NVIDIA DGX-1 FOR ANALYTICS
AI-ACCELERATED ANALYTICS AND INTERACTIVE VISUALIZATION

From Digital Business to AI Enterprise

Every day businesses are generating and collecting unprecedented amounts of data. This massive amount of information represents a missed opportunity for any company that's not implementing AI-accelerated analytics. The more data you have, the more you can learn. Let's look at how customers can effectively analyze, visualize, and unleash the power of AI to transform their digital business.

GPU-accelerated analytics and interactive visualization solutions, powered by NVIDIA® DGX-1™, provide deeper insights, enable dynamic correlation, and deliver predictive outcomes.

No longer constrained by compute power and human capabilities, you can bring the power of AI to your company.

ANALYZE DATA 100X FASTER	NVIDIA GPU-accelerated databases let customers stream, process, query, and analyze datasets in seconds to milliseconds, instead of hours to minutes. On-premise or the cloud, these databases help manage increasing data demand. GPU-parallelized processing architecture allows for linear scalability. It also reduces analytical processing times for multi-billion row data sets by more than 100X.
VISUALIZE 100X MORE DATA	NVIDIA GPU-accelerated visualization platforms are 10-100X faster than existing systems. They allow users to do complex, multidimensional visual renderings in real-time, including easy drill-down and dynamic correlation analysis. Customers can now interact with millions of edges like and infer insights from 100X more data. These insights come from both historical data and unseen long tail, outlier data.
100X MORE COMPUTE POWER	NVIDIA focuses on innovation at the intersection of visual processing, AI, and high-performance computing. From real-world data, GPU Accelerated SW Algorithms can learn to recognize patterns too complex, too massive or too subtle for manually coded SW GPU deep learning is the computing model companies will use to transform their digital business into an AI enterprise.

NVIDIA DGX-1 For Analytics

NVIDIA, the leader in GPU-accelerated computing, is now bringing the power of AI and deep learning to analytics platforms. NVIDIA DGX-1 combines the power of deep learning and accelerated analytics in a single integrated system with an optimized software stack for incredible performance and cloud management for ease of use.

Advantages of a GPU-accelerated Data Center

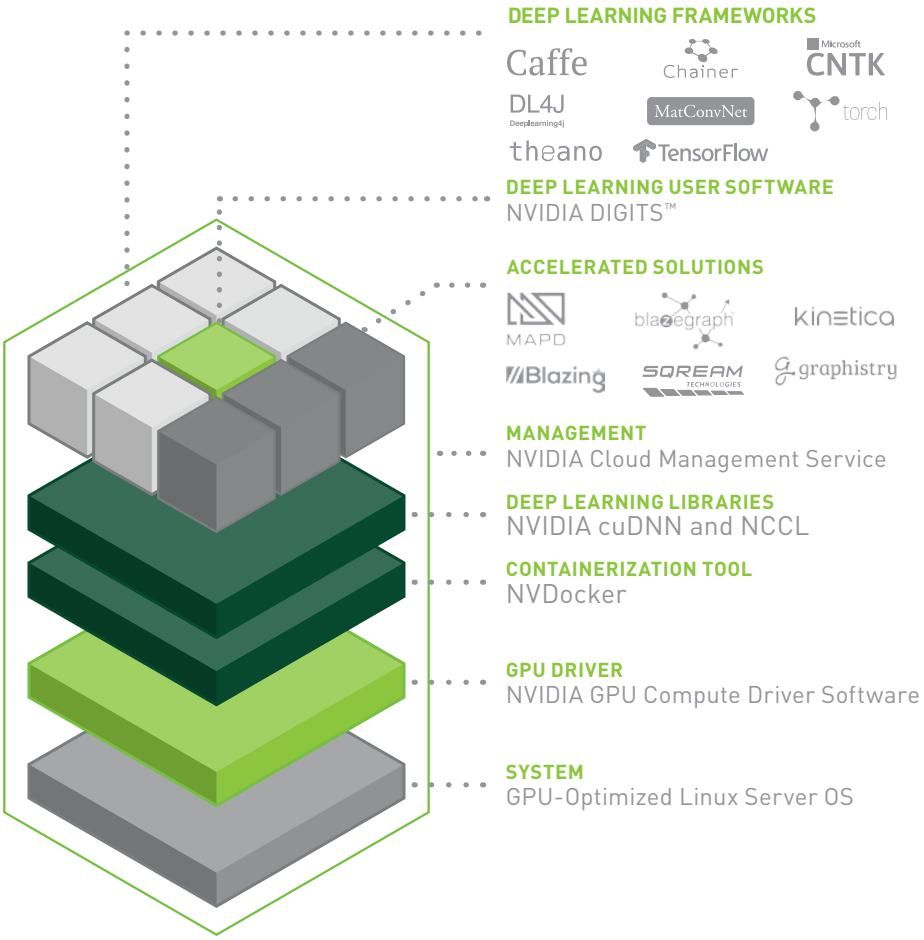
Empowers you to uncover patterns in large data sets, gaining unprecedented insights in hours or minutes.

