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Nidec Unveils "NIR3.0" Prototype: A 3.2MW, 800VDC-Compatible In-Row CDU

Nidec Corporation has officially announced the development of its Nidec In-Row Coolant Distribution Unit, NIR3.0. This next-generation In-Row CDU delivers a maximum cooling capacity of 3.2MW with full compatibility of supporting 800VDC high-voltage direct current power standard. The NIR3.0 is showcased at Booth #E63 during the OCP Global Summit 2026, October 12 – 15. The NIR3.0 will debut as part of Nidec's end-to-end liquid cooling solution designed to tackle the exponentially increasing power consumption and heat loads driven by advanced generative AI workloads.



As high-density AI servers push data center thermal limits, operators face an urgent need to balance superior cooling with maximum power efficiency. The NIR3.0 directly addresses market demands through two key technical capabilities:

- **800VDC Compatibility for Maximum Energy Efficiency:**
Supporting high-voltage 800VDC input, the NIR3.0 significantly reduces power conversion and transmission losses compared to traditional AC or lower-voltage DC systems. This dramatic increase in efficiency helps operators optimize Power Usage Effectiveness (PUE) and reduce operational expenses.
- **Industry-Leading 3.2MW Cooling Capacity:**
Delivering up to 3.2MW—the highest cooling capacity in Nidec's liquid cooling lineup. The NIR3.0 provides robust thermal management to ensure stable, continuous operation for ultra-large and high-density AI clusters.

Offered alongside a comprehensive suite of peripheral liquid cooling components, NIR3.0 provides an end-to-end solution designed for maximum uptime and reliability. Incorporating feedback from industry partners and summit attendees, Nidec aims to begin mass production in the first half of 2027 to support next-generation, high-heat AI semiconductors.

【Nidec OCP Global Summit Special Website】

<https://www.nidec.com/en/product/liquid-cooling-line-up/OCP/global-summit-2026>

【Nidec Liquid Cooling Products Page】

<https://www.nidec.com/en/product/liquid-cooling-line-up/>

【Inquiries Regarding Products and Exhibition】

https://one.nidec.com/spms_webinquiry