



**SECURE GIGABIT CONNECTIVITY
TO ANY LOCATION**



OVER ANY WIRELINE MEDIUM



DODIN APPROVED



ACTELIS HYBRID-FIBER, CYBER-HARDENED NETWORKING SOLUTIONS ARE LISTED ON THE DODIN APPROVED PRODUCTS LIST (APL)

TN # IS 23039011

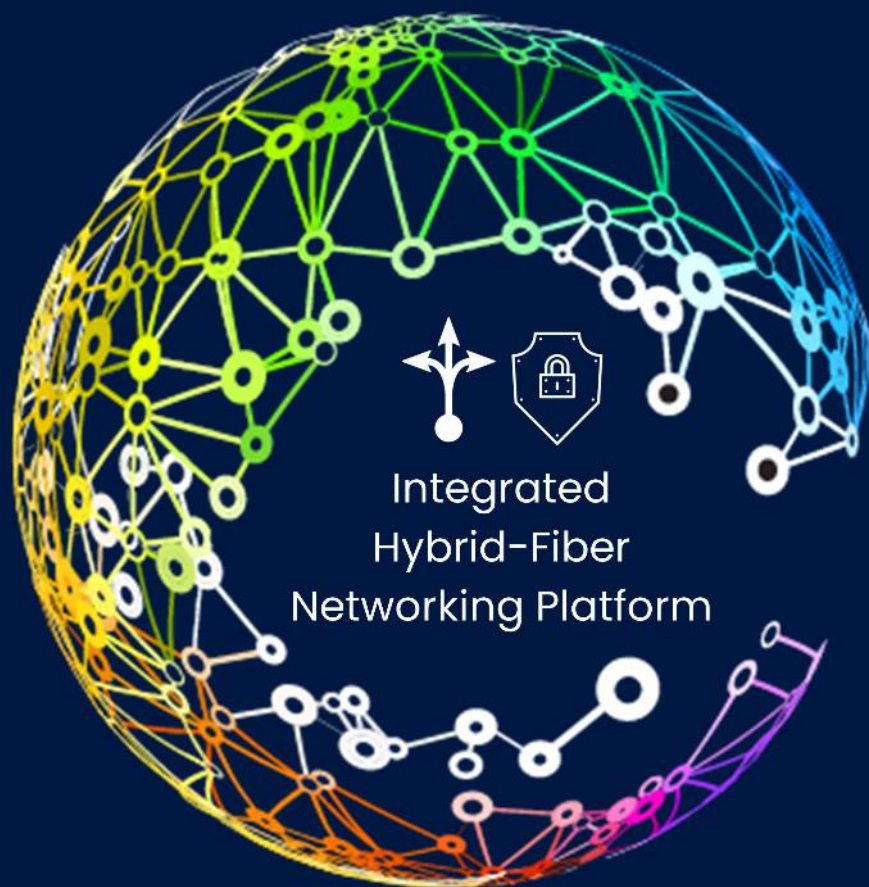


JITC Certified

The Actelis solution is the only technology of its kind found on the DoDIN APL, giving the military a cost-effective way to rapidly implement and connect IoT devices and applications at fiber-grade, utilizing any existing wires, fiber or coax, in just hours compared to weeks or months.



INTEGRATED HYBRID-FIBER NETWORK: SCALABLE, FLEXIBLE, SECURE



FIBER WHEN AVAILABLE, GIGABIT COPPER/COAX WHEN NOT

Actelis provides a single platform that brings your existing legacy infrastructure together with your growing network of new fiber installations, into one, secure Gigabit network.

Our platform, from our networking devices to our management system, is cyber-hardened, helping to protect your critical applications from cyber attacks.



A GLIMPSE INTO THE ACTELIS PORTFOLIO

Ethernet Aggregation Switches, MTU Solutions

Point-to-Multi-Point Ethernet Aggregation platforms
– Hybrid Copper-Fiber



ML2300
ML230



ML690E



GL800



GL900

Ethernet Access Devices & Industrial Switches

Managed switches, Hybrid Copper-Fiber



ML600



ML650SV



ML600D



GL800



GL90x

Reach & Rate Extenders

Repeaters and DSL Broadband amplifiers , Over copper



XR239



BBA

Optical Hardened Switches

10G and 1G L2/L3 managed switches.



GL6000



ML500



GL5000



ML500D

Management Solutions



MetaASSIST
EMS



CYBER HARDENED SOLUTIONS FOR YOUR MISSION CRITICAL APPLICATIONS



Management Layer
High Level Authentication & Encryption



**Encrypted
Switching Layer**



**Encrypted
Transmission Layer**



**Encrypted
Switching Layer**

END TO END ENCRYPTION

Keeping your network safe from cyber-hacking or denial of service attacks is a key focus for Actelis.

We provide **“Triple Shield Protection”** – three levels of network protection encrypting your data at the transmission level, device level, and management level.



WEATHER HARDENED TECHNOLOGY



Hybrid Switches



Fiber Switches



Ethernet Aggregators



Amplifiers and Repeaters

BUILT FOR EXTREME TEMPERATURES

Actelis equipment is designed for outdoor or indoor use and is proven in over 40 countries in some of the world's harshest climates. You can find Actelis devices in the bitter cold of Alaska and Canada, the extreme heat of Arizona, and the damp humidity of Florida.

