Axellio PacketXpress – The Network Intelligence Platform
Scalable, Simultaneous, Always-On
Recording and Distribution at over 100 Gbps

Axellio® PacketXpress® is the network intelligence platform to capture, store, analyze, and distribute all network traffic in an extremely small footprint at over 100 Gbps. It is designed to enhance the performance, efficiency, and accuracy of your existing security analysis applications.

PacketXpress provides an open, scalable platform capable of handling over 100 Gbps traffic with no loss, while simultaneously providing access to all data directly from disk at over 100 Gbps for real-time or forensic analysis applications. For real-time analysis, it increases the performance and accuracy by avoiding overload situations and the resulting blind spots. For historical forensic analysis as well as mitigation validation, PacketXpress replays any pre-and post-event packet data at any speed for in-depth analysis.

PacketXpress is scalable and extensible from mobile deployments to multi-rack datacenter and distributed solutions. It complements any existing security analysis infrastructure, making any network analysis application more resilient while reducing licensing costs.

Use Cases in the Network & Security Operational Lifecycle

PacketXpress addresses many challenges across the network and security operational life cycle:

- **Monitor for Complete Visibility:** Monitor more traffic via your existing network infrastructure while providing richer insight for forensic analysis. PacketXpress collects, tags, and immediately stores all traffic from multiple network sources.
- **Detect Events Accurately in High Traffic**: essential traffic which further offloads the analysis applications.
- **Analyze and Resolve Quickly:** Find and replay any pre-and post-event packet data at any speed for in-depth analysis. In addition, scale to retain network traffic for days, months or years cost-effectively.
- **Validate Countermeasures Before Deployment:** Find and replay any pre-and post-event packet data at any speed up to over 100 Gbps to validate countermeasures or stress test the monitoring infrastructure.
- **Optimize Network & Security Infrastructure Under High-Traffic Load:** Predict and optimize the stability, speed, scalability, and responsiveness of any network and security infrastructure under high traffic load.
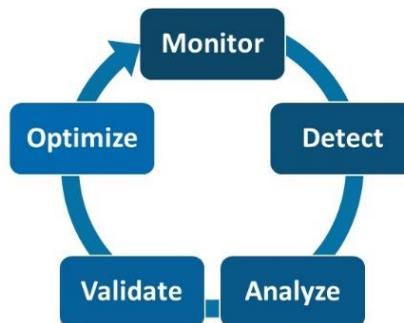
AXELLIO

Founded: 2018, US owned and operated

HQ: Colorado Springs, CO, USA

Background: 20 years' experience in high-speed, high-volume storage, Axellio provides extreme high-performance, scalable, compact, economical, and simultaneous time-series data ingest, storage, and distribution solutions at speeds exceeding 100 Gbps.

Target Market: Network and Security Operations in:

- Defense
- Intelligence
- Commercial Enterprise

PacketXpress
High-speed network packet data capture, storage, distribution, control, and analysis platform

Applications:
- Cyber security threat detection and response
- Low SWaP, high-speed capture, and distribution
- Other inline packet assessment & control

US Government Contracts:
- GWACs include NASA SEWP and CIO CS
- Under contract with DoD/Army since 2020 delivering cyber solutions

ISO 9001:2015 Certified

Axellio PacketXpress – the Network Intelligence Platform
Rethinking Network Traffic Analysis

