FIBER MOUNTAIN
The Glass Core™ Company



# Network Security For The First And Last Mile

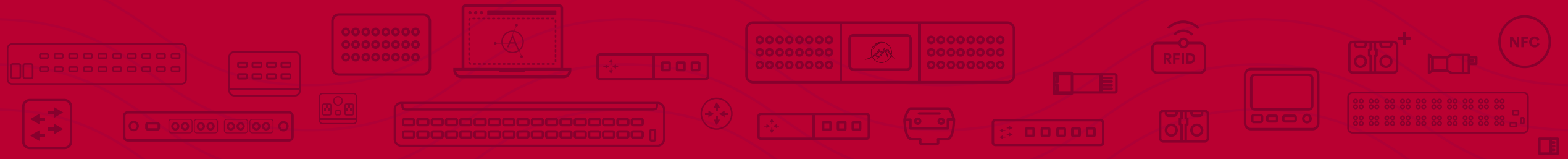
Presenters: FMI Technical Staff

Saturday, July 6, 2024

# Agenda

- Why Fiber Mountain
- Security Trends for The Physical Network
- DEMO
- Product & Solution Details
- Emerging Technologies for The Physical Network
- ROI & Competitive Landscape
- Summary




# Why Fiber Mountain?

# Why Fiber Mountain

## Company Expertise (50+ years)

- Software Applications
- Security
- Networking (routers/switches)
- Structure cabling
- Data center design
- Services

