

Technology (Hardware/Semi)

Thoughts on Nvidia's customized AI chips for China

- On 9 Nov, several news outlets reported ([link](#)) Nvidia plans to launch a new series of customized AI GPUs on 16 Nov specifically for the Chinese market, following the recent US export restrictions on China ([report](#)) aimed at limiting China's use of high-performance GPUs (A100/H100 & 800 variants) in AI/ML sectors. The new GPU series tailored for China includes the HGX H20, L20 PCIe, and L2 PCIe, featuring further reduced computing power to adhere to the latest restrictions.
- **Implication 1: Nvidia tries its best to maintain the lucrative China revenue.** Nvidia's swift introduction of GPUs designed specifically for China in the wake of US export ban last month underscores the strategic significance of its China business, and how Nvidia is unwilling to lose market share to other competitors. Nevertheless, despite Nvidia's rapid adaption to the new restriction, the evolving nature of the new US tech ban on China hints that this might not be the final action the US takes to limit China's advancement in the semi industry. Since WSJ's report on the export ban on 31 Oct, Nvidia saw its share price rebound by 15.1% to US\$469.5 as of 9 Nov.
- **Implication 2: Optical transceiver demand remains strong despite the recent tech restrictions,** especially demand for the 800G optical transceivers, driven by the ongoing momentum in AI developments. Based on the hyperscalers' capex outlook for 2024 and beyond especially in the AI-related segments, we remain optimistic and expect to see secular growth in the optical transceiver sector. We maintain our BUY rating on Innolight (300308CH) with a TP of RMB109.3 as the company recorded strong 3Q growth with backlog for high-performance optical transceivers well extended into early-2024 ([link](#)).
- **Implication 3: We believe recent tightened restrictions will accelerate China companies' pace towards self-sufficiency.** Even though Nvidia will have tailor-made chips for China market, China-based companies are determined to find domestic alternatives to secure their supply chain. A case in point is Baidu's recent bulk order of 1,600 Huawei 910B Ascend AI chips for 200 servers, indicating a move away from foreign tech products, such as Nvidia's A100 chips. While comparable to Nvidia's chips on raw computing power, Huawei's 910B chips do not match up in performance ([link](#)). Nonetheless, this pivot by Baidu, which came just before US tech ban in October, highlights Chinese tech firms' efforts to reduce dependency on imported tech and accelerate their stride for technological self-reliance ([link](#)). Meanwhile, the Xiaomi 14 smartphone, released last month, has adopted storage device using NAND flash memory from China's YMTC (Yangtze Memory Technologies Co.), showing China's tech independence in the memory sector.
- **We believe the trend will serve as a tailwind for China's semi names across different sectors. We recommend investors to focus on beneficiaries in semi localization, such as Innolight (300308 CH, BUY), Willsemi (603501 CH, BUY), Maxscend (300782 CH, BUY) and Wingtech (600745 CH, BUY).**

OUTPERFORM
(Maintain)

China Technology Sector

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2. "Hardware – Optical transceivers: Implications from Coherent 2Q23 results and guidance" – 18 Aug 2023 ([link](#))
3. "Investors focusing on 800G transceivers ramp-up after 1H23 results" – 28 Aug 2023 ([link](#))
4. Thematic investment and megatrend: Riding the AI wave into the next phase – 17 Oct 2023 ([link](#))
5. Quick note on newly announced restrictions on advanced AI chips - 18 Oct 2023 ([link](#))
6. Innolight (300308 CH) – Expect higher contribution from AI revenue in 3Q; Upgrade to Buy – 20 Oct 2023 ([link](#))
7. Innolight (300308 CH) – Strong 3Q results on accelerating AI revenue – 24 Oct 2023 ([link](#))

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