MILITARY APPLICATIONS

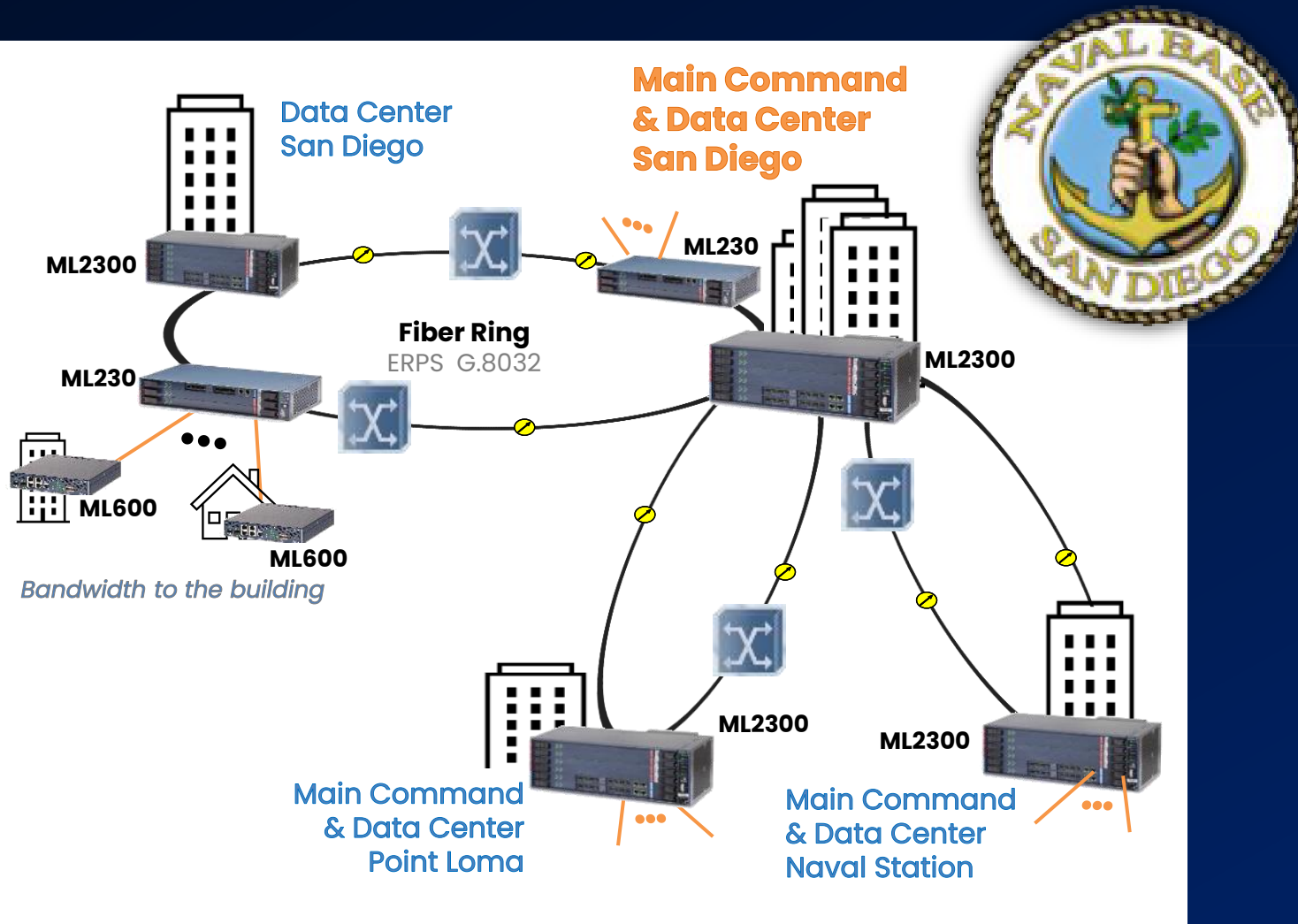
Actelis Solutions for Hybrid Networks – Over Fiber, Copper or Coax

- **Base Modernization**
- **TDM/T1 Replacement**
- **Migration to VoIP**
- **High Speed Ethernet Connectivity**
- **BW to the Building**
- **Backhaul Application**
- **HVAC Monitoring**
- **Alarm Circuit 'On Network'**
- **CAMPUS Replacement**



ONE NETWORK, ONE PLATFORM – SAN DIEGO

ETHERNET & FIBER RINGS



ACTELIS ML/GL PORTFOLIO FOR ALL DATA NETWORKS ACROSS THE BASE & BETWEEN BASES

- **Hybrid fiber Networks** utilizing the existing fiber & copper
- **Enhanced in-Base Applications**
 - Ethernet Services
 - VOIP
 - Campus replacement
 - T1 Replacement



