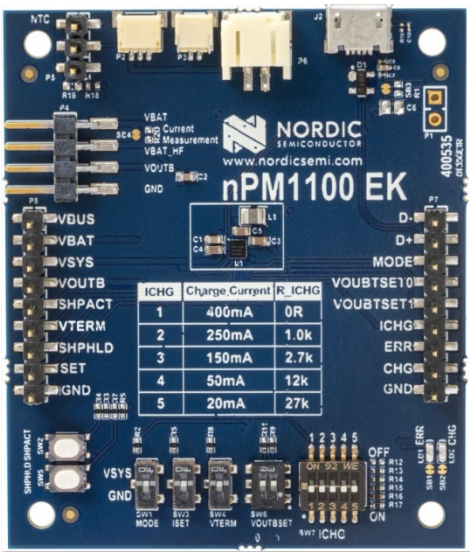
LAUNCH PACK

This document is not for publishing

nPM1100 EK

Evaluation Kit for the nPM1100 PMIC (Power Management IC).

Public launch date/confidential until:
May 27 th, 2021



PRODUCT INFORMATION

Manufacturer	Nordic Semiconductor ASA
Product name	nPM1100 Evaluation Kit (abbr. nPM1100 EK)
Part number/Ordering code	nPM1100-EK
Order dates	May 11th, 2021
Shipping dates	May 18th, 2021
Launch date	May 27th, 2021
Recommended quantity	1 pcs
Lead time	16 weeks
COO	Norway
ECCN	EAR99
HTS	8542.39.0001
Distribution cost	Available in the CRM system
Recommended resale price	Available in the CRM system
Related products	nRF52 Series SoCs, nRF53 Series SoCs
Supporting products	nPM1100 PMIC
Product page	http://www.nordicsemi.com/nPM1100EK

PRODUCT SPECIFICATIONS

Product name	nPM1100 Evaluation Kit (abbr. nPM1100 EK)
Product description	Evaluation Kit for the nPM1100 power management IC with electrical connectors and physical interfaces for operation
Supply voltage	4.1 V to 6.6 V input operating voltage
Battery operating voltage	2.3 V to 4.35 V
Output voltages	1.8 V, 2.1 V, 2.7 V, 3.0 V
System voltage	3.0 V to 5.5 V
Battery charging	400 mA linear charger for Lithium Polymer and Lithium-Ion batteries. JEITA Battery Temperature Standard compliant. Selectable 4.1 V or 4.2 V termination voltage
USB current limits	100 mA, 500 mA
Quiescent current	470 nA in ship mode (disables power output), 700 nA typical power-off
USB port detection	SDP, CDP, DCP
LEDs	Charge indicator and charge error
Buttons	Activate and deactivate ship mode
Switches	Mode: buck PWM mode override VOUTB: sets buck output voltage ISET: sets VBUS (USB) current limit VTERM: sets charge voltage ICHG: sets charge current
Temperature rating	-40 to 85°C
Packaging	2.075 x 2.075 mm WLCSP
JEITA	Compliant
RoHS	Compliant

OVERVIEW

The nPM1100 Evaluation Kit (EK) is a tool for evaluating the nPM1100 PMIC and its features in your application, without the need to create custom test hardware.

The kit features DIP-switches for all selectable settings, with buttons to enter and exit ship mode. The on-board battery connectors allow for easy connection to a battery and the included USB connector enables the use of USB for power input and charging a connected battery. Headers for all pins of the nPM1100 PMIC are also available on the kit, with all functions available. The board layout and BOM is optimized for performance.

The nPM1100 EK requires no software to operate and is compatible with all components that operate within the output voltages and power the PMIC can deliver, while charging lithium ion and lithium polymer batteries. The EK operates from either USB or other DC power, or from a connected battery.

The nPM1100 EK could be used to power any nRF52® or nRF53® Series Development Kit, allowing for the use of a rechargeable battery to power the DK without the need to disconnect it for charging. By using the Power Profiler Kit 2 (PPK2) the power drawn by the system could easily be assessed through an intuitive user interface in the nRF Connect for Desktop Power Profiler app. This allows for complete control over the entire systems power consumption.

The nPM1100s highly efficient step-down buck regulator can deliver up to 150 mA of current at a selectable output voltage of 1.8, 2.1, 2.7 or 3.0 V. It features soft startup and automatic transition between hysteretic and PWM modes. It also allows for forced PWM mode to ensure clean power operation, enabled by the on-board switch or pin control.

The integrated battery charger is designed to charge lithium ion and lithium polymer batteries to a termination voltage selectable to 4.1 or 4.2 V supporting cell chemistries with a nominal voltage of 3.6 and 3.7 V, respectively. It includes battery thermal protection and automatic selection of three charging modes: automatic trickle, constant current and constant voltage. The maximum charge current is selectable from 20 mA up to 400 mA by selecting one of the built-in charge current resistors via switches. The charger also features a discharge current limitation and is JEITA compliant.

The nPM1100 PMIC features a USB compatible system regulator that features USB port detection for SDP, CDP and DCP USB host-type ports supporting USB current limits of 100 mA and 500 mA, and a USB supply voltage ranging from 4.1 to 6.6 V. The system regulator features a 20 V overvoltage protection that allows for transient voltage peaks of up to 20 V. The regulator allows a system voltage output ranging from 3.0 to 5.5 V. The quiescent current of the PMIC is only 470 nA in ship mode, which disables power output and removes the need for external power switch.

KEY FEATURES

- nPM1100 PMIC
  - 400 mA battery charger
  - Highly efficient 150 mA buck regulator
  - USB compatible input regulator
- All PMICs features enabled and available
- Board layout optimized for best performance
- USB and battery connectors
- Switches for all selectable voltages, current limits, and modes
- Headers for all pins on the nPM1100 PMIC
- Charge and error indicator LEDs
- Buttons to enter and exit ship mode
- Requires no software to operate

APPLICATIONS

- Wearables
- Computer peripherals
- Personal medical devices
- Remote controls and gaming controllers

CALL-TO-ACTION

1) Please secure stock and prepare your online store for launch day
2) Update any current links related to the product launch
3) Please hold marketing promotion of this product until official launch date, coordinated with release of nPM1100 PMIC

MARKETING MATERIAL

Please go to Filecamp for access to all relevant content, photos and Nordic's general Corporate Brand Manual.

nPM1100 EK photo	Download product photo here
Related social media hashtags	#nPM1100, #NordicSemi
Nordic social media accounts Co-promotion: Follow, share, like and post about us & our products on social media.	Youtube Twitter / @NordicTweets Facebook LinkedIn

CONTACTS

For product related questions, please contact your main contact/Regional Sales Manager in Nordic Semiconductor.
For marketing and PR related questions, please contact us at marketing@nordicsemi.no