

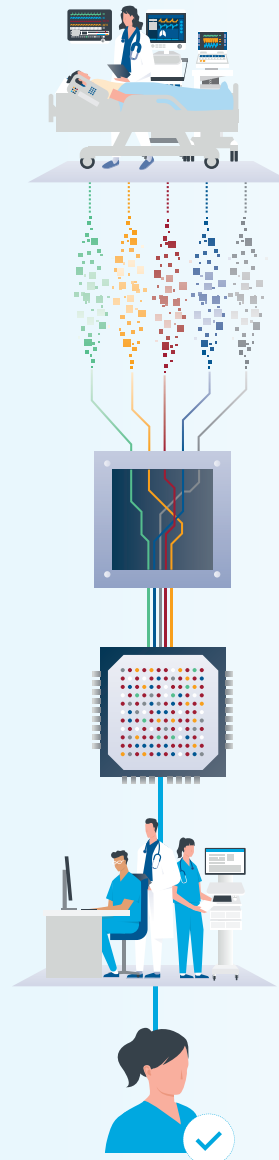
Medical Device Information Platform

One platform. Countless benefits.

Medical device data is the key resource in transforming from today's reactive care environment to insight-driven, proactive care delivery. When data is aggregated and presented in context to the patient, care providers can prioritize and coordinate interventions and activities more effectively and efficiently.

Today, hospitals wrestle with data silos created by disparate systems and technologies. By consolidating to single-vendor, enterprise platform solutions, hospitals have the opportunity to create efficiencies, increase data availability and adapt and scale to their ever-changing digital environments.

Each medical device is unique in its output and ability to connect to other systems – data needs to be liberated and then aggregated, so that applications can analyze and share data and insights across the care team.



Liberate

Every medical device is unique in its approach to providing data for use. Capsule has multiple ways to connect with devices and works with device manufacturers to develop and maintain device drivers — creating a plug-and-play platform to capture live streaming data.

Aggregate

Once data is collected, it is normalized and prepared for use by one, or multiple systems that can be used to create a comprehensive patient view.

Analyze

Live streaming device data can be analyzed to detect subtle changes in patient condition to provide proactive and meaningful insights to care providers.

Share

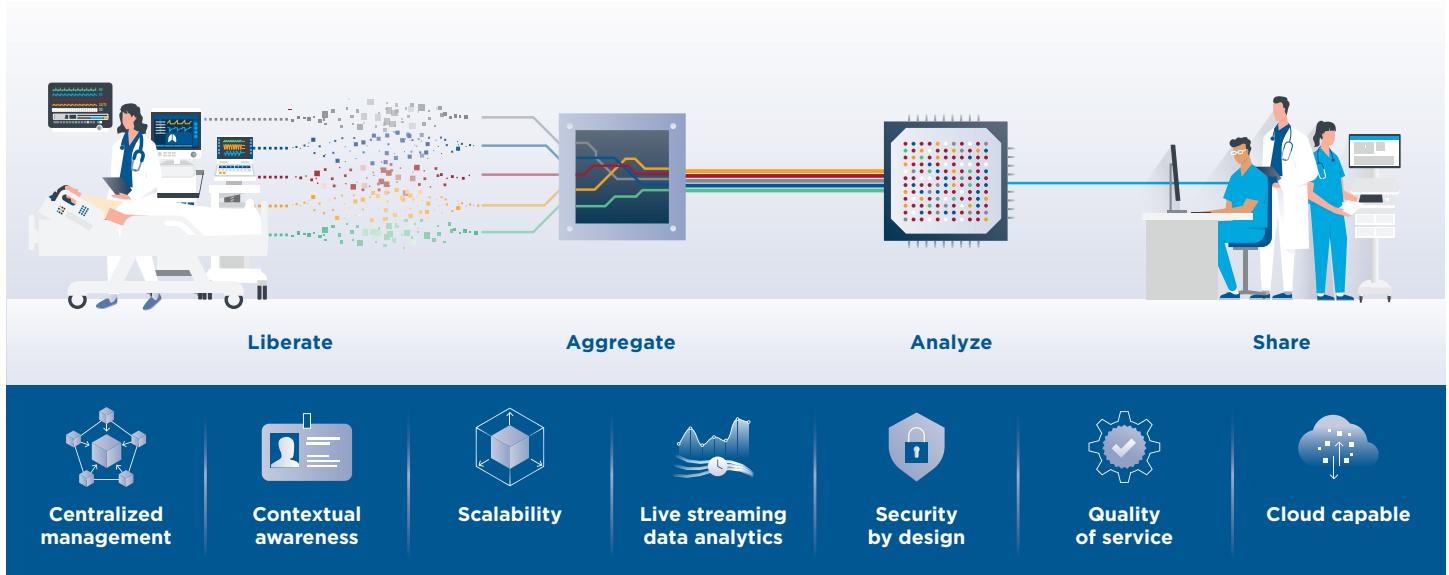
Insights can be recorded or announced through Capsule solutions or a hospital's clinical communication system, facilitating care coordination.

