2024

T1Nexus

THE NEXUS OF CUTTING-EDGE IDEAS AND YOUR FIBER NETWORK

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Overview

Transform your data center operations with advanced interconnect solutions from T1Nexus.

T1NEXUS

WHY CHOOSE T1NEXUS

Amidst the AI surge, data center operators grapple with rising power demands, the need for higher-density racks, more efficient cooling and robust workload management. Your plate is full. As the largest independent provider in the advanced, transceiver and cable interconnect solution segment, we're here to ease the pressure and keep you striding forward while exceeding today's performance, reliability, and innovation demands. Unlike some of our larger competitors in the AI-ready interconnect solution segment, our challenger strength and differentiation lies in our laser-focused expertise on a select few areas, where we can ensure product assurance, competitive advantages, and dedication to timely delivery, every time.

QUALITY YOU CAN TRUST

Deep-rooted joint manufacturing partnerships across Asia enable us to offer not only competitive pricing and guaranteed product assurance, but also a commitment to quality that's backed by lifetime warranties.

COOLING INNOVATION

Stay ahead with our immersion cooling cables, crafted for the most demanding data center environments

CUSTOMIZATION

With flexible fulfillment models, ongoing reliability testing and rapid prototyping, your vision for custom products becomes a reality.

VENDOR-NEUTRAL VERSATILITY

Or optical transceivers, AOCs, ACCs, AESs, DACs and more, are interoperable, ensuring seamless integration into any existing infrastructure.

DEDICATED SUPPORT

Our technical support team is always ready to assist, ensuring your operations run smoothly and efficiently

PRICING

T1Nexus offers factory-direct pricing as a manufacture at a fraction of costs compared to OEM.

Reimagining Interoperability

Choose T1Nexus, and invest in a future for universal functionality across your entire data center network

T1NEXUS

At T1Nexus, we redefine interoperability with our flagship product, EasyCoder. Designed for flexibility and unmatched value, EasyCoder empowers you to re-code our transceivers to be compatible with any brand of network equipment. Whether your network uses one brand of switch or multiple brands, our coding box ensures that you need only one transceiver to connect them all. This not only simplifies your inventory but also slashes costs by eliminating the need for multiple versions. Moreover, EasyCoder's advanced multi-coding feature means a single T1Nexus transceiver can adapt to any NEM equipment you have, further streamlining your operations. Large NEMs may restrict you to using just their hardware, but T1Nexus breaks those boundaries by offering the freedom to re-code and multi-code, a service you won't find from any network equipment manufacturer.

T1Nexus cabling solutions offer the same flexibility and interoperability, allowing support for multiple brands on each end of the cable, creating the ultimate solution that solves the interoperability challenge.

9001 ISO CERTIFIED

WARRANTY LIFETIME WARRANTY

TL9000

Optical Transceivers

Bridging the gap in HPC and AI connectivity with T1Nexus

T1NEXUS

Challenge

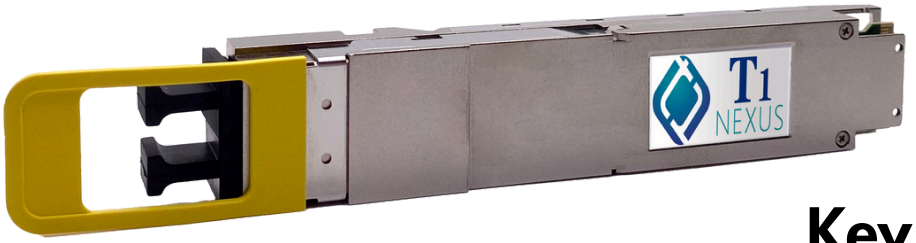
During the AI boom, securing essential hardware has become increasingly challenging due to prolonged lead times. The real test is finding a vendor who can swiftly manage the supply chain, ensuring timely delivery of interconnects so you can focus on deployment without delays. Additionally, supporting advanced transceivers across Nvidia and multivendor networks is a complex task that many vendors struggle with. The challenge lies in partnering with a provider who can deliver high-quality solutions seamlessly integrated into your diverse technological landscape.

