Strata LV DC-DC Power Board Series

Solutions Engineering Center (SEC)
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

2/8/2021
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 °C or +125 °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

- **Input Power**
- **Output Power**
- **Input Sync**
- **Dongle**
- **Load Transient**
- **Jumpers**
- **Test Points**
Strata LV DC-DC Power Board Series Block Diagram

INPUT
6~18Vdc

Reverse polarity protection
NVMFS5113PLT1G
MOSFET 60V 64A

NCV8664
LDO Regulator

5Vdc

Target IC regulator

NCT375MNR2G
Temp. Sensor

CAT24C512
EEPROM

Output

Load transient
NVMFS5C462NL
MOSFET 40V 57A

Signal Gen
Input

STRATA
(Assisted)

PC BUS

GPiOs
V MEAS. (MMS2522BT1G)
I MEAS. (NCS213RSQ72G)
Basic Tab
Input voltage/current, output voltage/current and output EN
Advanced Tab
Input voltage/current, power dissipation, input/output power, output voltage/current, load capacity, efficiency and board temperature
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
Thank You!