Informed decision

Medical Device Information Platform (MDIP)

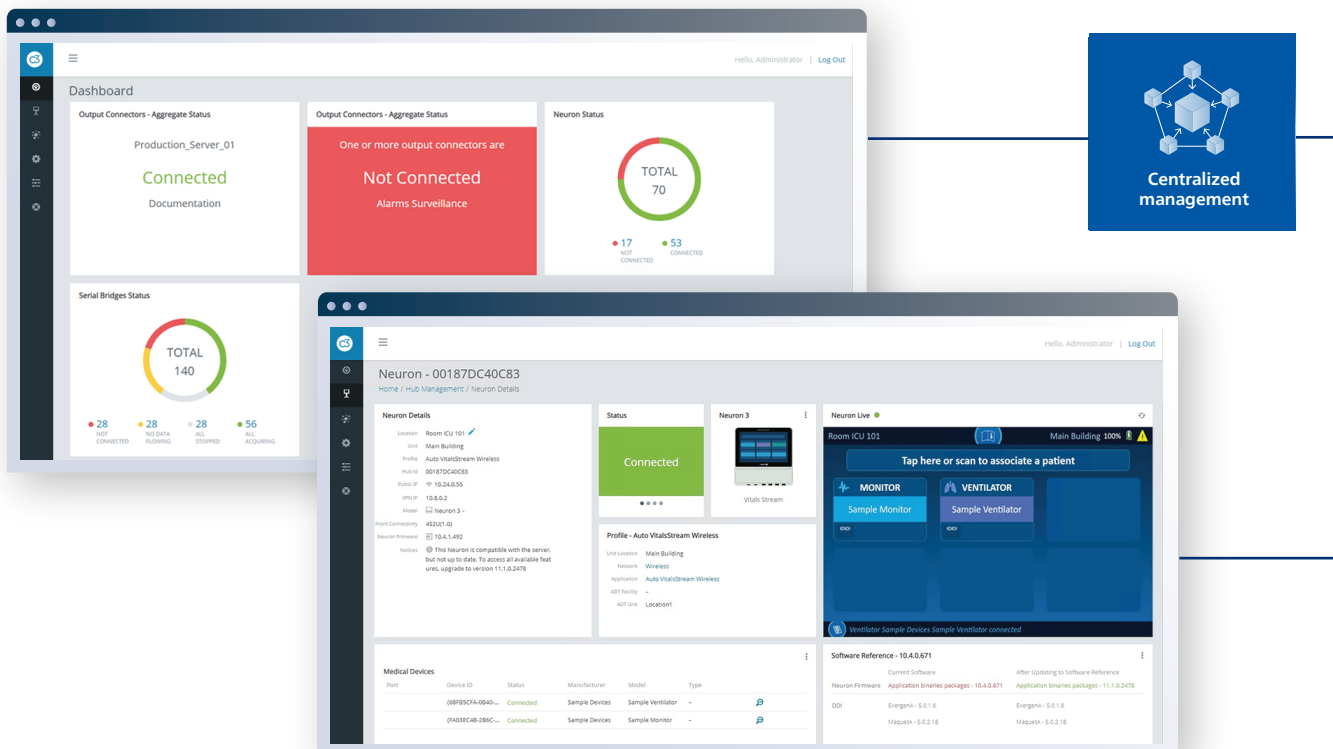
The Capsule MDIP is the single unified foundation to Capsule's solutions — integration, monitoring and surveillance.

These solutions leverage the capabilities of the platform to create and use live-streaming medical device information for proactive, informed decision making. Within the MDIP are configurable, cross-functional capabilities that handle core system requirements to provide a consistent, reliable, and seamless user experience.