## Trusted by:

- Fortune 100 companies
- U.S. Pentagon
- Co- location  Providers

## Certification:

Approved Product List (APL) certified by the DoD

# Technology Evolution

## The Evolution of Cell Phones

**1984**
Motorola DynaTAC 8000X

**1992**
The First Smartphone IBM Simon

**1997**
Nokia 6110

**2000**
Sharp J-SH04

**2007**
The First Apple iPhone

**2008**
The First Android HTC Dream

**2022+**
Modern Smartphones

Do more than just voice calls

FIBER™ MOUNTAIN

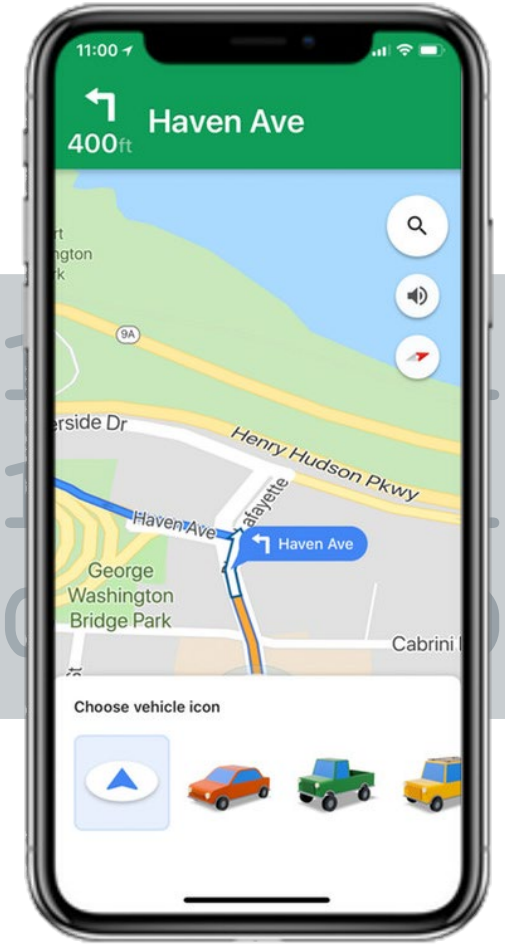
The Glass Core™ Company

# Our Vision

- Innovation
- Sensor Technology
- Real- time
- Security
- Layer Visibility

# Digital Transformation of the Physical Layer



# About Us

## Santa Clara, California

Business Development, Support,
Demo Center & Sales

Established in

2022

## Cheshire, Connecticut

R&D, Engineering, Q/A Product Management, Marketing & Datacenter

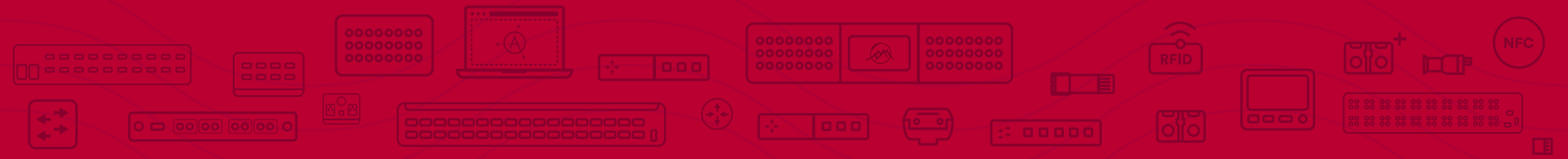
## Norman, Oklahoma

Headquarters

## Washington DC

Business Development
Support, Training
Demo Center & Sales




# Security Trends for The Physical Network

# Pain Points

- Physical Security
- Compliance
- Authorized/Unauthorized Users
- Risk Mitigation

# Physical Security

- Proactive instead of reactive
- Every port is monitored & tracked with sensor technology
- All changes are logged with timestamps and locations
- Notifications for all MACs
- Standard or customizable reports

# Compliance

- Visibility of all Open or Used ports in your physical layer.
- Ability to accurately survey network usage remotely and instantly.
- Ability to flag ports as “Reserved” for future deployments.
- Automated audits
- Asset and lifecycle management

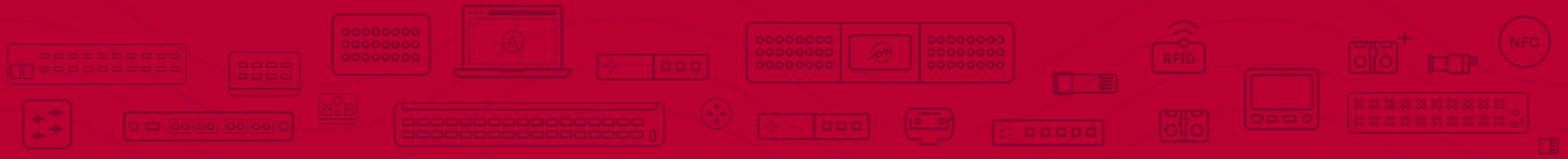
# Risk Mitigation

- Shorten commission and decommission SLA
- Minimize human error - based interruptions “label failure”
- Track every cable movement in the network
- Testing without the bulky/expensive equipment
- Safer and more efficient Troubleshooting

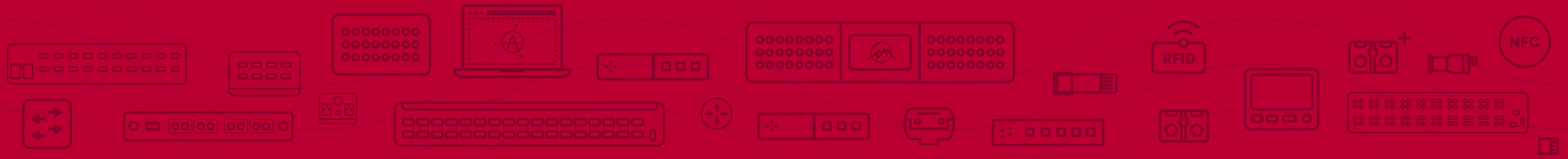
# Zero Trust User Authentication

- Minimize authorized user access errors
- Prevent unauthorized  user access
- Every port is monitored
- All changes are logged with timestamps and locations
- Notifications for all MACs
- Reports




# DEMO




# Our Products

## Overview & Benefits

# Technology Evolution

## The Evolution of Physical Infrastructure (Fiber Connectors/Cables)


1980 - 1990

First Connector


1992 - 1994

Better Connector Form Factor


1996 - 1997

Higher Density


2000s

Better Connector Form Factor

Now

Digital Connectors

# Fiber Mountain Cable Intelligence

- MPO & LC Cable assemblies
- Single mode and multi mode premium cable
- Built in or Clip on ID tags
- Uses NFC and RFID technology
- Cable information
- Able to discover cable connectivity from end to end
- Able to draw physical topology map accurately