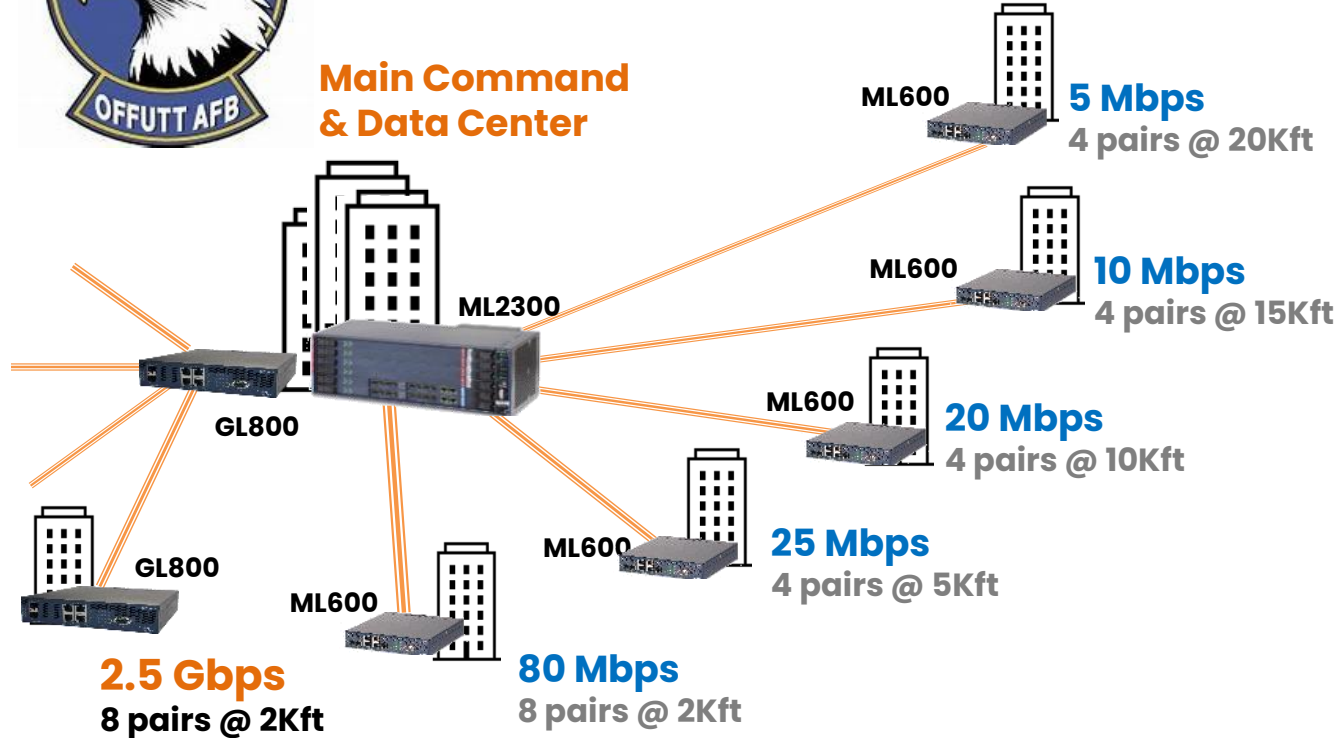
HIGH SPEED ETHERNET – OFFUTT AFB

ENHANCED CONNECTIVITY TO BUILDING ON CAMPUS



High-Speed Ethernet to Buildings/Locations on Base

Main Command & Data Center

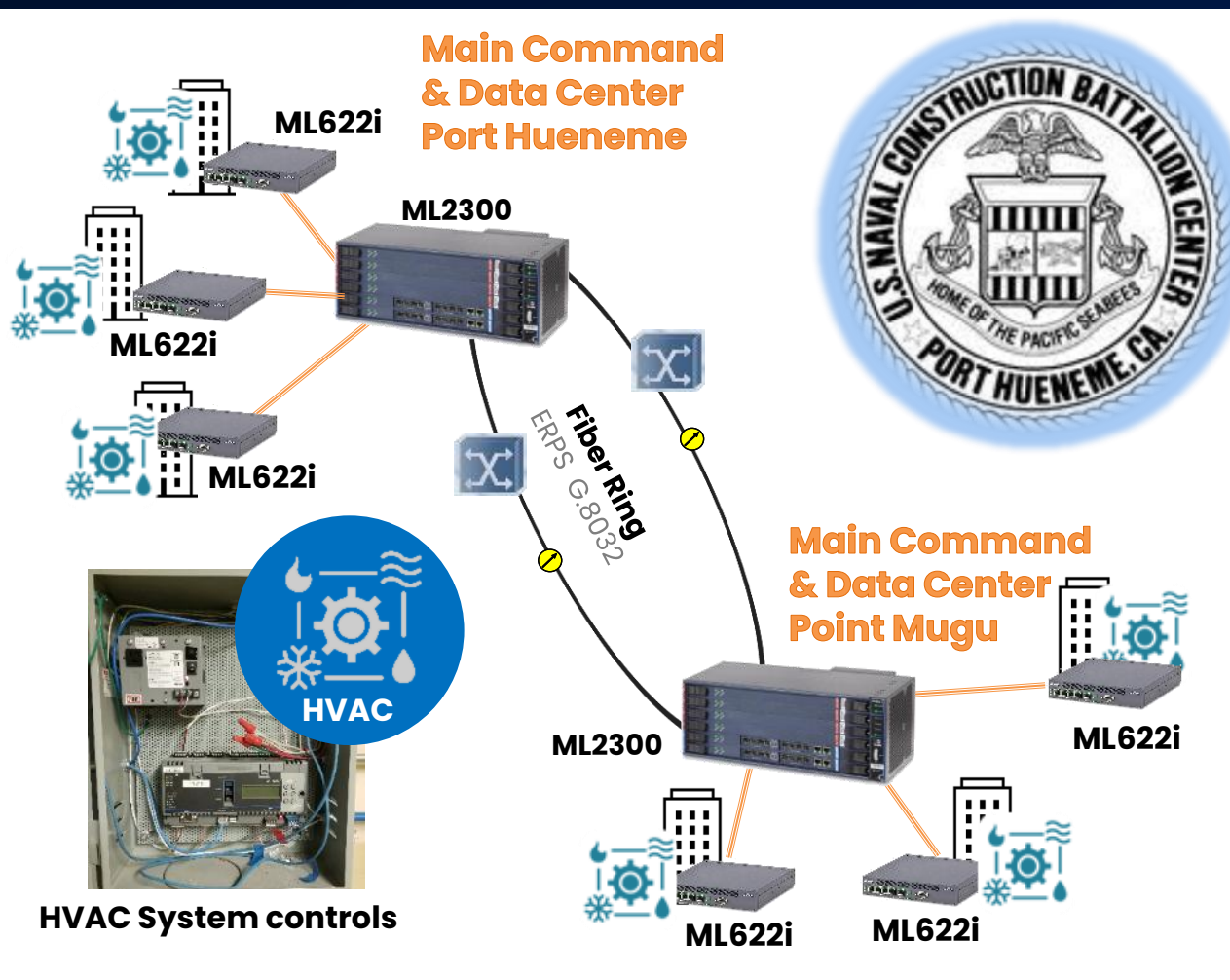


BASE MODERNIZATION – RELIABLE AND ROBUST COMMUNICATION WITH ACTELIS SOLUTIONS

- Actelis has been an integral part of the OFFUTT communication network for many years
- Actelis solutions utilize the existing infrastructure to offer higher bandwidth, resilient and cyber-hardened connectivity from 5 Mbps and up to 2.5Gbps over bonded copper



