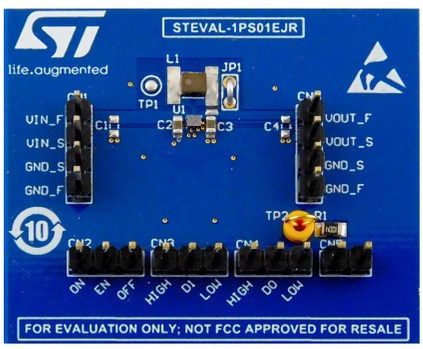
chanhvinh.com

life.augmented

STEVAL-1PS01EJR

Data brief

Evaluation board based on the ST1PS01EJR 400 mA nano-quiescent synchronous step-down converter



Features

- 94% typical efficiency at 1 mA load (V_{IN}=3.6 V, V_{OUT}=3.3 V)
- 1.8 V to 5.5 V input operating range
- Up to 400 mA output current capability
- Tiny external components: L=2.2 µH typ.
- Selectable output voltages: 1.8 V to 3.3 V
- Output voltage Power Good
- Dynamic output voltage selection (D0, D1)
- Suitable for the following applications:
  - Wearable applications
  - Personal tracking monitors
  - Smart watches, sport bands
  - Energy harvesting, wireless sensors
  - Wearable and fitness accessories
  - Industrial sensors, portable low power devices
  - Single cell Li-Ion battery applications
  - Bluetooth® low energy
  - ZigBee®
- Hardware is WEEE and RoHS compliant

Product summary	
Evaluation board for ST1PS01 step-down converter	STEVAL-1PS01EJR
400 mA nano-quiescent synchronous step-down converter with digital voltage selection and power good	ST1PS01

Description

The STEVAL-1PS01EJR evaluation board features the ST1PS01 nano-quiescent miniaturized synchronous step-down converter that is designed for applications where high efficiency, PCB size and thickness are key factors.

The converter can provide up to 400 mA output current with an input voltage ranging from 1.8 V to 5.5 V. The output voltage can be dynamically adjusted from 1.8 V to 3.3 V using two digital control inputs.

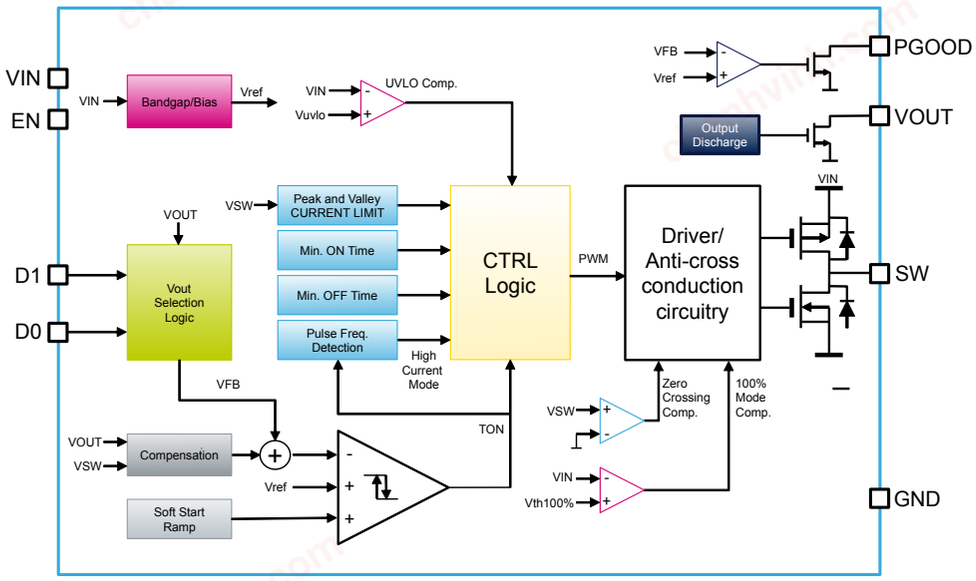
Thanks to the enhanced peak current control (PCC), the ST1PS01 can achieve very high conversion efficiency using only a 2.2 µH inductor and two small capacitors.

The advanced design circuitry minimizes quiescent current.

chanhvinh.com

1 Block diagram

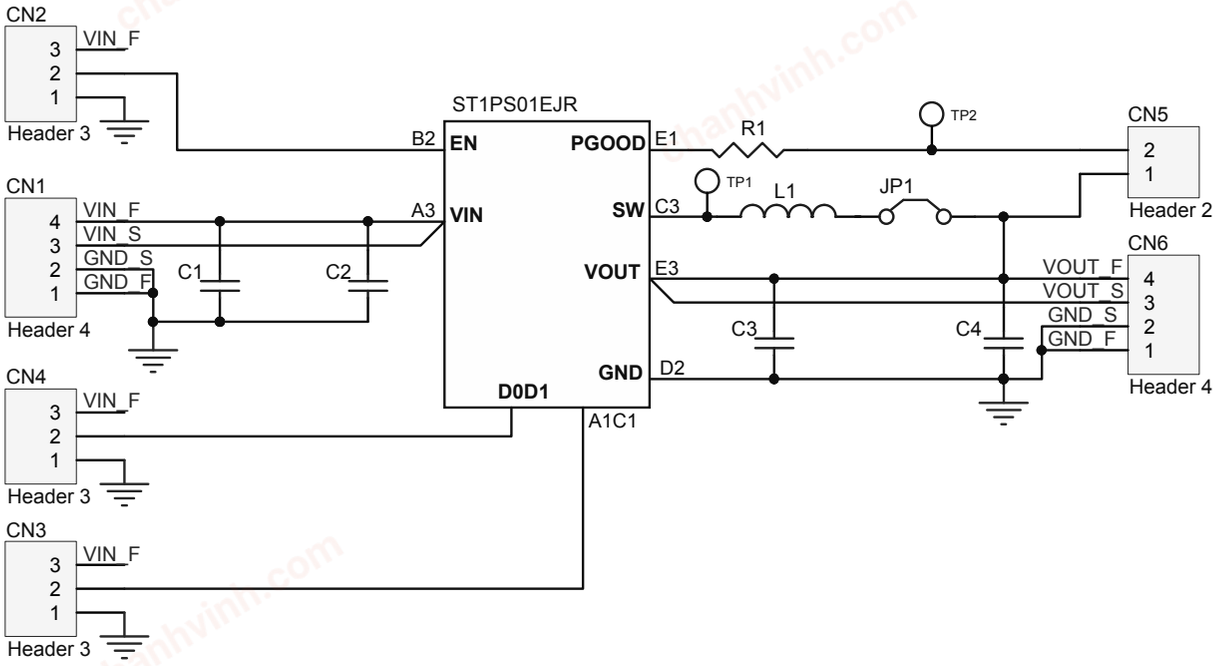
Figure 1. **STEVAL-1PS01EJR block diagram**



chanhvinh.com

2 Schematic diagrams

Figure 2. **STEVAL-1PS01EJR schematic**



chanhvinh.com

Revision history

Table 1. **Document revision history**

Date	Version	Changes
21-Dec-2018	1	Initial release.
17-Jun-2019	2	Updated features and photo in cover page.

chanhvinh.com

IMPORTANT NOTICE – PLEASE READ CAREFULLY

STMicroelectronics NV and its subsidiaries (“ST”) reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST’s terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers’ products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. For additional information about ST trademarks, please refer to www.st.com/trademarks. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2019 STMicroelectronics – All rights reserved