# Technology Evolution

## The Evolution of Physical Infrastructure (Fiber Panels)

**1980s**

Better Connectors

**1990s**

Better
Connectors & Density

**2000s**

Better Connectors, Density &
Cable Management

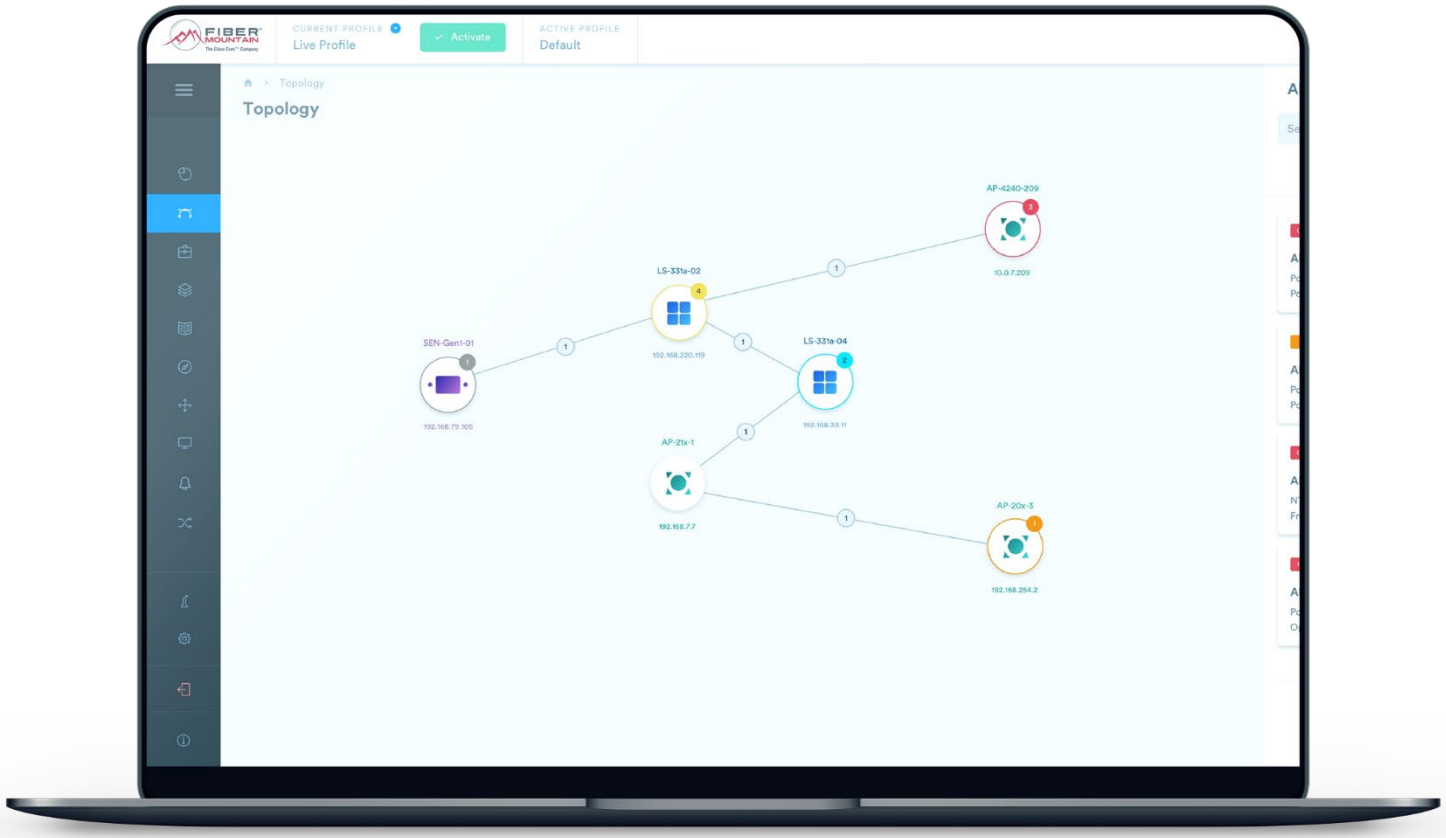
**Now**

Managed Patch Panel