The Ultimate Solution

T1Nexus optical transceivers are the answer to the challenges posed by the AI boom and complex multivendor networks. Our transceivers provide the high-speed, low-latency connectivity that HPC and AI systems require to operate at peak efficiency. With data rates up to 800G and distances up to 120km, your data isn't just moving—it's racing.

Moreover, T1Nexus collaborates with the largest service providers globally, proving our capability as a reliable partner. We ensure seamless integration and top-notch performance, making us the trusted choice for your advanced connectivity needs.

With T1Nexus, you're not just upgrading your system; you're revolutionizing the way your HPC and AI environments communicate.



T1Nexus' 800G Transceiver

Key Benefits

- **Unmatched speed:** Our transceivers facilitate data transfer rates that keep pace with the most demanding computational tasks.
- **Reliable long-range communication:** Distance constraints are eliminated, enabling robust data exchange over long hauls.
- **Seamless integration:** Compatibility with a wide array of NEM brands means our transceivers integrate effortlessly into your existing setup.
- **Scalable performance:** As your data needs grow, our solutions scale with you, ensuring your infrastructure never falls behind.

Full Product Range Here

Cabling Solutions

Streamlining connectivity in HPC and AI data centers with T1Nexus

T1NEXUS

Challenge

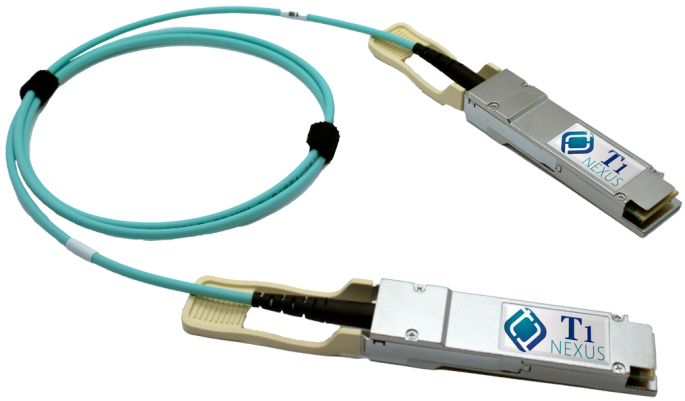
High-Performance Computing (HPC) and Artificial Intelligence (AI) data center environments face unique connectivity challenges so choosing the right technology is critical. Data centers powering HPC and AI applications grapple with the need for high-quality data transfer across a variety of platforms. Choosing the right cable is no longer a simple decision.

The Ultimate Solution

T1Nexus makes a variety of standard and custom cables, delivering the ideal solution for HPC and AI data centers looking for simplicity and reliability. All of our cables deliver guarantied interoperability with your specific brands of network equipment.

T1Nexus cables are a strategic choice for data centers that prioritize reliability, efficiency, and performance. By choosing T1Nexus, you are choosing solutions guaranteed to work with your network regardless of the brand of equipment deployed and solutions that will ensure a robust, interference-free, and scalable connectivity infrastructure.
Choosing the right cable depends on your specific needs. DACs are a good choice for short-distance connections where cost is a major factor. AOCs are better for longer distances or high-bandwidth applications. ACCs and AECs offer a middle ground for specific use cases.

