

APPLICATIONS

Along with data intensive **global workflows** there is a growing demand for fast long haul data transmission. **Fast file transfer** is the key enabler for distributed workflows and cloud services. Typical areas of applications are where massive amounts of data are moved between distributed locations e. g. in media industry and science.

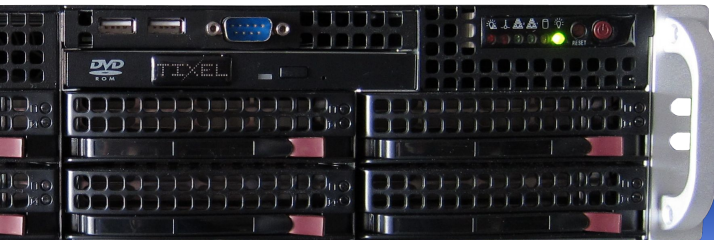
TIXEL offers high performance solutions for bulk data transfer that significantly help to **reduce time and cost**. Simple point-to-point scenarios as well as complex enterprise and B2B setups can be realized with TIXEL's file transfer acceleration products - even covering speeds beyond 10 G in cluster infrastructures.

PRODUCTS

TIXEL products are created for heavy duty operations in professional environments.

- **TIXstream** as the ultimate end-to-end solution can be licensed for different transfer speeds up to 5 Gigabits/s.
- **TIXway** significantly boosts FTP performance on WAN links up to 1 Gigabit/s with minimal impact on existing workflows.

These file transfer solutions are available as ready-to-use **appliances** as well as **software** packages for specified Linux based server systems. **OEM** customization is available on request.

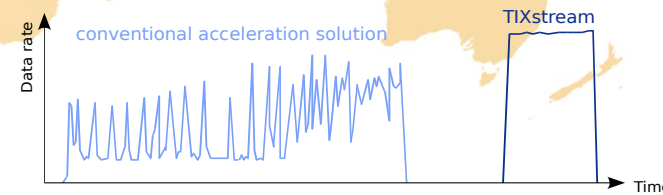


TECHNOLOGY

Wide Area Networks (WANs) based on the Internet Protocol (IP) suffer from latency, jitter and packet drops - characteristics that disqualify legacy protocols for reliable transmission at high data rates.

Using unreliable RTP/UDP leads to lost packets and data corruption while traditional TCP based file transfers (like FTP) fail to exploit high bandwidth links and deliver poor data rates.

TIXEL's patented Reliable WAN Transfer Protocol (RWTP) overcomes these weaknesses and delivers peerless performance. Along with its rock solid software framework it is the base for scalable transfer products for link rates ranging from 100 Megabits/s up to rates beyond 10 Gigabits/s.



The chart above shows typical data rate characteristics of a file transfer. TIXstream archives much higher and smoother link utilization without peaks and bursts.

Standard data transfer tools fail miserably especially on long distance multi-Gigabit networks. Thus many companies still ship hard disks instead of using high speed networks. Hence highly qualified personnel is doomed to wait and expensive equipment is under-utilized. TIXEL's technology is the key enabler for most efficient inter-facility bulk data exchange.

For case studies and more please visit www.tixeltec.com

Moving 2 Terabytes in 1 Hour.

Reliable. Secure. Any Distance.

High Performance File Transfer

TIXEL

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TIXEL

SOLUTIONS

TIXEL offers scalable transfer solutions tailored to your environment covering several kinds of network, storage, applications, and workflows.

