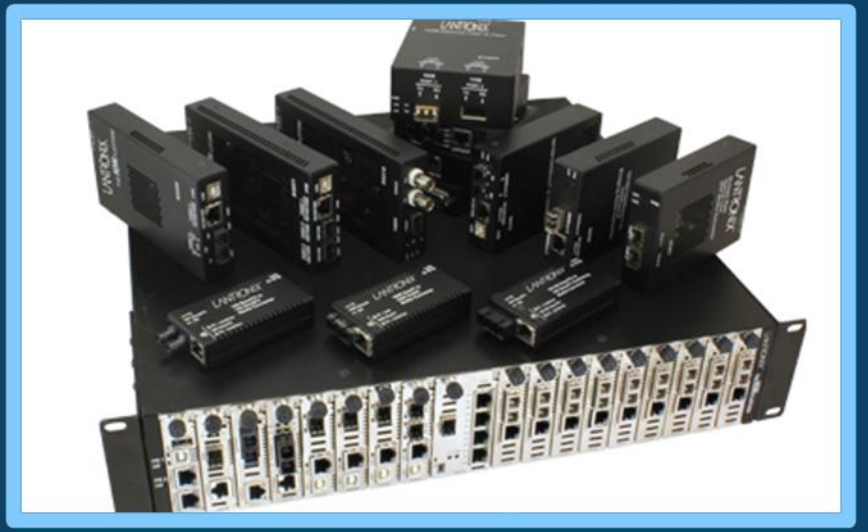
LANTRONIX®

- Express Deck – Media Converters

Media Conversion

Media Conversion Value Proposition

- A **quick and easy** way to convert from one media or communication protocol to another
  - Copper to fiber
  - Multimode to single mode fiber
  - Fast Ethernet to Gigabit Ethernet
- Leverages existing infrastructure for **faster time to service and reduced cost**
  - Increased data throughput/higher bandwidth of fiber
  - Overcome distance limitation of UTP cabling
  - Increase security with fiber transmission without a complete network overhaul
  - Ensure networks are future ready for increasing traffic
- Allows **simple addition of powered devices** where no electrical/AC outlets are available
  - Send power along with data to connected devices over a single UTP cable



Lantronix Value

Lantronix has the widest portfolio of TAA and NDAA compliant media converters, with over 38 years of expertise, global reach and support

Lantronix Breadth of Portfolio

Mini Media Converters and Network Adapters (NICs)

- Compact solutions for basic conversion with limited latency in tight spaces, cost-constrained environments or at the desktop

PoE Media Converters and Ethernet Extenders

- Simple solutions for extending Ethernet to the edge of networks and adding power for connected devices

ION Managed Converters

- Integration of Ethernet copper and fiber equipment and infrastructure with optimum flexibility for connected interfaces in high-density applications

Media Converter Use Cases

Retail

- Small size of Minis are ideal for limited space Point-of-Sale installations throughout stores
- Integrate existing Fast Ethernet copper networks with enhanced Gigabit Ethernet fiber cabling
- Basic media conversion capability is cost-effective and easy to install

Enterprise

- PoE media converters provide power and data for security cameras or WiFi access points where AC or electrical cabling is unavailable
- Utilize existing coax or 2-wire cabling in walls or elevator shafts; extend beyond 100m Ethernet cable limitation
- Save time, money and disruption to business operations

Data Centers

- Managed media converters accommodate integration of multiple services in data centers or large networks
- Support T1, DS3, POTS and Ethernet services in the same chassis
- Simplify management and inventory across data center facilities

Fiber to the Desk Use Cases

Government/Enterprise

- Secure fiber transmission to the desk reduces risk of data leaks/hacking
- Transmission over fiber allows increased throughput, bandwidth and reliability for networks increasing data usage
- PoE NICs/media converters provide data and power for VoIP phones, security cameras or WAPs where AC power is not accessible
- Easy installation reduces disruption to business

Education

- Provide phone connections in dorm or classrooms for safety concerns
- Fiber distribution to overcome distance limitations of copper
- PoE media converters can power and connect VoIP phones to network while reducing need for electrical cabling/outlets
- Compact solutions for small spaces

How to Qualify A Prospect

Who to Engage

- Enterprises
  - Office
  - Government Agencies/Military
  - Financial
- Schools/Universities
- Retail
- Data Centers
- Historic buildings

