

Axellio Xpress Platform™

Your Fast Track to Real-Time Data Insight

As technology has improved over the last 50 years, data capture and data management/monitoring have moved from a “nice to have” to become part of your critical operations. The actionable intelligence that can be distilled from that data is now vital to intelligence analysis, cybersecurity, troubleshooting, performance, and compliance systems.

Many organizations see data monitoring as complex and costly, even for cybersecurity. Challenges include high data speeds and volume overwhelming tools, loss of institutional knowledge, and the complexity of analyzing time series data. As a result, organizations often fail to extract valuable insights from their data. The consequences of this inaction can be catastrophic and cause missed security threats leading to data breaches, network issues and outages, overloaded sensors and tools, lost tactical advantages, and missed adversary activity.

The Axellio Xpress Platform™ is uniquely positioned to help address these data ingestion, storage, and analysis concerns with support for high capacity read and write, capabilities to ingest any time series data (e.g., packet, radio frequency, voice, video, log files), high bandwidth storage, and DVR-like access to the data – all in software, not an expensive appliance.

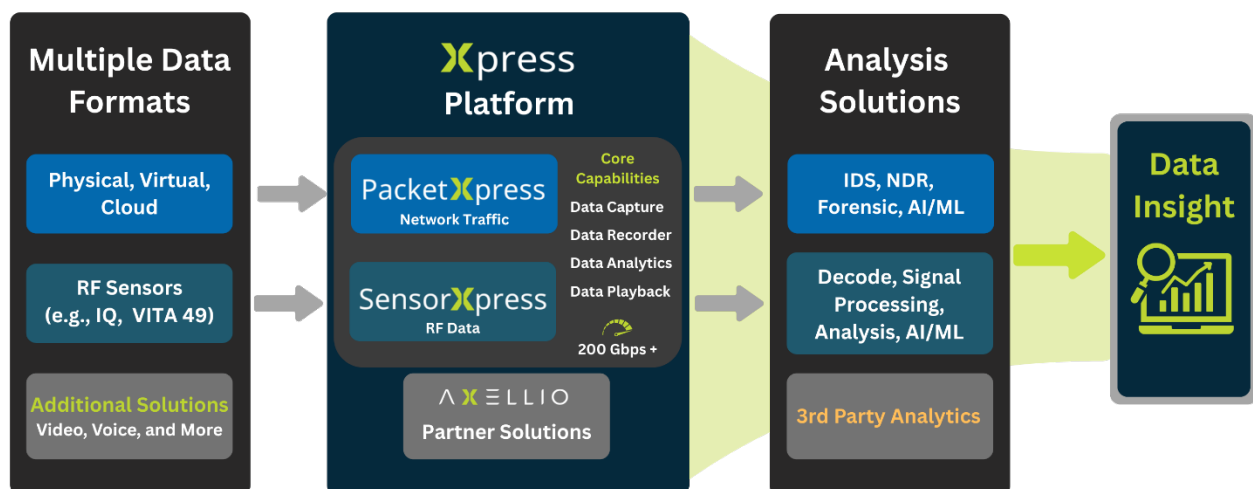


Figure 1: Axellio Xpress Platform

The unique and patented architecture of the Axellio Xpress Platform enables it to simultaneously read, write and store data at any speed – including speeds of 200 Gbps and higher. As both commercial and government customers grapple with data overload, they need solutions that allow them to ingest the data, manipulate it, store it for later playback/recall, and distribute data subsets to the right tools for analysis. The Axellio Xpress Platform, shown in Figure 1, is the only solution on the market that delivers these capabilities in a hardware agnostic solution for any time series data.

At the core of the Axellio Xpress Platform is a pure software-based engine that can scale from small IoT data streams to the largest enterprise networks. The Xpress Platform is a network intelligence platform and can run

in continuous, always-on environments. It can also interface, ingest, and process data from multiple, simultaneously transmitting data sources — whether that data comes from network taps or data sensors.