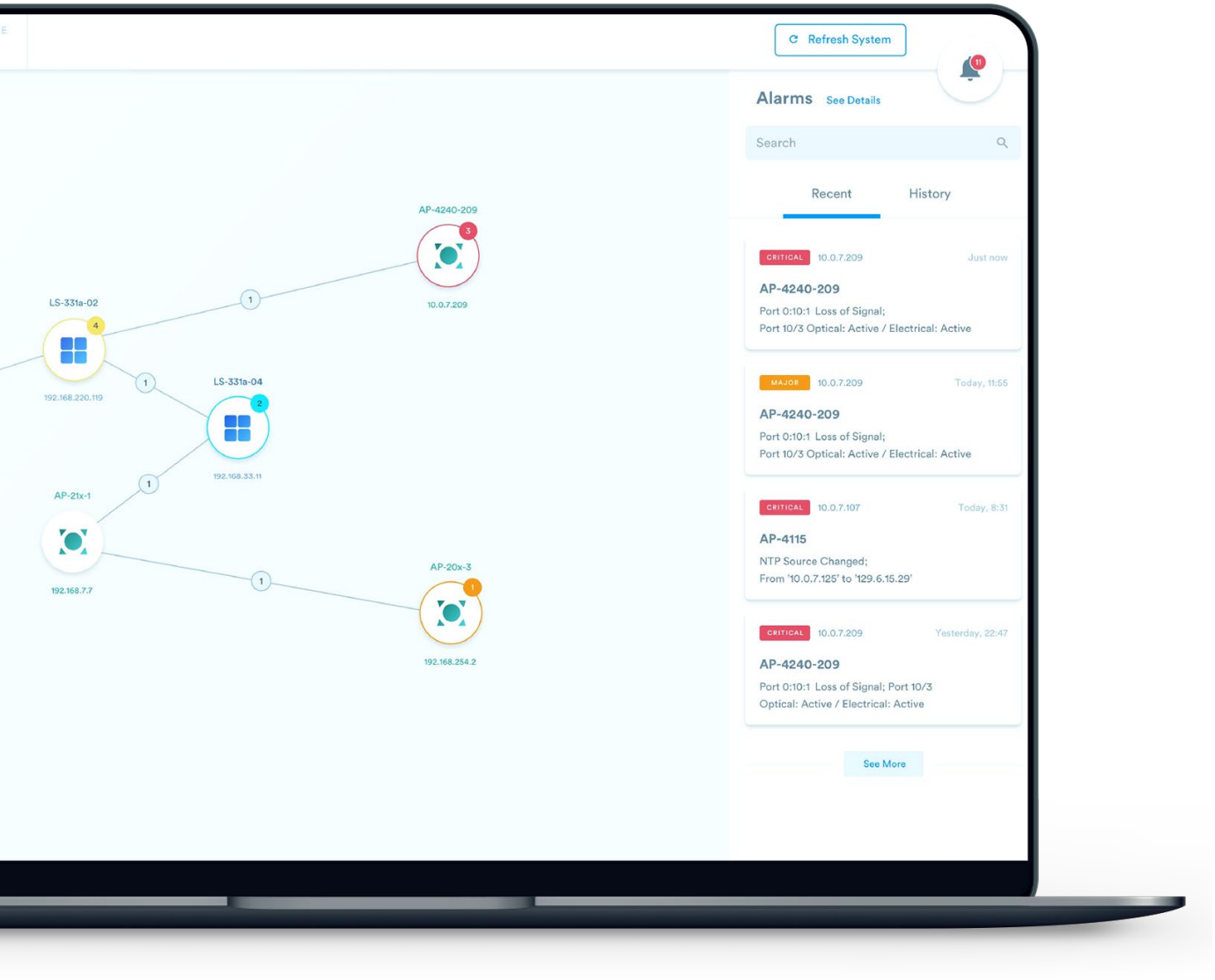
 

# AllPath® Director

## Management & Orchestration For the Physical Network






- Single - pane- of- glass Management
- Highly Efficient Software Orchestration Platform
- Intelligent Optical Networking
- ICID™ - Intelligent Connection Identification