Leveraging the latest storage and server architecture technologies, Axellio developed a high-speed, high-intake network visibility platform for packet capture, storage, analysis, and distribution in an extremely small footprint. Designed for the needs of defense and intelligence agencies and global security operations, PacketXpress combines the benefits of network packet capture and network packet broker solutions. PacketXpress buffers incoming traffic, allowing monitoring and analysis tools to ensure they never drop a packet even under high traffic conditions. As a result, analysis applications can be deployed as software-only solutions, virtualizing the previously hardware-centric approach while storing all packets.
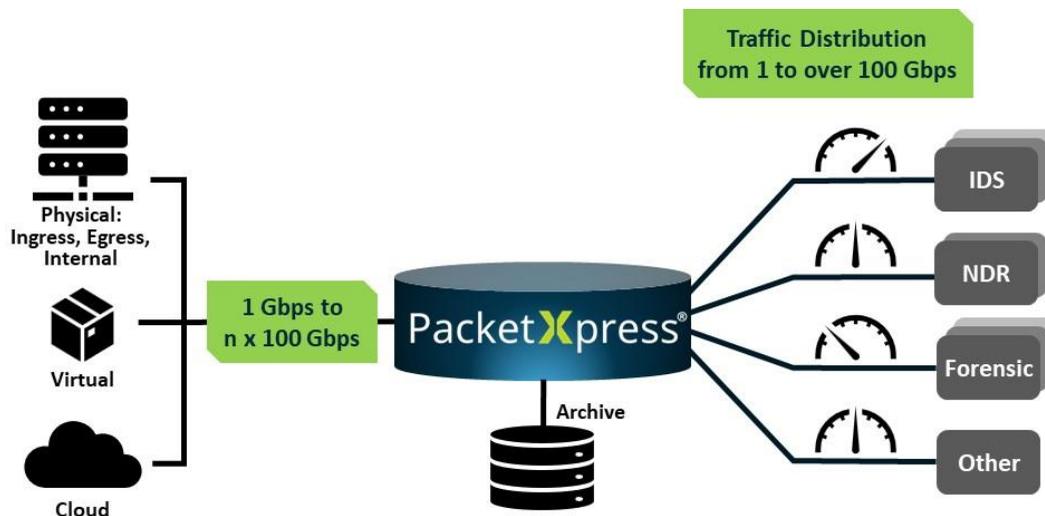

Axellio PacketXpress - The Network Intelligence Platform

- **Collect anywhere** – at any speed:
    - o   Collect traffic from the physical ingress-egress, the internal network, to virtual, and cloud.
    - o   No loss capture at any speed – from 10 Gbps to well over 100 Gbps sustained simultaneous data ingest, recording, and distribution.
- **Adaptive traffic distribution** – to any analysis application:
    - o   Reliable software APIs – distribute traffic at controlled, application consumable rates with no loss.
    - o   Rewind, replay, re-analyze – for repeated in-depth analysis, mitigation validation, and training.
    - o   Multiple data extraction streams can be individually configured for speed and content.

- **Universal platform for any application** – tailored to your specific needs:
    - o   Flexible form factor – from mobile to multi-rack data center configurations delivered on common-off-the-shelf (COTS) hardware.
    - o   Expandable storage – from hours to months – local or external.
    - o   Customizable – from the software to off-the-shelf hardware to fit your environment.
    - o   Dense footprint – offered from 1U and up, depending on capacity & intake rates.

PacketXpress provides a flexible architecture with speed at its core, allowing Axellio to quickly add new capabilities to meet almost any use case that utilizes network packets.

PacketXpress – An Open Platform

Built as a dense, high-performance platform, PacketXpress® integrates leading-edge server and storage technologies and a patented file system for a diverse set of use cases and analysis applications. PacketXpress provides the industry's highest sustained performance in the smallest footprint:
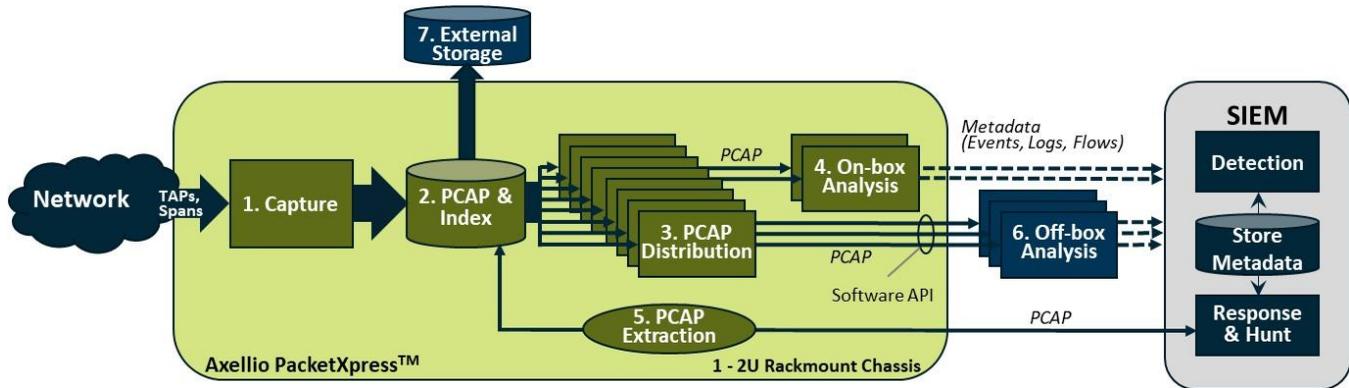
PacketXpress Architecture