HVAC NETWORK – PORT HUENEME



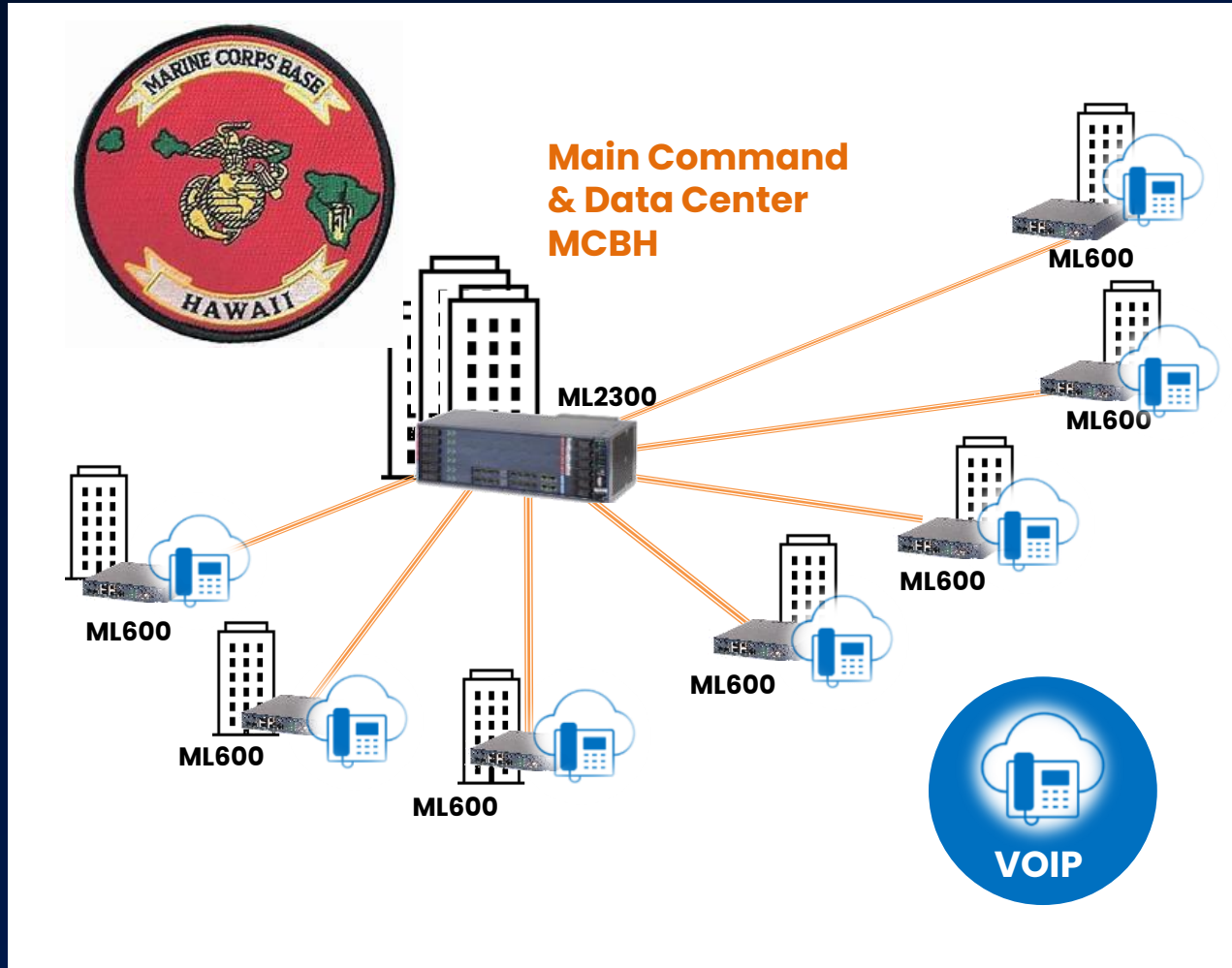
GETTING THE HVAC 'ON NETWORK' INSTANTLY, EFFICIENTLY AND COST-EFFECTIVELY

HVAC Monitoring Benefits:

- **Energy Efficiency** – Reduces energy waste and lowers costs.
- **Preventative Maintenance** – Detects early system issues, preventing failures.
- **Air Quality** – Ensures proper ventilation and filtration.
- **Smart Optimization** – Uses analytics to enhance performance and comfort.



BASE MODERNIZATION VOIP PROJECT – MCBH



80 VOIP LOCATIONS USING THE EXISTING COPPER INFRASTRUCTURE

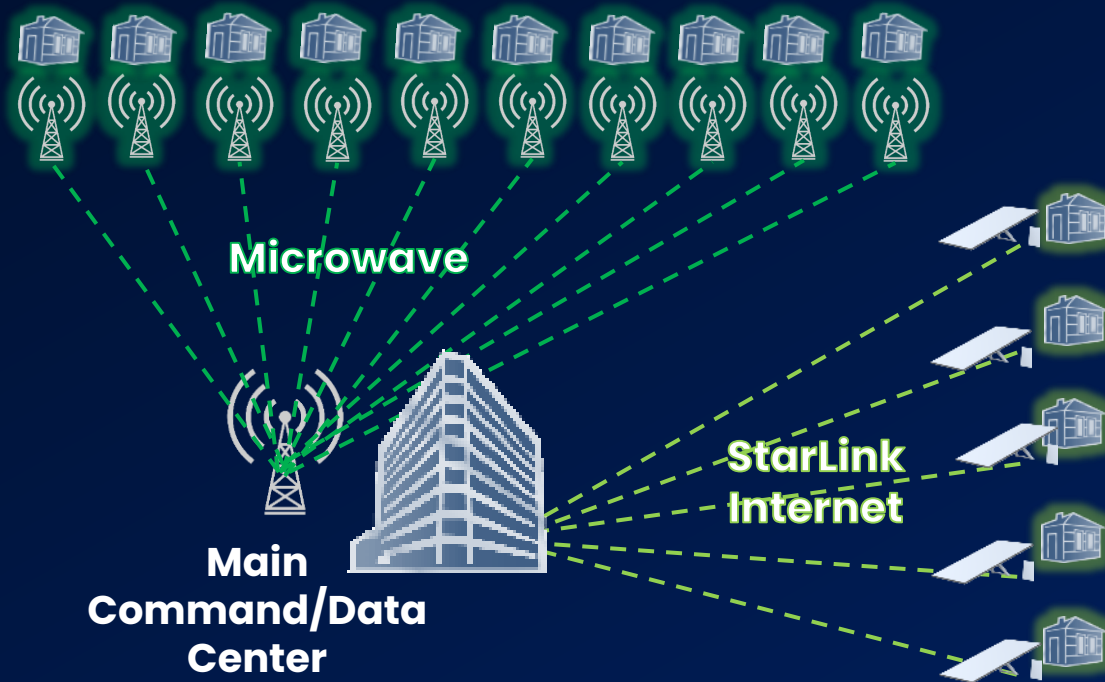
The original plan was to use Fiber to connect all 80 locations for VoIP.

The project would have cost **Million+** dollars and take **over a year to complete**