# Sensus

## An Intelligent Managed Patch Panel


Guided Moves, Adds & Changes

Automatically Document Cables And Attached Devices

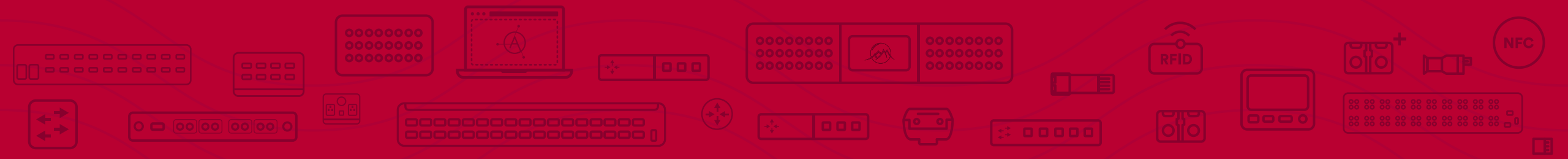
Monitor, Track and Audit every connection

# Features

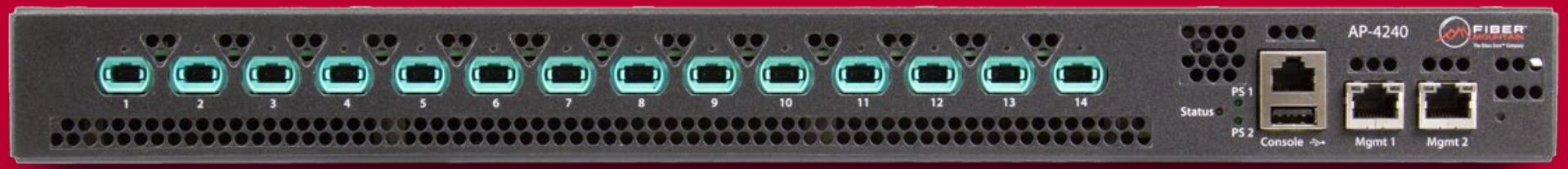
- Passive Fiber Connectivity
- Modular Chassis
- LCD Screen for Operations Management
- High Density – 192 Fibers
- Presence Sensor
- Smart Cable Sensor
- Central Management
- Diagnostic Test Capability
- Work Order Management
- Dual Power or POE




# Emerging Technology In The Physical Network




# Optical Path Exchange

Making the Physical Layer Dynamic


- Protocol agnostic
- Allows for dynamic cross-connects
- Tap any port
- Centrally managed
- Allows for dynamic layer 1 network isolation
- Supports 1/10/40 100 G (10 x 10)
- Tap functionality Built-in
- Software Control Patching
- Multicast – Distribute Traffic From One Port

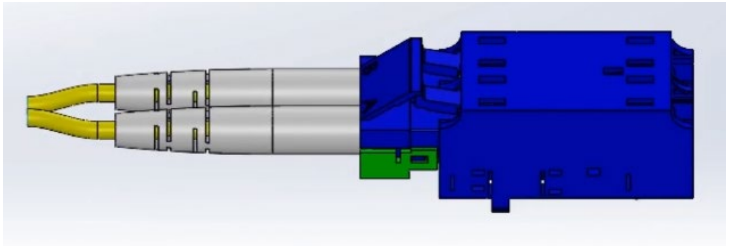
 


# Secured Network Port

For the Physical Network

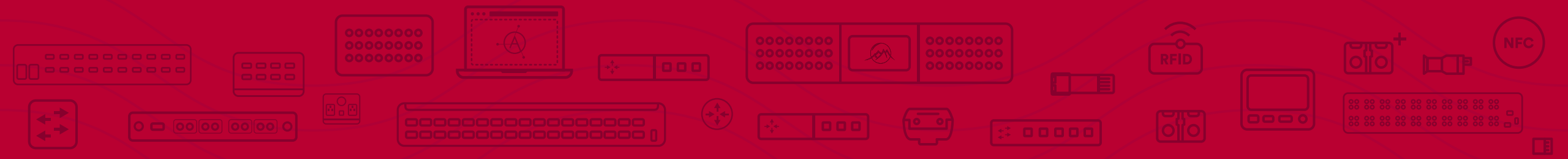
 

# Secured Network Port

- Patented connector to enable mechanical port locking & unlocking
- Controlled locally from LCD or from remote software.
- Port can be configured to be locked or unlocked by default.