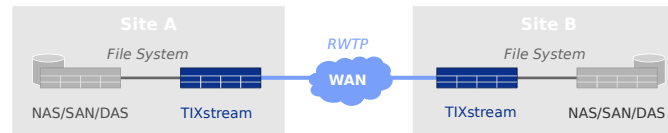
- The **Reliable WAN Transfer Protocol (RWTP)** enables efficient compensation of network impairments like packet loss, jitter, and high latencies
- Compatible with standard **Internet Protocol (IP)** infrastructure like leased lines and MPLS networks
- Guaranteed **robust 100 % error-free** data transfers
- **Fastest speeds** at current and upcoming WAN links by enabling extreme high data rates for reliable and secure data transfers
- **Content agnostic** transfer speed
- Available as **appliance** and Linux **software** package
- Standard interfaces: **1** and **10 Gigabit Ethernet (GE)** network, **Fibre Channel** storage, **HDSDI** video playback

PERFORMANCE

On a typical WAN link with a round trip time (RTT) of 100 ms and 0.1 % packet loss FTP may deliver 0.6 Megabits/s or less. TIXway boosts this to 978 Megabits/s. TIXstream transfers 5 Gigabits/s at a 10 G link. Thus waiting for 100 Gigabytes to be transferred may take two days – or less than 3 minutes.



TIXSTREAM



TIXstream enables maximum transfer speed in a tightly integrated end-to-end workflow chain.

- Up to 625 Megabytes/s (**5 Gigabits/s**) on 10 GE
- **Transfer, backup, and synchronization**
- Drag-and-drop **watch folder**
- Segment based **checkpoint management**
- **Rapid local copy** for heterogeneous storage environments
- Broad **file system** support e. g. SAN: StorNext®, CXFS™; DAS: XFS, ext3, ext4; NAS: NFS, CIFS, OneFS®
- OneFS® **multi-path NFS** acceleration
- Platform independent **web-based user interface** for management and administration

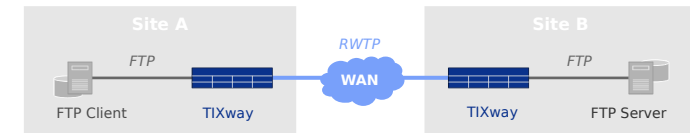
Jobs						
Locations Admin About						
Status Configuration User settings						
id	Name	Start	ETA	Datarate	Progress	
	daily backup	31-08-2011 07:03:09	00:00:01	5082.0 Mb/s	<div style="width: 100%;"></div>	
	FX image sequence	31-08-2011 07:03:12	00:00:07	5100.0 Mb/s	<div style="width: 90%;"></div>	
	Orig image sequence	31-08-2011 07:03:23	00:00:25	5004.0 Mb/s	<div style="width: 50%;"></div>	

- **Web Service** and command line interface (**CLI**)
- Integrated **diagnostic tool set** to optimize transfer chain

TIXSTREAM OPTIONS

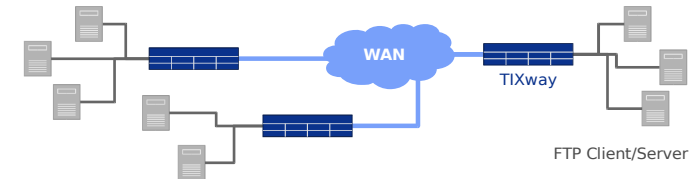
- Full speed **on-the-fly AES-256 encryption**
- **Remote playback** of uncompressed SD, HD, and 2K DPX files via HDSDI for movie and video production
- **Clustered** solution for transfer speeds beyond 10 G

TIXWAY



TIXway is focused on transparent acceleration of existing FTP-based workflows with ultimate ease of integration.

- Up to 125 Megabytes/s (**1 Gigabit/s**) on 1 GE
- Significantly **accelerates FTP** based workflows by locally terminating FTP connections and running **RWTP** on the critical long haul path
- **Minimum user impact** – unmodified workflows, minimum integration and deployment effort
- **No extra software** on FTP client and server machines
- **Compatible** with most FTP clients and servers



- One TIXway node serves **multiple FTP clients/servers**
- Up to 20 **parallel FTP sessions** at each TIXway
- TIXway nodes are located in close proximity to the FTP nodes – in-house, on-set, or at the provider's POP

TIXway can perfectly be combined with TIXstream enabled environments in order to support a broader range of workflow setups and applications.

