NVIDIA FY2025 Due Diligence Brief

22 November 2025

Executive takeaways

- NVIDIA exited FY2025 with $130.5B in revenue (+114% YoY) and 75% gross margin, translating to $72.9B in net income (56% net margin) and $64.1B of operating cash flow (FY2025 Form 10-K, filed 26 Feb 2025).
- Data Center now represents 88% of total revenue ($115.2B, +142% YoY) while Gaming stabilized ($11.4B, +9%). Automotive and Pro Visualization are re-accelerating from small bases, confirming the multi-rail thesis from the 2024 mind map.
- The November 2025 10-Q shows the Blackwell ramp in action: inventories nearly doubled to $19.8B since January while cash plus securities swelled to $60.6B, supporting sovereign AI builds and Spectrum-X networking rollouts.
- NVIDIA's platform narrative from the 2025 Annual Review (AI factories, CUDA-X software, Omniverse digital twins) is now monetizing through recurring software and cloud-delivered services layered on top of silicon.
- Valuation remains rich (16.9x NTM sales, 29.6x NTM EPS per Semiconductor List.xlsx) but supported by industry-leading growth, structural net cash ($34.7B at FY-end, $52.1B at the October quarter), and a widening software moat.

Source corpus

- NVIDIA Form 10-K for FY2025 (filed 26 Feb 2025) and NVIDIA Form 10-Q for the quarter ended 26 Oct 2025 (filed Nov 2025).
- "NVIDIA Corporation 2025 Annual Review" ("The Future Runs on Accelerated Computing"), highlighting AI factories, Blackwell, Spectrum-X, CUDA-X and Omniverse narratives.
- "Nvidia_MindMap_2024.pdf" capturing product/industry flows across Data Center, Gaming, ProViz and Automotive compared with AMD/AVGO/QCOM/MRVL.
- "Semiconductor List.xlsx" peer comp sheet (market cap, growth, valuation metrics, EPS revisions as of Nov 2025).

Intelligence supply chain map (2025 upgrade)

- **Foundational compute:** Blackwell GPUs + NVLink, Grace CPUs, and Spectrum-X networking integrate into "AI factories" (Annual Review pp. 3–11). Compute is split between accelerated training/inference and Ethernet+InfiniBand fabrics, mirroring the Compute vs. Networking split in the FY2025 segment data.
- **Software flywheel:** CUDA-X, cuOpt, cuQuantum, Earth-2, MONAI, and Omniverse form the programmable layer that converts raw GPU cycles into industry workflows—extending the 2024 mind map from "products" to "platforms" and locking ecosystems through domain libraries.

- **Industry verticals:** Data Center (sovereign AI, enterprise AI factories), Gaming/Creator (RTX 50, DLSS 4), ProViz (Omniverse digital twins), Automotive (ADAS/robotaxis) act as demand nodes. Money flow now starts with hyperscaler/sovereign capex commitments and trickles into software subscriptions and maintenance.
- **Feedback loops:** Omniverse and CUDA telemetry inform future silicon requirements, while platform customers (e.g., automotive OEMs) pre-pay capacity—tightening NVIDIA's working capital loops and justifying inventory builds observed in the 10-Q.

FY2025 scoreboard

Metric ($ in billions unless noted)	FY2025	FY2024	YoY
Revenue	130.5	60.9	+114%
Gross margin	75.0%	72.7%	+230 bps
Operating income	81.5	33.0	+147%
Net income	72.9	29.8	+145%
Operating cash flow	64.1	28.1	+128%
Capital expenditures	3.2	1.1	+195%
Free cash flow	60.9	27.0	+125%
R&D as % of revenue	9.9%	14.2%	(430 bps)
Diluted EPS (USD)	2.94	1.19	+147%

Table 1: Consolidated results sourced from FY2025 Form 10-K.

Key observations:

- Operating leverage was pronounced: opex grew 45% while revenue more than doubled, expanding operating margin to 62.4%.
- Free cash flow conversion (47% of revenue) enables self-funded capex for AI factories and ongoing $42.4B of FY2025 share repurchases/dividends (cash flow statement).
- R&D dollars grew $4.2B YoY yet mix shift toward larger revenue base dropped R&D intensity below 10%, highlighting scale benefits.

Segment deep dive

Interpretation:

- **Data Center flywheel:** Compute outpaced networking, implying backlog for full-stack systems (Grace Hopper, HGX) while Spectrum-X Ethernet ramps as sovereign AI projects seek open alternatives.
- **Gaming base is sticky:** RTX 40/50 cycles plus DLSS 4/AI creator workloads sustain high-margin desktop sales even as volume normalizes.
- **Emerging rails:** Automotive and ProViz now deliver $3.6B combined—small but growing fastest; Omniverse software attach and DRIVE-based contracts support multi-year visibility.