# ROI & Competitive Landscape

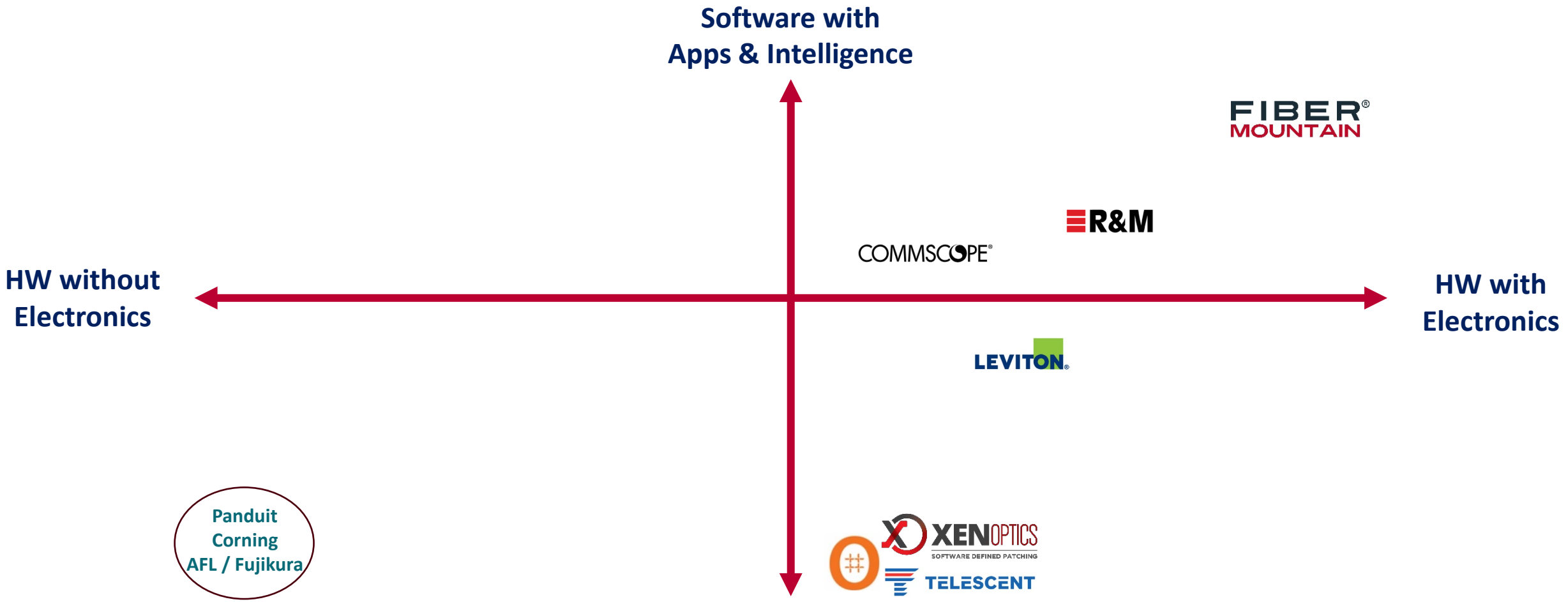
 

# Competitive Space

| | | Fiber Mountain | CommScope | Panduit | Corning | Fujikura AFL |
|---|---|---|---|---|---|---|
| Cables and Connectors | Unique RFID and NFC Tags | ✓ | | | | |
| | Identify cable properties (type, length, polarity etc.). | ✓ | | | | |
| | Support standard fiber, cable, and connectors | ✓ | | | | |
| Managed Patch Panel | Front Port LED's | ✓ | ✓ | ✓ | | |
| | Rear Port LED's | ✓ | | | | |
| | Connector Presence Detection (front) | ✓ | ✓ | | | |
| | Connector Presence Detection (rear) | ✓ | | | | |
| | Real- time Port Identification and Status (Used vs. Available) | ✓ | | | | |
| | Port Finder (Point to Point Connectivity) | ✓ | | | | |
| | Pathfinder (End to End Routing) | ✓ | | | | |
| | Event Detection, Alarms, Auto save History, for Front Ports | ✓ | ✓ | ✓ | | |
| | Event Detection, Alarms, Auto save History, for Rear Ports | ✓ | | | | |
| | Fiber Testing: Line continuity, OTDR, Bit Error Rate test (PRBS), End- Face Inspection | ✓ | | | | |
| | No Special Wiring Requirement | ✓ | | | | |
| | Seamless integration with layer 1 optical switches | ✓ | | | | |
| Software | Integrated Management Module with Touch Screen (Easy UI) | ✓ | ✓ | | | |
| | No cable length limitation (Mgmt. Module to Patching Module) | ✓ | | | | |
| | Marketplace for User Apps. (for Mgmt. Module) | ✓ | | | | |
| | API's for DCIM Integration | ✓ | | | | |
| | Cloud software for remote management | ✓ | | | | |