T1-DAC-100G



T1-AOC-10G-

Full Product Range Here

Cabling Solutions

Streamlining connectivity in HPC and AI data centers with T1Nexus

T1NEXUS

- **DAC (Direct Attach Cable):** These are copper cables with SFP+ or QSFP connectors on each end. They are passive, meaning they don't require any external power source. DACs are cost-effective and low-power, but have limited reach (typically under 10 meters) and are bulkier due to thicker insulation for shielding.
- **ACC (Active Copper Cable):** A type of DAC that uses electronics built into the connector head to boost the signal and extend the reach compared to passive DACs. They can reach up to 30 meters but are more expensive and consume slightly more power than DACs.
- **AEC (Active Electrical Cable):** A newer type of cable similar to ACCs. They use advanced signal processing to achieve even thinner cables and longer reach (up to 7 meters for high speeds like 800G) compared to traditional DACs. They are still under development but offer a potential cost-effective alternative to AOCs for shorter distances.
- **AOC (Active Optical Cable)**: These cables use fiber optic technology to transmit data using light pulses. They are thinner and more flexible than DACs, with a much longer reach (up to 100 meters or more). AOCs are ideal for high-bandwidth applications but are generally more expensive than DACs and consume more power.

T1-AOC-25G

Full Product Range Here

Feature	DAC	ACC	AEC	AOC
Cable Type	Copper	Copper	Copper	Fiber Optic
Active/Passive	Passive	Active	Active	Active
Typical Reach	< 10 meters	Up to 30 meters	Up to 7 meters (high speeds)	Up to 100+ meters
Cost	Low	Medium	Medium/High	High
Power Consumption	Low	Low-Medium	Medium	High
Flexibility	Low	Low-Medium	Medium	High

Cabling Solutions

Streamlining connectivity in HPC and AI data centers with T1Nexus

T1NEXUS

In addition to our point to point cables, our break-out cable solutions provide the ideal solution for solving complex connectivity scenarios in a data center.

Breakout cables offer several advantages:

- **Organization:** A breakout cable takes a single connector and splits it into multiple, typically smaller connectors. This helps organize and distribute signals to different devices or ports, reducing cable clutter.
- **Versatility**: Breakout cables can be used to connect a single source with multiple devices that use different connector types or throughput. For example, a breakout cable with a single MPO fiber optic connector on one end splitting into multiple LC connectors on the other end is used in data centers to connect high-speed network equipment. Breakout cable with a single 800G connection on one end can be split into multiple 100G, 200G or 400G connections on the other end, allowing you to connect an AI server to to multiple switches.
- **Space Saving:** In some cases, using a single breakout cable can be more space-saving than using multiple individual cables. This is especially true when dealing with bulky connectors or situations where cable management is a concern.
- **Compatibility/Interoperability:** Any on T1Nexus breakout cables can support all of your network equipment, with each endpoint capable of supporting one or multiple brands of servers, switches and cards.

Full Product Range Here

T1-QSFP-DD-400G-AOC

T1-DAC-10G

Media Converters

Revitalizing network infrastructure with T1Nexus

T1NEXUS

Challenge

Networking solutions often struggle with the limitations of aging infrastructure. As networks grow and data demands increase, the existing copper cables can become a bottleneck, unable to support extended ranges or higher data transfer rates. Additionally, electromagnetic interference (EMI) and network noise can degrade signal integrity, leading to unreliable connections.

The Ultimate Solution

T1Nexus media converters are engineered to breathe new life into aging networks. By seamlessly bridging the gap between fiber and copper cables, our media converters provide the much-needed flexibility to enhance network performance. They are designed to extend the reach of your network, accelerate data transfer rates, and shield your connections from EMI and network noise.

Choose T1Nexus media converters to transform your old network into a modern, high-performing ecosystem, ready to tackle the challenges of today's data-driven world.

Benefits

- **Extended range:** Our media converters enable longer distance data transmission expanding the reach of your network beyond the limitations of copper cables
- **Faster data rates:** Experience improved data throughput, ensuring that your network can handle the increasing volume of data traffic.
- **EMI and noise protection:** With our media converters, your network is safeguarded against EMI and noise ensuring clean and uninterrupted data signals
- **Cost-effective upgrade:** Revitalize your existing network without the need for a complete overhaul, saving on infrastructure costs
- **Simple integration:** Designed for easy deployment, our media converters integrate into your current setup without complex changes.