The Actelis solution costs 500K deployable in three months



BELIEVE IT OR NOT – MILITARY WASTE



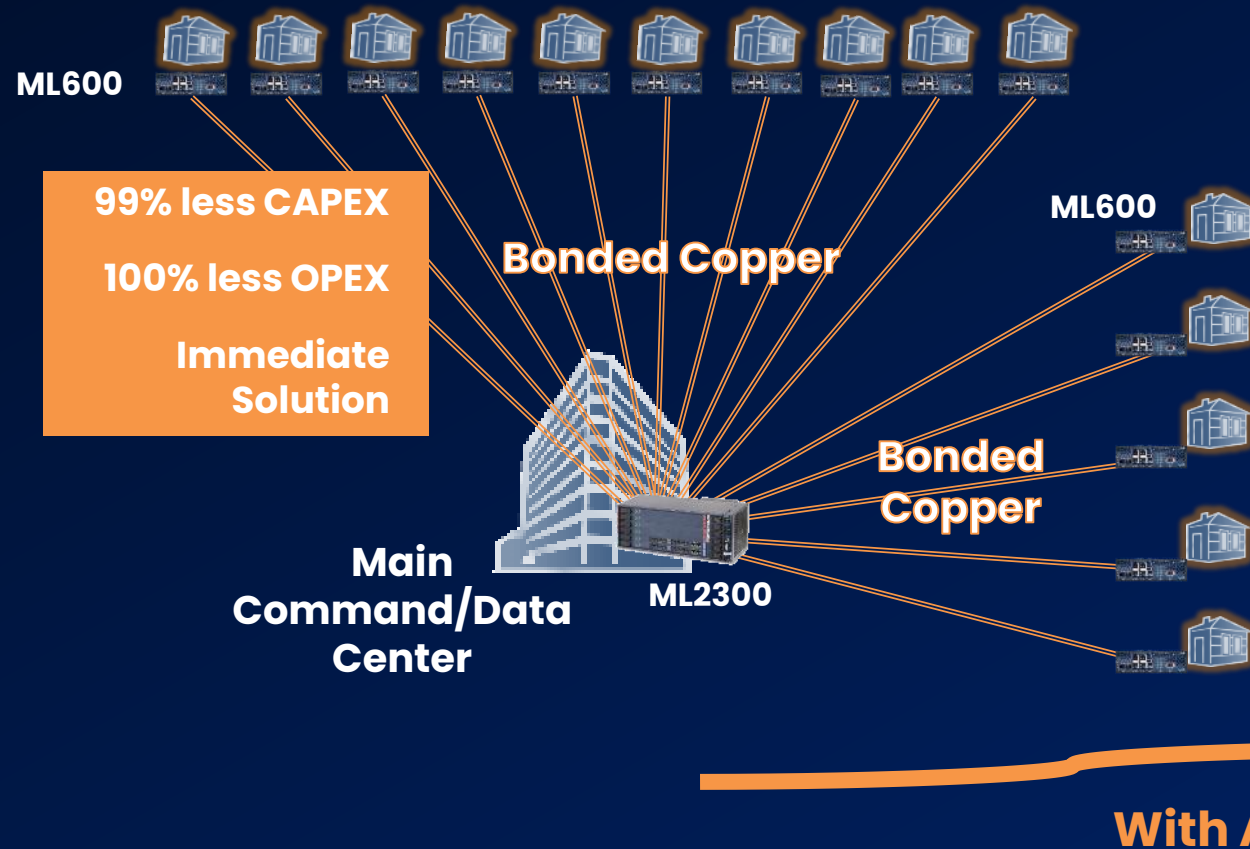
15 SENSORS USING LESS THEN A MEG EACH

- 10 separate Microwave connections, Reoccurring yearly cost
- 5 StarLink connection to the internet, reoccurring monthly cost (\$5K/location)
- 8 months to a year to install
- Estimated, 2.1 million dollars Installation only (CAPEX only)



BELIEVE IT OR NOT – MILITARY WASTE

WHAT COULD HAVE BEEN



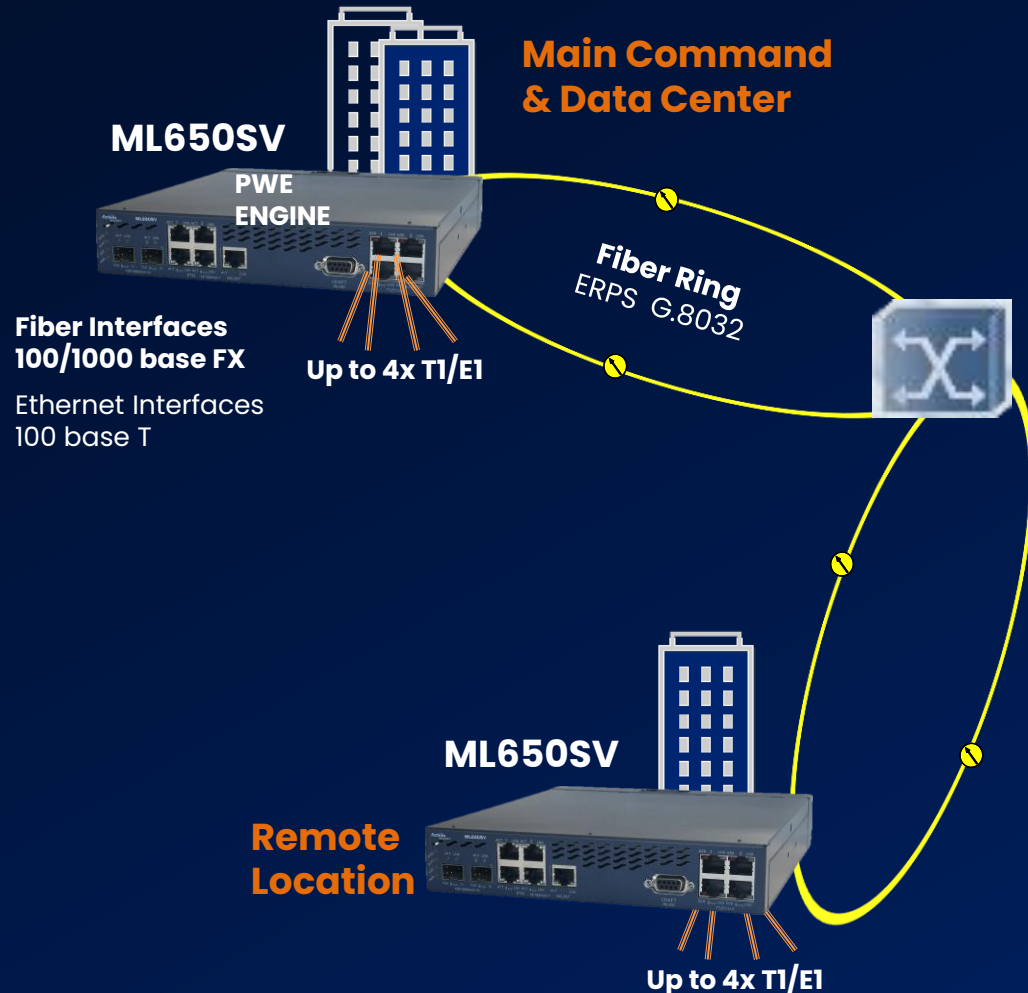
15 SENSORS USING LESS THEN A MEG EACH

- 10 separate Microwave connections
- 5 Star Link connection to the internet
- **8 months** to a year to install
- Estimated, **2.1 million dollars to install**

- **15x 2-Wire modems**, existing infrastructure
- **2 weeks to install**
- Estimated, **30K**



SEAMLESS T1/E1 MIGRATION TO FIBER BASED PACKET SWITCHED NETWORKS WITH ML650SV



SEAMLESSLY INTEGRATION OF TDM & ETHERNET/IP SERVICES INTO A SINGLE, COST-EFFECTIVE PLATFORM WITH BUILT-IN PSEUDOWIRE EMULATION (PWE) CAPABILITIES.