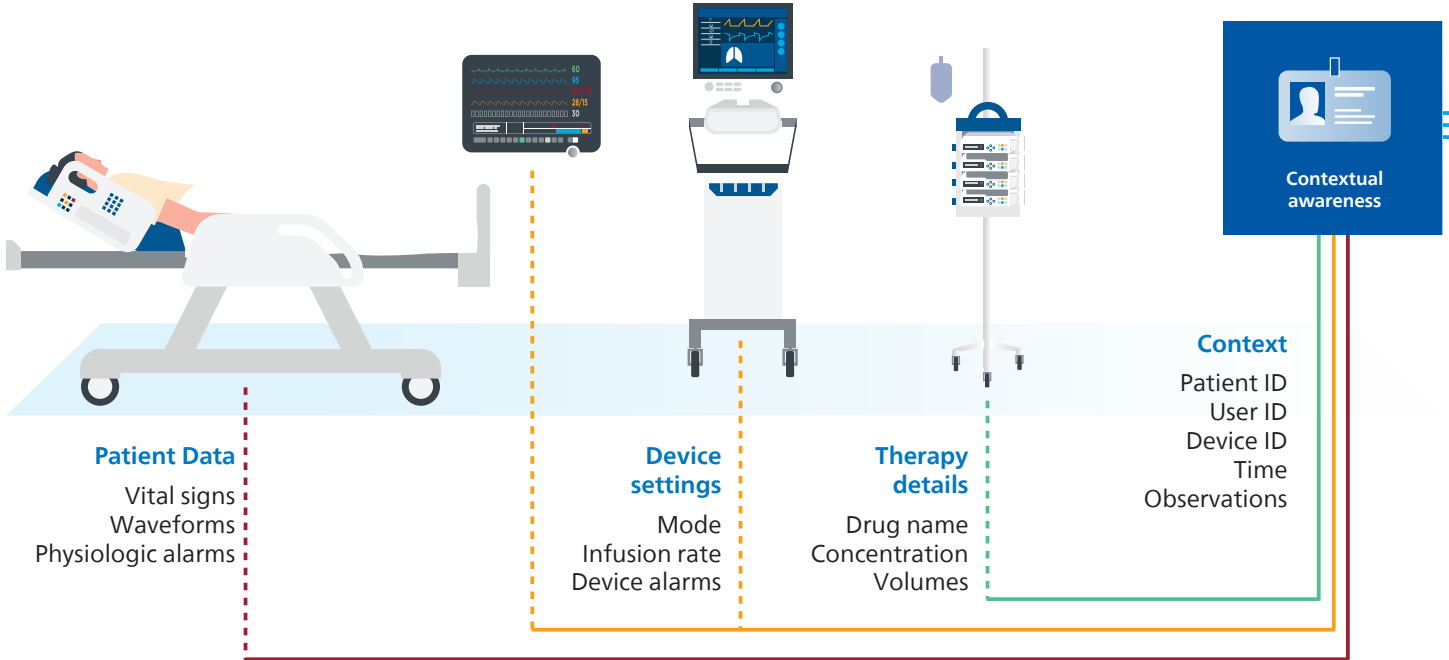
Centralized management

Provides single visibility and management of the Capsule MDIP, hubs, connections, and application configurations securely from anywhere through a web-based application. Enhanced controls and live remote views help ease deployment and management by providing searching and filtering of connected hubs and access to hub details and status.