A snapshot of T1's Media Converter Family

Full Product Range Here

Immersion Cooling

A Sustainable Innovation for Data Centers

T1NEXUS

Challenge

As data centers grow in complexity and scale, they face the dual challenge of increasing energy consumption and environmental impact. Traditional cooling methods are becoming unsustainable, contributing to high carbon footprints and operational inefficiencies.

The Ultimate Solution

TT1Nexus' Immersion Cooling technology represents a paradigm shift in data center thermal management. By submerging servers and components in a specially designed, non-conductive liquid, our technology enables more efficient heat dissipation than air cooling. This approach not only reduces energy consumption but also extends hardware lifespan and decreases the need for space-consuming cooling infrastructure.

Experience the next step in data center evolution with T1Nexus' Immersion Cooling technology—where performance meets sustainability.

Sustainability Benefits

- **Reduced energy usage:** Immersion cooling significantly lowers power requirements for cooling, contributing to a greener data center with a smaller environmental footprint.
- **Lower carbon emissions: B**y optimizing energy efficiency, T1 Nexus' solutions help data centers move towards carbon neutrality aligning with global sustainability goals
- **Enhanced hardware efficiency:** The precise temperature control afforded by immersion cooling leads to improved performance and reliability of data center equipment
- **Scalable and future-proof:** As data demands escalate, T1Nexus' Immersion Cooling technology scales to meet these needs without a proportional increase in energy consumption.

T1-QSFP28-100G

Full Product Range Here

Passive Networking

Maximizing efficiency and capacity

T1NEXUS

Challenge

Modern networks, particularly in data centers and large-scale communication infrastructures, are under constant pressure to increase capacity and efficiency. However, active components that require power and electronics can introduce complexity, increase costs, and limit scalability. There's a need for a more streamlined approach that can handle the growing demands without the drawbacks of active networking.

The Ultimate Solution

T1Nexus addresses these challenges with its range of passive networking components, including splitters, couplers, and multiplexers. Our passive solutions, utilizing DWDM and CWDM technologies, enable the combination or separation of optical signals on a single fiber without the need for active amplification or regeneration. This simplifies the network architecture and enhances its capacity and efficiency.

T1Nexus' Passive Networking solutions are ideal for applications ranging from backbone networks and data center interconnects to metropolitan area networks and beyond, providing a robust foundation for today's data-driven world.

Benefits

- **Energy savings:** Passive components don't require power, leading to significant energy savings and a reduced carbon footprint.
- **Increased network capacity:** By allowing multiple signals over a single fiber passive networking dramatically increases the network's data-carrying capacity.
- **Simplified infrastructure:** The absence of active electronics reduces complexity making the network easier to manage and maintain.
- **Cost-effective:** Passive components are generally more affordable than their active counterparts, offering a cost-efficient way to upgrade network capacity.
- **Reliability:** With fewer points of failure, passive networks tend to be more reliable and secure.

Full Product Range Here

EasyCoder

Effortless compatibility, infinite possibilities

T1NEXUS

The ultimate coding box platform solution, Code, re-code, and test optics for compatibility with hundreds of OEM brands using the T1Nexus EasyCoder.

Give your give network engineers and field technicians a leg up and save them hours -- and even days -- with the T1Nexus coding box platforms. EasyCoder Coding Box Platforms are designed to support hundreds of OEM brands, come with OEM-compatible code available for download from the cloud, and make the laborious process of coding, re-coding, and testing optics, quick and painless. They are also portable or rack-mountable, offering you the flexibility to address any coding networking scenario that arises.

T1's EasyCoder

FEATURES

- Supports OSFP, SFP, QSFP and QSFP-DD form factors
- On-site troubleshooting
- Custom code development

Contact our specialists for samples and quotes.

Get the T1Nexus advantage today.

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