Key Benefits:

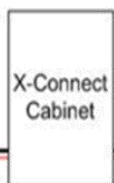
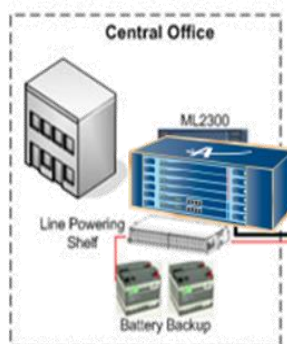
- **Legacy Equipment Support:** Ensures compatibility with essential existing E1/T1 systems.
- **Efficiency & Cost Savings:** A single-unit solution that reduces both CAPEX and OPEX while streamlining operations.
- **Comprehensive Circuit Emulation Support** including - CESoETH (MEF 8), CESoPSN, & SAToP.
- **Carrier-Grade, Compact Design** – Delivering robust performance in demanding environments.



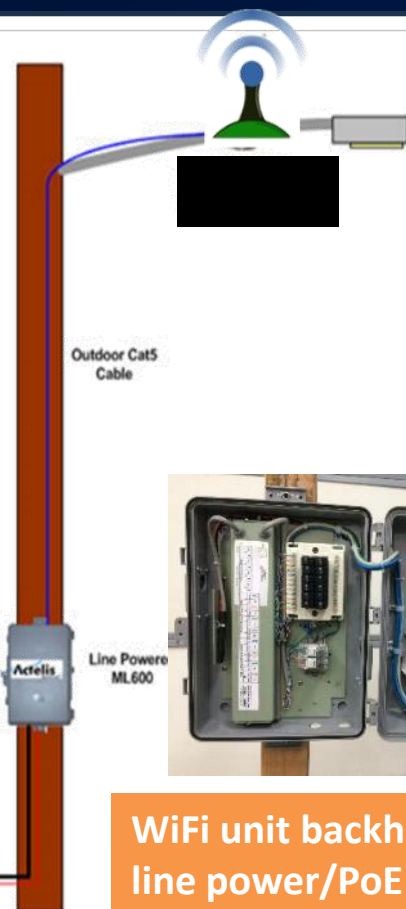
WIFI BACKHAULING ON POLE, STRAND MOUNT



Actelis ML600
Enclosure with
Line powering



Copper Pairs



WiFi unit backhauled &
line power/PoE by the
Actelis ML600D unit

OUTDOOR OPTIMIZED DEPLOYMENT OF WIFI HOT SPOTS

Where you need it, and not where
you can – by using bonded copper

- Cost optimized – Location, Power
- High Bandwidth
- Remote power feeding
for backhaul & WiFi equipment
- Integrated in Actelis
self-contained enclosure



MULTI-TENANT UNITS (MTUs) IN NEED OF GIGABIT, FIBER-QUALITY CONNECTIVITY

Actelis has the solutions

GL800 enables Gigabit to the MTU over existing wires if Fiber is not available

GigaLine 900 enables Gigabit, Fiber-Grade connectivity in buildings, utilizing existing twisted pairs and/or Coax infrastructure, to offer **Instant 1G services**.