Is engineered with groundbreaking technologies, delivering the fastest solutions for your deep learning training and AI-accelerated analytics.

Improves your ROI through increased productivity and the enterprise reliability.

Has the compute power of 250 servers without the hidden cost of traditional systems.

Software



Hardware

SYSTEM SPECIFICATIONS

GPUs	**8x Tesla P100**
TFLOPS (GPU FP16 / CPU FP32)	**170/3**
GPU Memory	**16 GB per GPU**
CPU	**Dual 20-core Intel® Xeon® E5-2698 v4 2.2 GHz**
NVIDIA CUDA® Cores	**28672**
System Memory	**512 GB 2133 MHz DDR4**
Storage	**4x 1.92 TB SSD RAID 0**
Network	**Dual 10 GbE, 4 IB EDR**
Software	**Ubuntu Server Linux OS DGX-1 Recommended GPU Driver**
System Weight	**134 lbs**
System Dimensions	**866 D x 444 W x 131 H (mm)**
Packing Dimensions	**1180 D x 730 W x 284 H (mm)**
Maximum Power Requirements	**3200W**
Operating Temperature Range	**10 - 30 °C**

Partner Applications

DGX-1 includes industry-leading deep learning and accelerated analytics applications that are tested to ensure a fast, reliable, predictable deployment.

Learn more, visit **www.nvidia.com/dgx-apps**

Industry Use Cases

Customers everywhere are using massively parallel graphics processors to provide higher throughput for compute-intensive workloads and achieving significant performance gains without the hidden cost of scale-out architecture. This can result in dramatic cost savings.

Ad Tech

- Assess inventory availability
- Optimize campaign management and conversion
- Analyze campaign performance

Federal

- Process data streams like video, speech, image faster
- Disrupt planned cyber and criminal activities
- Leverage advanced object recognition technologies to locate threats faster, safer, and more accurately

Finance

- Correlate impact of economic trends and hedge funds related to portfolios
- Campaign and conversion analysis
- Analyze critical markets and evaluate credit worthiness

Healthcare

- Analyze clinical trials, cross-trials, and drug compliance
- Identify patient populations that could benefit from predictive outreach
- Identify disease risk

Manufacturing

- Leverage live streaming analytics on component functionality to ensure safety, avoid failures and validate warranty claims.
- Monitor real-time data feeds from laboratory and production-line machinery to identify catastrophic events and generate notification
- Predict maintenance and monitor conditions

Oil and Gas

- Manage, visualize and optimize exploration and production operations
- Determine drilling and completion of wells
- Predictive and reduce down-hole failures

Retail

- Analyze historical sales to determine geographic product demand for future inventory and store locations.
- Manage real-time supply chain for replenishment and inventory management
- Manage ad-tech, geospatial tagging and customer preference recommendations

Security

- Detect anomalous behavior in network traffic to identify vulnerabilities
- Analyze data-in-motion and at rest can help find new associations or uncover patterns and facts
- Analyze internet, smart devices, and social media data to prevent criminal threats

Telco

- Correlate call records with server performance data to spot problems in real-time and build ad targeting profiles.
- Analyze intra-day billing
- Identify emerging trends in customer-specific usage

Transportation

- Real-time management of traffic patterns and congestion
- Live monitoring of railroad conditions
- Optimize long-haul trucking routes and load capacities

For more information, visit the following:

Learn more about DGX-1 for Analytics here - **www.nvidia.com/analytics**

Explore DGX-1 Partner Applications here - **www.nvidia.com/dgx-apps**

Get started with Deep Learning today - **developer.nvidia.com/deep-learning**

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