Customer Needs

- Secure data transmission
- Enhanced network speeds
- Expanded network distance
- Flexibility to place powered devices throughout their network
- Capability to easily add devices such as security cameras or WAPs
- Flexibility to manage multiple services
- Preserve/leverage existing cabling

Opportunity Drivers

- Increasing use/high speed transmission of data
- Expanding networks to support larger spaces/multiple buildings
- Enterprise upgrades
  - PCs/laptops/thin clients
  - WiFi 6e/7 Access Points
  - VoIP phones
- Increased need for safety/surveillance
- Organizational requirements for secure data transmission over fiber
  - Concerns over EMI or RFI (susceptibility to hacking)
  - Rules prohibiting use of wireless transmission

Competition

	Allied Telesis	American Fibertek	Omnitron	Lantronix	Comments
Managed Offering Flexibility					
Chassis Configuration	🟡	🟡	🟢	🟢	Allied 8/16/24 port blades; Others single port cards. AFI 11/14 slot chassis; Omnitron 1/2/5/19 slot; LTRX 1/2/6/19 slot chassis
Fiber Customization	🔴	🟡	🟢	🟢	Allied LC/SFP only; AFI SC/ST/SFP; Omnitron and LTRX offer fixed optics SC, ST, LC and SFP options
Fast Ethernet	🟢	🟢	🟢	🟢	
Gig Ethernet	🟢	🟢	🟢	🟢	
10G Ethernet	🟢	🔴	🟢	🟢	
Fiber to Fiber	🔴	🟢	🟢	🟢	
T1/E1/DS1	🔴	🔴	🟢	🟢	
T3/E3/DS3	🔴	🔴	🔴	🟢	
POTS	🔴	🔴	🔴	🟢	
Unmanaged Offering Diversity					
Layer 1	🟢	🔴	🟢	🟢	
Layer 2	🟢	🟢	🟢	🟢	
Fast Ethernet	🟢	🟢	🟢	🟢	
Gig Ethernet	🟢	🟢	🟢	🟢	
10G Ethernet	🟢	🔴	🟢	🟢	
Fiber to Fiber	🔴	🟢	🟢	🟢	
USB	🟢	🔴	🔴	🟢	
Extenders	🟢	🔴	🟢	🟢	
PoE/PoE+/PoE++	🟡	🟡	🟢	🟢	Allied and American Fibertek PoE/PoE+ only
PoE Powered	🔴	🟢	🟢	🟢	
TAA Compliant	🟢	🟢	🟢	🟢	
NDAA Compliant	🟢	🟢	🟢	🟢	
BAA Compliant	?	🟢	🟢	🔴	
Lifetime Warranty	🟢	🟢	🟢	🟢	
Phone Support	🔴	🟢	🟢	🟡	Allied paid support; AFI and Omnitron free published phone support; LTRX free phone support avail but not published

Point of Sale Connectivity

Large Home Improvement Store

Why we win:

- **Compact size**
- **Quality product**
- **Easy-to-install**
- **Cost-effective solution**
- **Responsible, reliable partner**

Challenge

One of the largest home improvement retailers in the world conducts approximately 17 million customer transactions per week at point of sale (POS) terminals throughout their stores. They needed to upgrade their connections for POS, WAPs, paint center PCs and security cameras to accommodate growing network traffic.

Solution

The retailer selected Lantronix M/GE-PSW Series mini media converters to provide rate conversion capability, integrating their existing 100Base-TX copper network with new 1000Base-SX fiber cabling. Fiber allowed them to extend out of the stores to their outdoor garden centers.

Results

The small size mini media conversion was ideal for limited space POS installations and basic media converter capability made it cost-effective and easy to install throughout the stores and garden centers.

Fiber to the Dorm

University

Why we win:

- **Extended network distance over fiber**
- **Power for VoIP phone ; PoE eliminates need for additional power outlets**
- **Ease of use; high quality product**

Challenge

Even though students mostly use cell phones, the University needed to provide phone connections in dorm rooms for security and safety reasons. Voice over IP (VoIP) phones were ideal; however, copper cabling provided distance limitations.