Multiple Links

GigaLine 800

G.fast/35b/17A Bonding up to 16 pairs

UP TO 10X
Cost savings

SIMPLIFIED
powering

IMMEDIATE –
Broadband deployed
in just hours

ULTRA-GREEN low
power solution

Self install CPE

CROSSTALK Free,
robust services



GigaLine 900

CYBER
Hardened

REMOTE
Management &
Automation



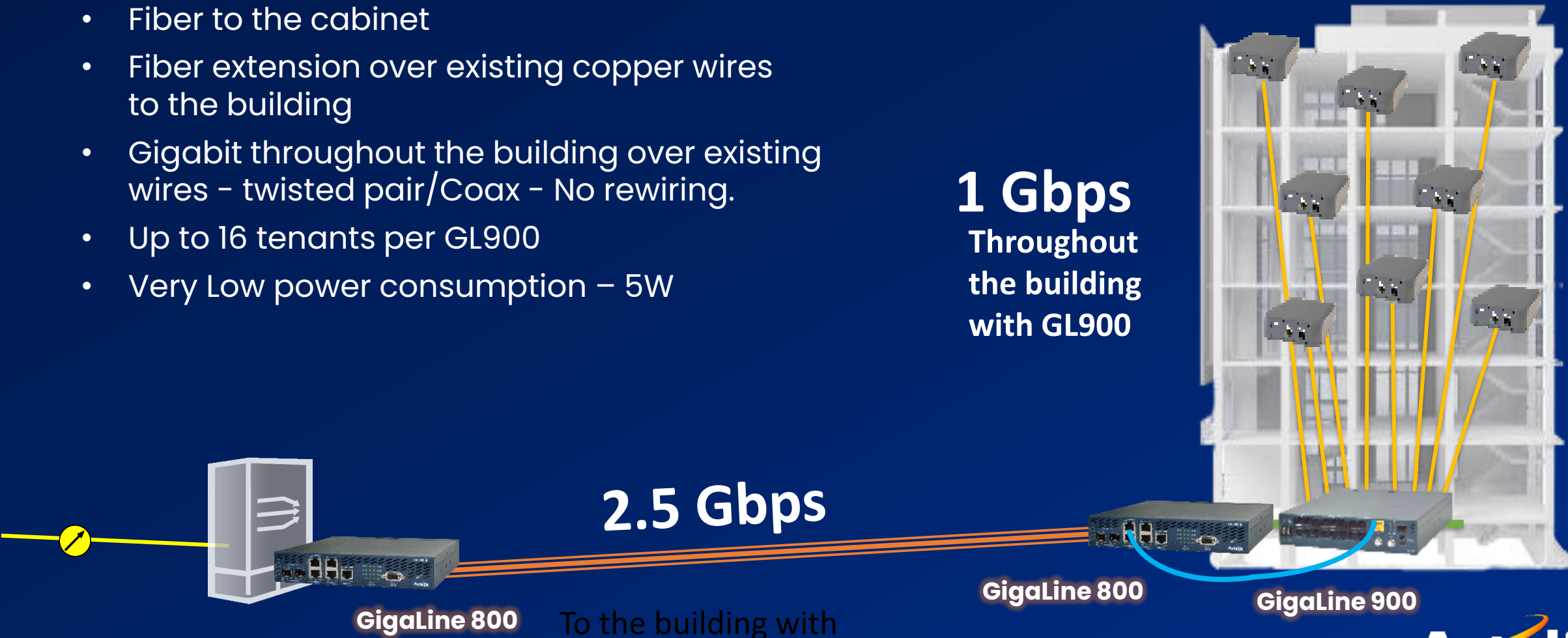
INSTANT 1G TO MULTI-TENANT UNITS

USE CASE #1 – BONDED COOPER AS BACKHAUL

- Fiber to the cabinet
- Fiber extension over existing copper wires to the building
- Gigabit throughout the building over existing wires – twisted pair/Coax – No rewiring.
- Up to 16 tenants per GL900
- Very Low power consumption – 5W

1 Gbps
Throughout
the building
with GL900

2.5 Gbps



GigaLine 800

To the building with
GL800

GigaLine 800

GigaLine 900



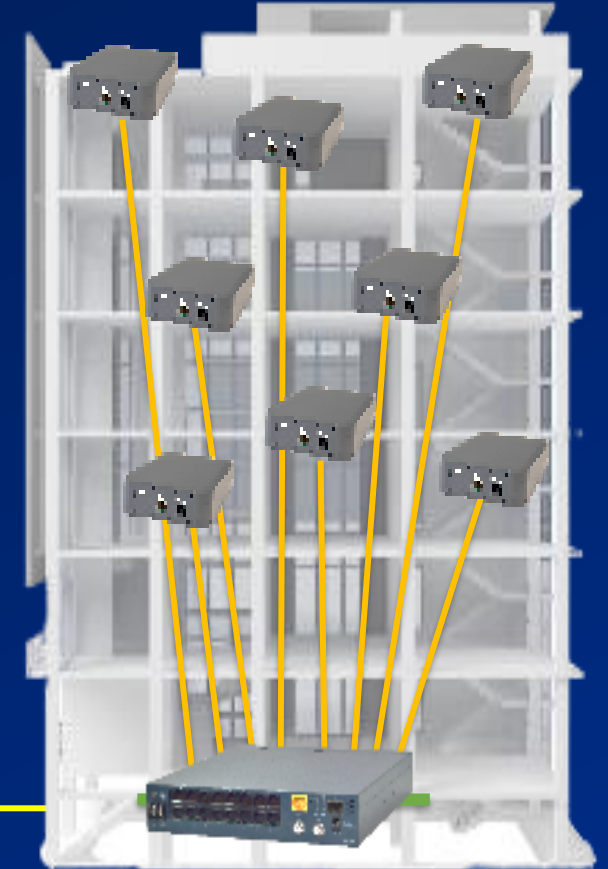
INSTANT 1G TO MULTI-TENANT UNITS

USE CASE #2 – FIBER AS BACKHAUL

- Fiber to the building
- Gigabit throughout the building over existing wiring twisted pair/Coax. No rewiring is needed.
- Up to 16 tenants per GL900
- Very Low power consumption – 5W

1 Gbps
Throughout
the building
with GL900

2.5 Gbps





Applying the Science of Networking

'CAMPUS' REPLACEMENT

**PairGain / ADC 'CAMPUS' Replacement
Tech Refresh Initiative
With Actelis Smart Base Solution**



ACTELIS → PAIRGAIN CAMPUS REPLACEMENT

Manufactured Discontinued Products Over 10 Years



PairGain Campus Star



PairGain Campus Unit



Cisco LRE

Primary Reasons for Replacing with Actelis

- **Significantly Higher Performance**
Actelis offers up to 25× throughput
- **Unmatched Reliability**
Actelis Provides fiber-like uptime, maintaining service even during multiple failures.
- **Higher Density**
Actelis Supports 20× more copper pairs per rack unit, optimizing space and capacity
- **Flexible Deployment**
Actelis solutions fit diverse installation needs, budgets, topologies, and interfaces.
- **Power and Data on the Same Lines**
Actelis delivers both power & data over copper-supporting remote devices like WiFi AP/cameras.

