NEH2000BY | Product at a Glance

Design benefits

- High-efficiency low-power DC-DC converter designed for light Energy Harvesting
- Embedded ultra-fast Maximum Power Point Tracker – MPPT
- Small BOM with no external inductor required
- Compact QFN16 - package 3x3 mm
- Assembly footprint of ~12mm2

Applications

- Smart home: TV remote controls, smart tags, keyboards, home sensors
- Smart city: beacons, IoT sensor networks, industrial monitoring
- Wearables: smart bands, earbuds, smart shoes, smart glasses, health monitoring
- Retail: Electronic shelf labels, asset trackers

Product Roadmap

Device Part Number	Power Range	Conversion Efficiency	Boosting Factor	MPPT Interval	LDO, OVP, LVD, USB, Cold Start, I2C	Harvester
NEH2000	35uW to 2mW	Up to 80%	2x	1s	Not Supported	PV-Cells
NEH7100*	10uW to 50mW	Up to 90%	2x, 4x, 8x, 16x	0.5s to 64s	Supported	PV-Cells, RF, Piezo, TEG

*RFS expected in Q4 2023

Key technical features

- Harvesting power range from 35uW to 2mW
- Conversion efficiency: up to 80%
- Battery voltage: 2.5V .. 4.5V
- Boosting factor: 2x
- MPPT interval: 0.7s
- Time for MPPT optimization: 10ms
- Standby current: < 625 nA
- Only three external capacitors required
- Temperature range: -40 to 85degC

Engineering support

- Datasheet
- Reference Design
- Evaluation board