Solution

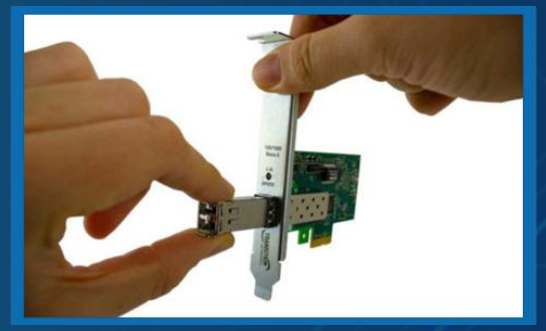
The University selected Lantronix SGPAT Series PoE+ media converters, which allowed them to reach longer distance from the University's IT center over fiber cabling, while also utilizing Power over Ethernet (PoE) over copper cabling to power the VoIP phones in each dorm room.

Results

The SGPAT media converters were an easy and cost-effective solution for integrating copper and fiber cabling and providing PoE to power the VoIP phones in each dorm room.

Fiber to the Desktop

Federal Agency



Why we win:

- Secure fiber transmission benefits
- Increased data throughput
- Breadth of product offering
- Long-standing relationships with Federal agencies; large embedded base

Challenge

A federal agency opening a new location needed to provide Ethernet to workstations throughout the building, but the agency's security policy did not allow twisted pair copper cabling because of the risk of hackers tapping into electromagnetic signals. Further, the agency processed large amounts of data and needed to ensure the data was transmitted quickly and securely.

Solution

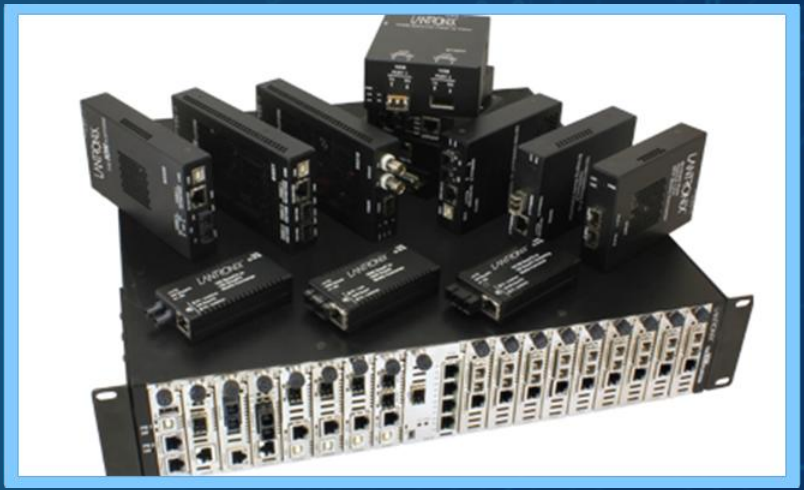
The agency installed fiber cabling throughout the building, extending it to the workstations. Transmission over fiber cabling is shielded from EMI and RFI, provides higher data throughput capacity, better bandwidth and reliability, and improved security versus copper cabling. Lantronix N-GXE Series PCIe Gigabit Ethernet Fiber Network Interface Card allowed the agency to directly connect each desktop PC to the fiber network. The N-GXE NIC's Wake-on-LAN capability also allows the IT manager to awaken workstations in sleep mode to provide updates as needed.

Results

The agency's network accommodates increased data throughput and reliability, and the network will keep pace with traffic growth by supporting future data rates and new applications. The agency is confident in the security of its data transmission over the fiber network.

Integrating Multiple Network Services

National Service Provider



Why we win:

- **Breadth of portfolio**
- **Ability to consolidate multiple services into a universal platform**
- **Simplifies service deployment, reduces inventory for customer**

Challenge

The Service Provider used multiple vendors' equipment for providing its customers with business Ethernet and Enterprise data services, which complicated network maintenance, troubleshooting, inventory and vendor management.

Solution

The Service Provider standardized on Lantronix ION Platform for its management capabilities, security of data, and ability to integrate multiple services into a common chassis.

Results

The Service Provider was able to simplify setup and ongoing maintenance by using a universal platform for both central office and customer premise. They also simplified and reduced time to turn up new customer services, improving their ability to meet customer demands and stringent SLAs. And they were able to reduce inventory levels and reduce costs by standardizing platforms and consolidating vendors.

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Thank You!

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