Segment revenue ($ in billions)	FY2025	FY2024	YoY
Data Center	115.2	47.5	+142%
Compute	102.2	38.9	+162%
Networking	13.0	8.6	+52%
Gaming	11.4	10.4	+8.6%
Professional Visualization	1.9	1.6	+20.9%
Automotive	1.7	1.1	+55.3%
OEM and Other	0.4	0.3	+27.1%

Table 2: Revenue by end market – FY2025 Form 10-K Table 47.

Balance sheet and liquidity

Metric ($ in billions)	Jan 26 2025	Jan 28 2024
Cash and cash equivalents	8.6	7.3
Marketable securities	34.6	18.7
Cash + securities	43.2	26.0
Accounts receivable, net	23.1	10.0
Inventories	10.1	5.3
Total current assets	80.1	44.3
Total current liabilities	18.0	10.6
Long-term debt	8.5	8.5
Net cash (cash + securities – total debt)	34.7	16.3
Shareholders' equity	79.3	43.0

Table 3: Balance sheet strength from FY2025 Form 10-K.

Highlights:

- Working capital nearly doubled to support longer lead-time AI systems while net cash also doubled, so liquidity remains ample.
- Receivables growth mirrors hyperscaler concentration—monitor DSOs as sovereign projects scale.
- Debt load is modest ($8.5B) relative to cash; NVIDIA retains flexibility for acquisitions or incremental fab commitments.

Latest 10-Q pulse (quarter ended 26 Oct 2025)

Signals from the quarter:

- Revenue grew 62% YoY while operating margin held above 63%, demonstrating pricing power during the Blackwell transition.
- Inventories nearly doubled in nine months, consistent with staged Blackwell builds and higher networking content; management notes (10-K Risk Factors) emphasize the complexity of integrating new suppliers.

Metric	Q3 FY26	Q3 FY25
Revenue ($B)	57.0	35.1
Gross margin	73.4%	74.6%
Operating income ($B)	36.0	21.9
Net income ($B)	31.9	19.3
R&D spend ($B)	4.7	3.4
Operating cash flow (9M, $B)	66.5	47.5
Cash + securities ($B)	60.6	43.2*
Inventories ($B)	19.8	10.1*

Table 4: Data from November 2025 Form 10-Q; *prior column uses FY2025 year-end baseline.

- Cash plus securities reached $60.6B even after $42.3B of year-to-date financing outflows, underscoring self-funded growth.

Competitive and valuation snapshot

Company	Market cap ($T)	Rev NTM ($B)	PS NTM	PE NTM
NVIDIA (NVDA)	4.54	272.3	16.9	29.6
Broadcom (AVGO)	1.61	52.0	10.4	22.0
AMD (AMD)	0.40	34.4	9.0	37.9
Qualcomm (QCOM)	0.19	43.0	4.3	14.9
Marvell (MRVL)	0.08	7.2	10.5	38.8

Table 5: Peer data from `Semiconductor List.xlsx` (updated Nov 2025).

Notes:

- NVIDIA's valuation premium is justified by 65% NTM revenue growth vs. peers sub-25%.
- Net profit margin (LTM) of 54.6% dwarfs closest peer AVGO (49.6%), even before recurring software is fully monetized.
- Debt-to-equity remains just 10.7% vs. AVGO at 99.8%, providing option value for inorganic plays.

Competitor book-of-business comparison

Additional benchmarking insights:

- **Mix concentration:** NVIDIA draws 88% of revenue from Data Center; peers remain more diversified (AVGO sub-30% in DC, AMD split across client/gaming/embedded). This concentration amplifies upside to AI spend but heightens hyperscaler exposure.
- **Software leverage:** CUDA-X, Omniverse, MONAI, and NeMo provide recurring revenue layers missing at hardware-centric peers, supporting higher gross and net margins.

oprule Company	Core product stack (per 2024 mind map)	2025 focus areas	Implication vs. NVIDIA
Broadcom (AVGO)	Custom ASICs, fibre-channel storage, Ethernet/optical networking	Diversified datacenter connectivity and telco infrastructure	Competes with Spectrum-X networking, but lacks CUDA-equivalent software moats.
AMD (AMD)	CPUs/GPUs/APUs, DPUs, FPGAs, semi-custom SoCs across data center, client, gaming, embedded	Genoa/Bergamo CPUs, MI300 accelerators, adaptive SoCs for edge/5G	Hardware breadth is wide, yet accelerated software ecosystem trails NVIDIA's CUDA-X maturity.
Qualcomm (QCOM)	3G/4G/5G modems, on-device AI compute, licensing-heavy QTL model	Handset refresh plus XR/automotive digital cockpit silicon	Strength in cellular IP; limited overlap with NVIDIA's data center AI but relevant in automotive infotainment bids.
Marvell (MRVL)	Custom ASICs, electro-optics, storage controllers, carrier Ethernet	Cloud-optimized custom silicon and electro-optic modules for AI fabrics	Pursues "semi-custom" AI silicon; still partners with NVIDIA for NICs and storage.
NVIDIA (NVDA)	Full-stack accelerated compute (GPU/CPU/DPU), CUDA-X software, Omniverse, DRIVE, Spectrum-X	AI factories, sovereign AI, Omniverse SaaS, automotive production ramp	Combines silicon, networking, and software flywheel—only player monetizing every layer of the stack.