The Xpress Platform offers essential data management capabilities like deduplication, filtering, and buffering — all at exceptionally high speeds. These features help eliminate unnecessary data, reducing bandwidth demands across networks. This means less network congestion and improved data throughput, especially in bandwidth-constrained environments. Additionally, Xpress's high-speed buffering allows precise traffic rate control to analysis tools, ensuring complete data visibility for security while lowering licensing costs by avoiding the need to provision for peak data rates.

The Xpress Platform ingests and can manipulate the data, if required, before sending it to specific solutions for processing. While the Xpress Platform can work with any times series data, Axellio currently has two specific versions, PacketXpress for network packet data and SensorXpress for radio frequency (RF) data. The platform is flexible, allowing future integrations with new data sources, enabling rapid adaptation to market needs. Analytics solutions then convert this data into actionable information, which can be viewed through the native Axellio interface or integrated with third-party systems like SIEMs or data visualization tools.

Xpress-enabled Solutions

Packet Data

Axellio's PacketXpress is a network intelligence platform designed to capture, store, analyze, and distribute all network traffic in an extremely small footprint with no data loss. PacketXpress can handle any network speed, even those above 200 Gbps. This unique, patented software design increases performance and accuracy by avoiding overload situations and the resulting blind spots for real-time analysis. For historical forensic analysis, as well as mitigation validation, PacketXpress also replays any pre-and post-event packet data at any speed for in-depth analysis. It works like a network DVR!



Figure 2: PacketXpress — High-speed network packet data capture, storage, distribution, control, and analysis solution

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. More information is available on our [website](https://www.axellio.com).

Radio Frequency Data

The SensorXpress solution is designed for the reliable capture and distribution of RF data at extremely high speeds while maximizing storage and minimizing hardware and processing requirements. This is a NextGen RF data ingestion, storage, and distribution solution that is hardware, frequency, and protocol agnostic. Instead of feeding the collected signals from hardware sensors and receivers directly into the signal analysis, decode, or processing systems, SensorXpress can buffer the data between the sensor and RF analysis tools by capturing and storing the RF data. The data storage time is mission dependent – from microseconds to days. SensorXpress can then simultaneously distribute the RF data at controlled rates and contents specific to each analysis system, avoiding system overload.

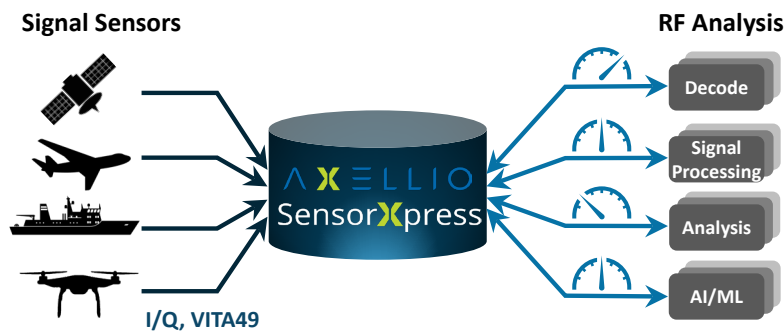


Figure 3: SensorXpress – High-speed RF data capture, storage, distribution, and control solution

SensorXpress provides a flexible software architecture with speed at its core, allowing Axellio to quickly add new capabilities to meet any use case (e.g., proprietary RF protocols). More information is available on our [website](#).

Analytics and Open API

A key aspect of any monitoring and diagnostic system is the effective display of relevant data. After capturing the right data, you need an interface that presents it in the desired format, while also keeping up with fast data rates. The Xpress Platform offers users two choices – the native Axellio interface or use of a 3rd party analytic platform.

The Xpress Platform offers a native analytics interface that encompasses a dashboard of useful monitoring data including system utilization, capture data rate, system I/O, etc. The dashboard is customizable and configurable and uses a “set and forget” setup for the fully contextual database.

Axellio’s Open API interface allows you to integrate the Xpress Platform with other industry standard solutions or to create your own analytics solution by exporting data through the API. When it comes to integration of other solutions, the Xpress Platform supports many APIs. Examples include Wireshark, Snort, and Security Onion. The Xpress Platform also supports more than packet data. Metadata can also be exported by using protocols like NetFlow.