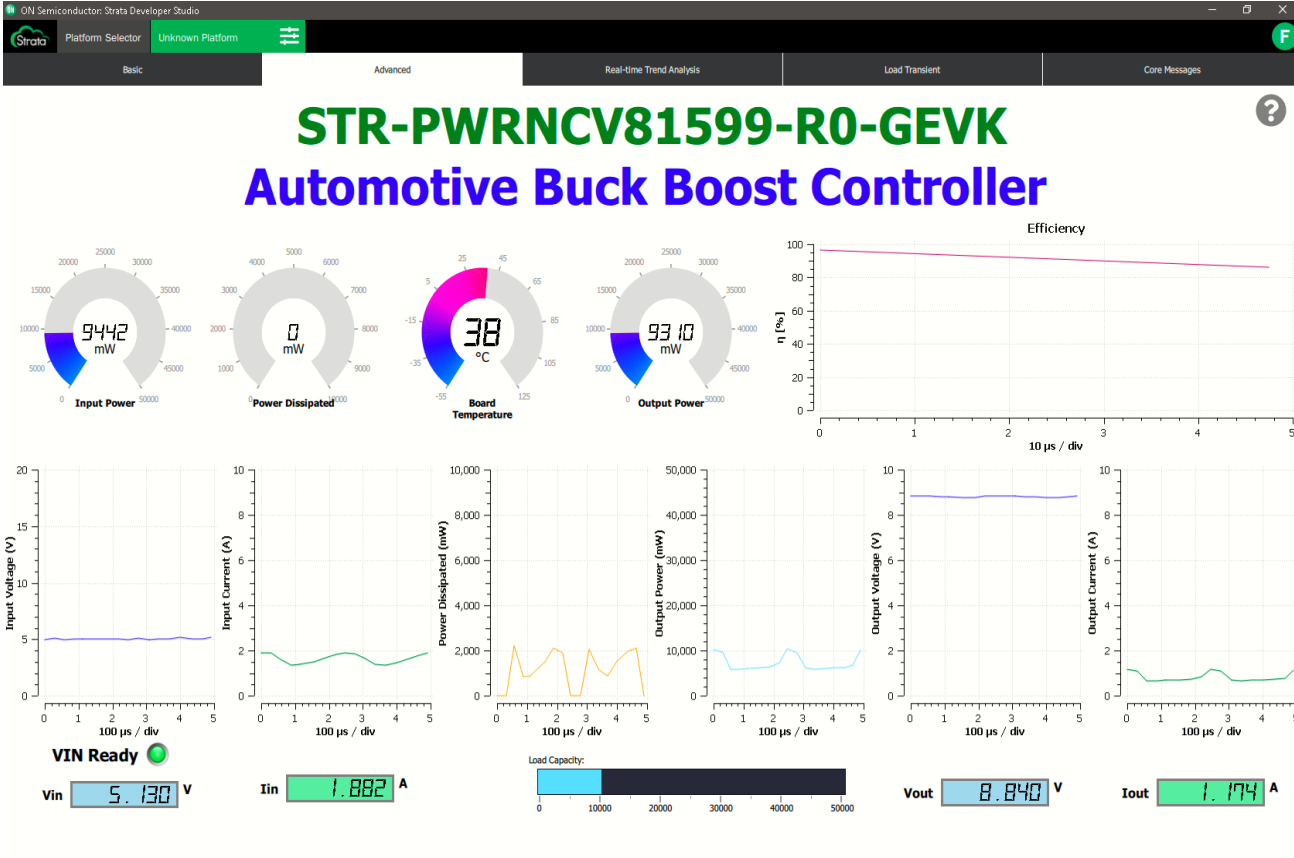
0.660 A

### Basic Tab

Input voltage/current, output voltage/current and output EN



# Strata LV DC-DC Power Board Series UI Control

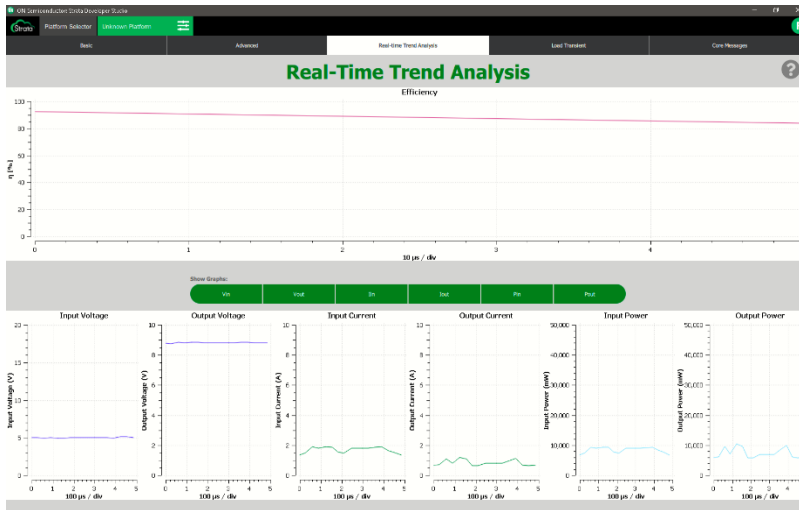


### Advanced Tab

Input voltage/current, power dissipation, input/output power, output voltage/current, load capacity, efficiency and board temperature

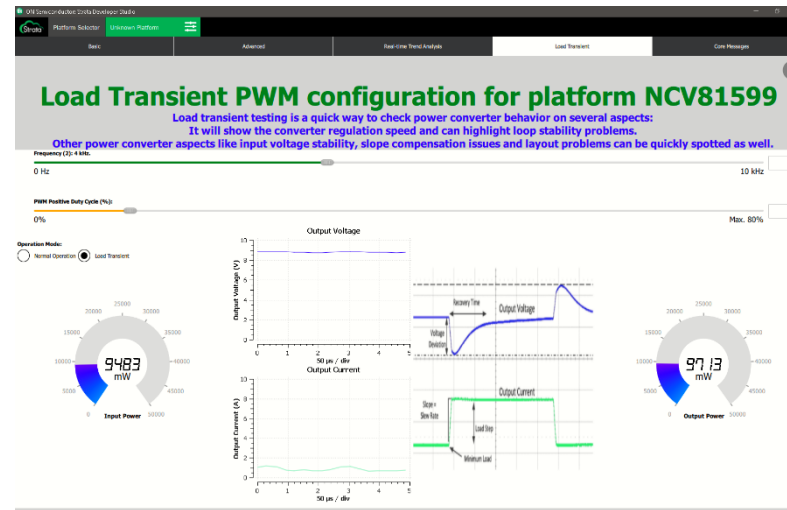


# Strata LV DC-DC Power Board Series UI Control



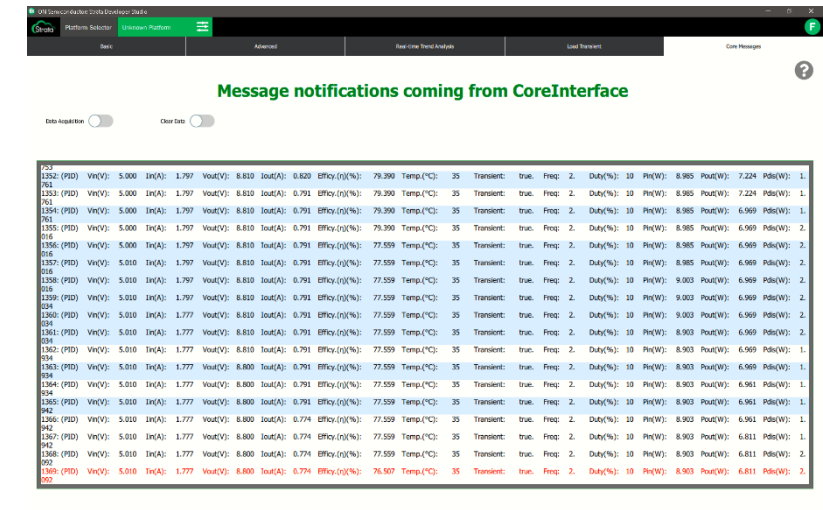
## Real-Time Trend Analysis Tab

Efficiency, input/output voltage, input/output current, input/output power graphs



## Load Transient PWM Configuration Tab

Control over Frequency, PWM positive duty cycle, normal operation/load transient and measurements of input/output power, output voltage/current



## Message Notifications Tab

Downloadable data acquisition of every measurement





# Strata LV DC-DC Power Board Series



## Overview Video

Strata Low Voltage DC-DC Evaluation Board Series

Today we are introducing the Strata low voltage DC-DC evaluation boards series, which is an evaluation environment for low ...

**Easy and Fast Evaluation of DC-DC ICs**

INPUT: 2.5-5.5Vdc

Reverse polarity protection: NVMF5113PLT1G MOSFET 60V 64A

5Vdc

NCV8664 LDO Regulator

NCV6922 PMIC

OUTPUT

Load transient: NVM53089M MOSFET 60V 64A

NCT375MNR2G Temp. Sensor

CAT24C512 EEPROM

Jumpers

Share



# Thank You!