Actelis solution

An Acknowledged leading provider to the military for over 25 years

ML2300



ML230



ML600



GL800

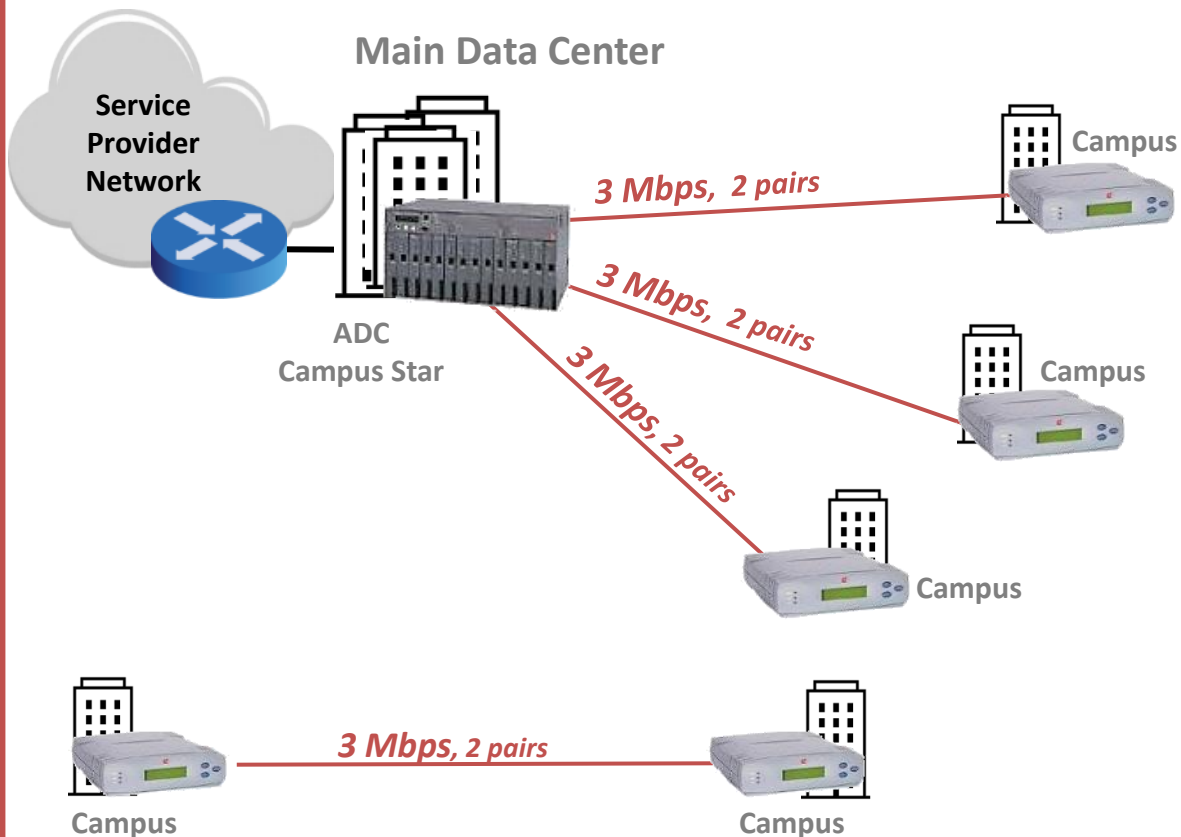


"Actelis is the sole DSL solution approved by the DoD"



BASE CONNECTIVITY USING 'CAMPUS' → HINDERING SMART BASE MODERNIZATION

Base Connectivity Using Campus (Pairgain/ADC)



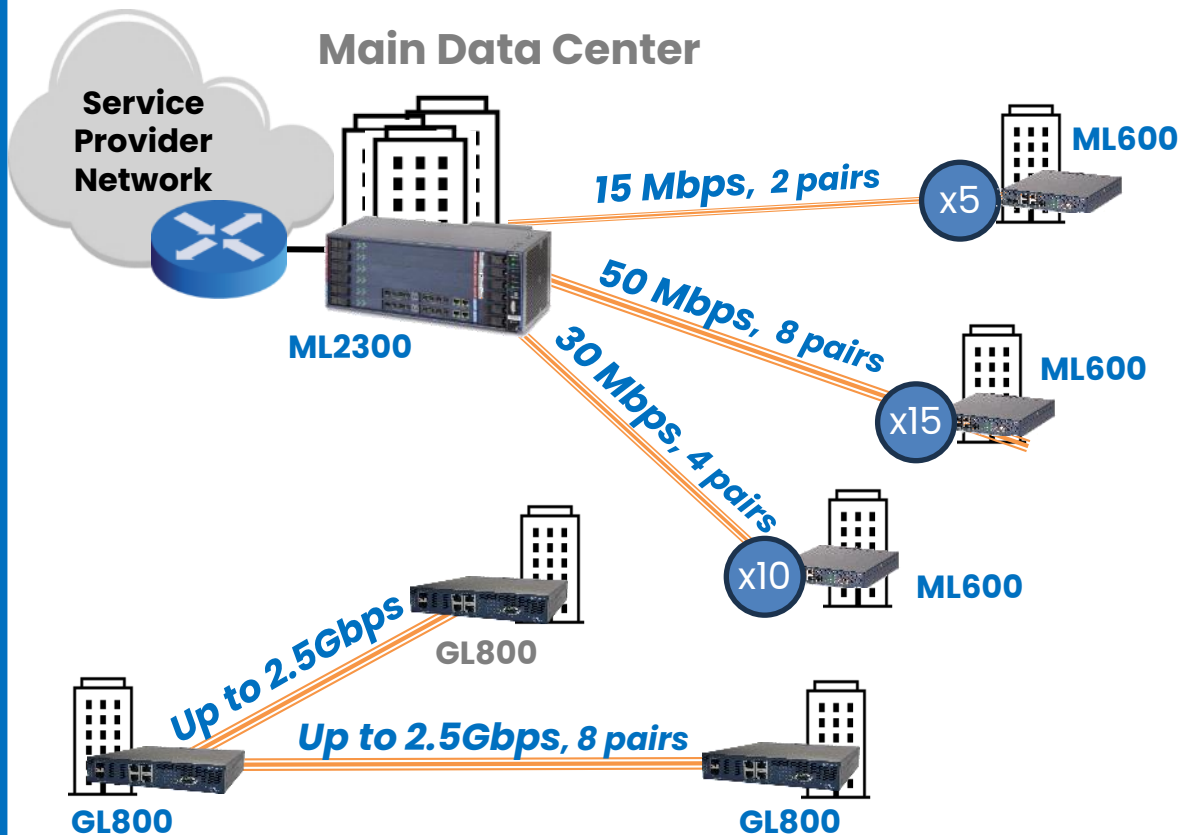
• **CAMPUS main limitations :**

- **Aging Infrastructure** – Rely on outdated technology prone to failure, with no viable replacement options.
- **Insufficient Bandwidth** – Offer very low bandwidth, failing to meet the high-speed connectivity demands of modern smart bases.
- **Unreliable Performance** – Struggle with service continuity, leading to frequent disruptions and reduced operational efficiency.
- **Integration Issues** – Legacy competitor equipment lacks compatibility with modern Ethernet switches and devices, delaying deployments and increasing costs.



SMART BASE LAN CONNECTIVITY USING ACTELIS

LAN Connectivity Using Actelis



- **Actelis solutions**

- **Instant 10x faster connectivity**
- **Extremely high reliability** and connectivity availability
- **Significant scale and growth opportunity**
 - Up to 100 Mbps with Actelis ML600
 - Up to 2.5 Gbps with new GL800
- **Easy replacement** – Same form

Actelis is the sole DSL solution approved by the DoD



BASE MODERNIZATION MADE EASY → GO WITH ACTELIS

Actelis Hybrid-Fiber, Cyber-Hardened Networking Solutions deliver significantly superior modernization by maximizing your existing infrastructure. This ensures:

- ☒ **DRASTICALLY LOWER COSTS** – Achieve major savings on CAPEX and OPEX
- ☒ **RADICALLY FASTER DEPLOYMENT** – Upgrade in a fraction of the time.
- ☒ **EXCEPTIONALLY EASY MIGRATION** – Transition smoothly with minimal effort & disruption.

Actelis is the ONLY copper (DSL) solution approved by the DoD – TN # 23039011

Thank You!

Doug Nelson
dnelson@actelis.com
951-966-7732