Table 6: Book-of-business view derived from 2024 mind map plus FY2025 disclosures.

- **Balance-sheet flexibility:** NVIDIA's \$43B FY-end cash plus securities and net cash position contrast with AVGO's leveraged balance sheet ($\tilde{\$}$90B debt), giving NVIDIA capacity to secure wafer supply and co-invest in fabs.
- **R&D intensity:** Despite \$12.9B FY2025 R&D, NVIDIA's R&D-to-sales ratio (9.9%) now trails AMD (estimated $\tilde{2}$0%) and Marvell (18%), indicating superior operating leverage even while funding multiple software stacks.

Opportunity radar for 2025+

1. **AI factories and sovereign AI:** Governments and Fortune 500s are committing to national/enterprise AI infrastructure (Annual Review pp. 3–11). Each deployment bundles Blackwell GPUs, Grace CPUs, Spectrum-X networking, CUDA-X software, and DGX Cloud services, creating multi-year, multi-layer revenue.

2. **Spectrum-X and networking ascendancy:** Ethernet-based Spectrum-X fabrics highlighted in the Annual Review align with a 52% YoY networking revenue jump; incremental attach improves blended gross margin while embedding NVIDIA software in the network plane.
3. **Omniverse + digital twins:** Omniverse is pitched as the OS for industrial digitalization (page 7). Combining ProViz hardware, RTX workstations, and SaaS subscriptions turns one-time creator revenue into recurring ARR.
4. **Automotive/robotics optionality:** Automotive revenue rose 55% YoY as OEM design wins transition to production. The 2024 mind map shows competitors (AMD/QCOM/MRVL) still stitching together CPUs, FPGAs, and connectivity—NVIDIA's single-stack DRIVE platforms can capture higher content per vehicle.
5. **Software monetization:** CUDA-X libraries, NeMo, MONAI, Parabricks, and Earth-2 create paywalls beyond hardware. Expect higher-margin enterprise support and token-based pricing as generative workloads scale.

Risks and watch items

- **Export controls and China mix:** 10-K Risk Factors (pp. 37–38) note ongoing US export regimes; although China Data Center revenue grew in FY2025, it remains below pre-control levels and requires custom products.
- **Supply chain complexity:** NVIDIA now prepays multiple foundry/back-end partners. Integrating new suppliers and coordinating large purchase commitments increases execution risk (10-K Risk Factors, supply chain section).
- **Inventory and channel management:** Inventories doubled both year-on-year and sequentially (10-Q), reflecting staged builds. Any demand pause could stress working capital.
- **Regulatory/litigation overhangs:** 10-K cites active securities litigation around historical channel disclosures and heightened scrutiny of AI safety/data privacy (particularly in China and EU data localization laws).
- **Concentration risk:** Hyperscalers and sovereign programs drive the majority of Data Center sales. Delays or self-designed silicon (e.g., internal AI accelerators) could reduce wallet share.

Scenario outlook (management-style)

Action items and monitoring

- **Track inventory burn vs. Blackwell shipments:** Use upcoming earnings calls and supply-chain checks to confirm staged builds convert to revenue without write-downs.
- **Watch export-control narratives:** Monitor US BIS updates and NVIDIA's custom SKUs for China to ensure compliance without margin erosion.
- **Validate software ARR traction:** Request disclosure on CUDA-X/Omniverse monetization (subscribers, ARR) to gauge multiple expansion sustainability.
- **Peer benchmarking:** Refresh Semiconductor List.xlsx quarterly to capture shifts in valuation vs. AMD/AVGO/QCOM/MRVL as they counter-program NVIDIA.

Scenario	Key assumptions	FY26 rev ($B)	Diluted EPS ($)	
Bear	Export controls tighten; sovereign AI projects stagger; networking supply bottlenecks hold utilization to 60%.	165	4.0	Aligns with
Base	Smooth Blackwell ramp, steady hyperscaler demand, Omniverse/Enterprise software begins to contribute mid-single-digit ARR.	207	4.5	Mirrors FY1 cons
Bull	Sovereign AI megadeals + automotive ADAS production, full CUDA-X/SaaS monetization, Spectrum-X share gains in Ethernet AI clusters.	285	6.7	Consistent with FY2 c

Table 7: Forecast envelope grounded in peer data (Semiconductor List.xlsx) and NVIDIA disclosures.

Appendix: data notes

- Dollar figures rounded to one decimal place for billions and to the nearest hundred million for select items; percentages rounded to the nearest tenth.
- Free cash flow defined as operating cash flow minus purchases related to property, equipment, and intangible assets (per FY2025 Form 10-K cash-flow statement).
- Scenario EPS approximations apply FY2025 diluted share count (24.8B) and assume tax rate consistent with FY2025 (13.3%).