High-speed capture & recording – from 10 Gbps to multiple 100 Gbps without losing a packet:
- Monitor across physical, virtual, containerized, and cloud environments using commercially available TAPs, SPANs, R-SPANs, virtual TAPs, and cloud service offered mirroring services.
- Hardware-based traffic filtering, deduplication, and slicing for selective traffic capture packet timestamping with nano-second accuracy.

Storage – simultaneous read and write at over 100Gbps for on-disk-storage for days, weeks, or months:
- Scalable storage – NVMe SSD drives with an onboard storage capacity of 700 TB in just a single 1U.
- Long-term, off-box archiving and compression to further extend storage capacity at reduced cost.
- Secure data through data at rest encryption.

Adaptive traffic distribution – near real-time, content- and rate-controlled traffic distribution directly from disk:
- Multiple data extraction streams can be flexibly and individually configured in both speed and content
- Automatically adjusting traffic to rates the analysis applications can reliably consume.
- Open web API for PCAP retrieval for onboard and offboard analysis applications.

Analysis application agnostic – software-based, hardware-agnostic access to packets anytime for any event, with direct integration in your existing workflow:
- Application agnostic – deploy any analysis application on-board using any standard OS and distribute to any outside analysis applications via standard software APIs
- Ability for dynamic queries without the need to pre-define indexing at time of capture, offering more flexible and dynamic analysis capabilities for the unexpected.
- Multi-pass analysis – rewind, replay, re-analyze for repeated in-depth analysis and mitigation validation.

Open platform – scalable and economical – lowest footprint and cost to performance ratio in the industry while scaling from mobile to distributed datacenter deployments:
- Delivered on COTS technology - from any major vendor to reduce maintenance and procurement costs.
- Small form factor – Offered as compact as 1U to reduce Size, Weight, and Power (SWaP) for mobile deployment and ease of transportation.
- Scalable – Multiple instances of PacketXpress can be deployed for even higher performance in data center type applications or for distributed deployment.

PacketXpress – The Analysis Edge You Need for Your Environment

Close the visibility gap – go beyond the metadata:
- Broaden the view – extend visibility into external, internal on-prem, virtual, and cloud.
- Provide immutable evidence – immediate access to any pre- and post-event packet data.
- Avoid going blind when traffic spikes – keep up and increase analysis accuracy.

Increase operational effectiveness – for rapid and informed decisions:
- Fast access to all pre- and post-event packet data – for all events, anytime, anywhere.
- Local and remote access – wherever your experts are located.
- Validate mitigation – Ensure that the corrective measures are effective.

Reduce total cost of ownership & complexity – monitor your entire infrastructure:
- Centralize hardware intensive processing and reduce hardware sensor proliferation and complexity.
- Manage traffic rates to your analysis applications, avoiding licensing for peak traffic rates and efficiently managing network and traffic growth.
- Integrate seamlessly and leverage your existing analysis infrastructure – no retraining or workflow changes, just better data.

Contact us

Find out how PacketXpress can make a difference for your application:

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