# Competition: Intelligent Connectivity



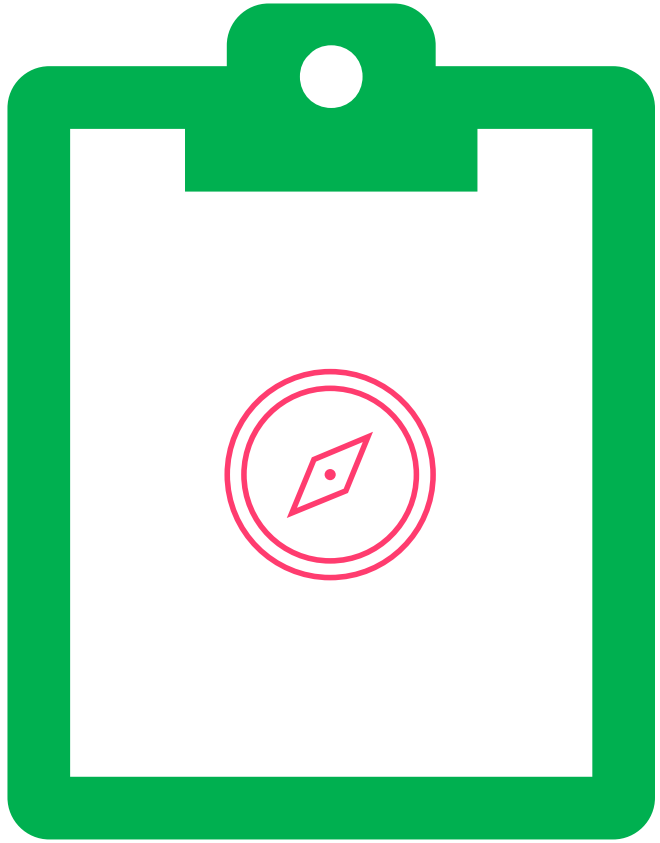

 

# Real Life ROI Example

- At one federal facility, TS/SCI staff spend over **600 hours / month** on site surveys
- The average cost of a TS/SCI staff at this location is roughly **$100/ hour**
- This equates to at least **720k / year** on surveys
- With just the dynamic reporting feature alone, **reduce labor cost by 75%**

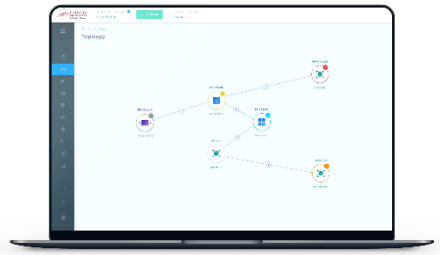
# Operational Excellence



**Speed** to deploy, troubleshoot & certify, commission

# Fiber Mountain Products

## INTELLIGENT PHYSICAL LAYER (APL CERTIFIED)



AllPath® Director

Sensus

Intelligent Fiber Cables

## STANDARD PHYSICAL LAYER (AVAILABLE ON GSA)

J- Series

Non- Intelligent Fiber Cables

# Summary

- Fiber Mountain's products are geared to create operational efficiencies while providing a more managed and secure physical layer.
  - **Documentation** – Automated, accurate, affordable
  - **Capacity Planning** – Visible port capacity anywhere
  - **Remote Hands** - Guided Moves, Adds and Changes
  - **Security** – Audit and monitor all physical layer changes
  - **Troubleshooting** – End to end cable path finder in minutes

# Contact

## Meet The Fiber Mountain Enterprise & Federal Support Team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# Thank You!

www.fibermountain.com