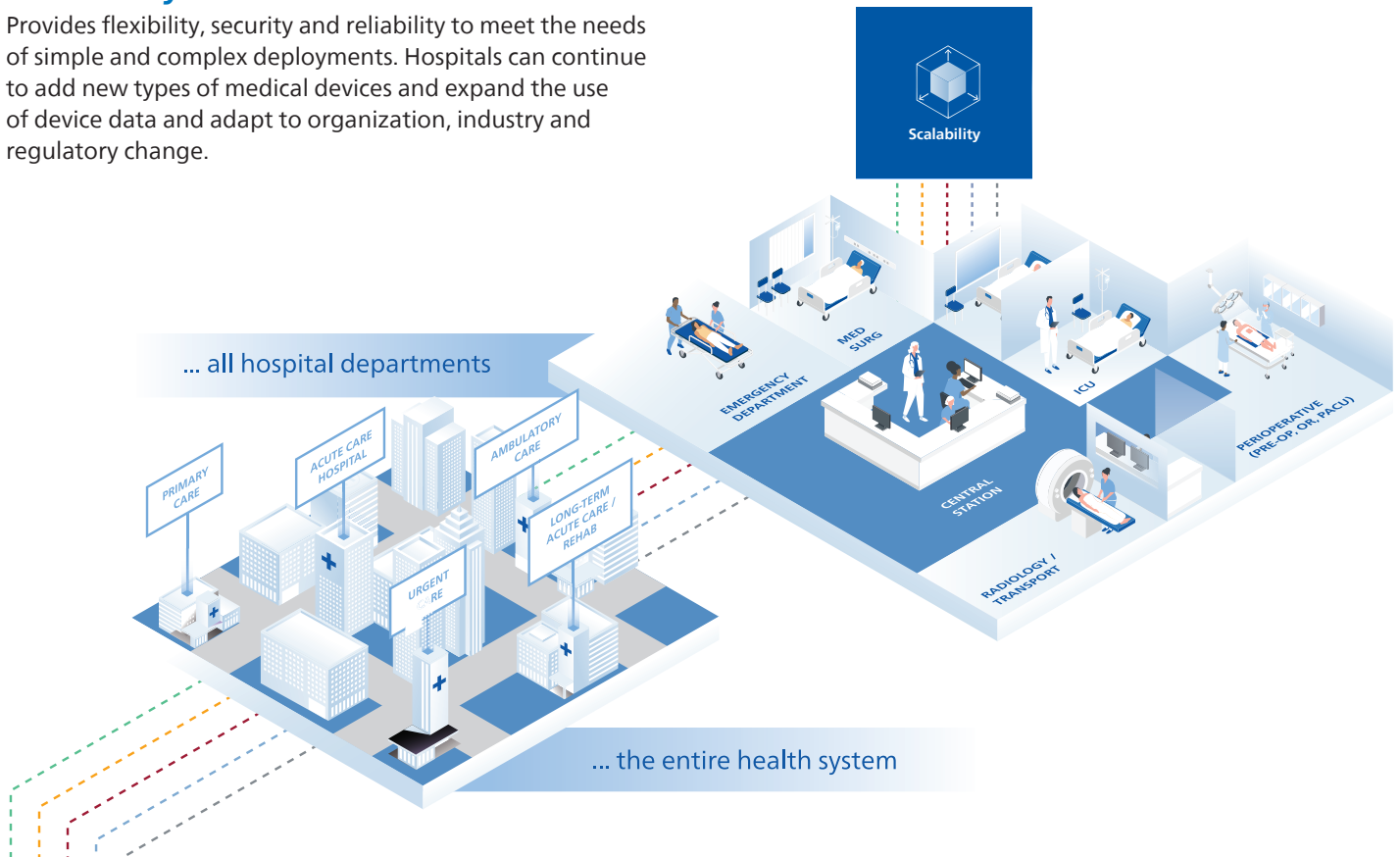
Contextual awareness

Provides critical contextual data elements that consuming systems require such as patient identification and association, multi-visit encounter selection, time synchronization, user access, asset location. The MDIP provides the tools and processes that can correctly identify, associate and disassociate the patient.



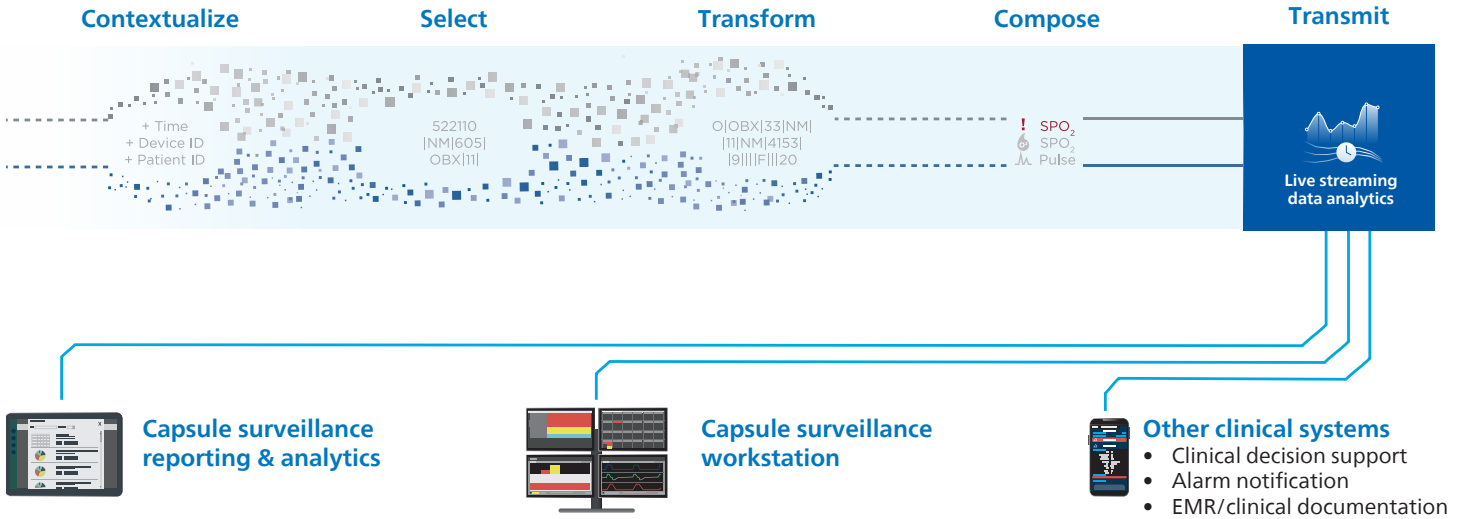
Scalability

Provides flexibility, security and reliability to meet the needs of simple and complex deployments. Hospitals can continue to add new types of medical devices and expand the use of device data and adapt to organization, industry and regulatory change.



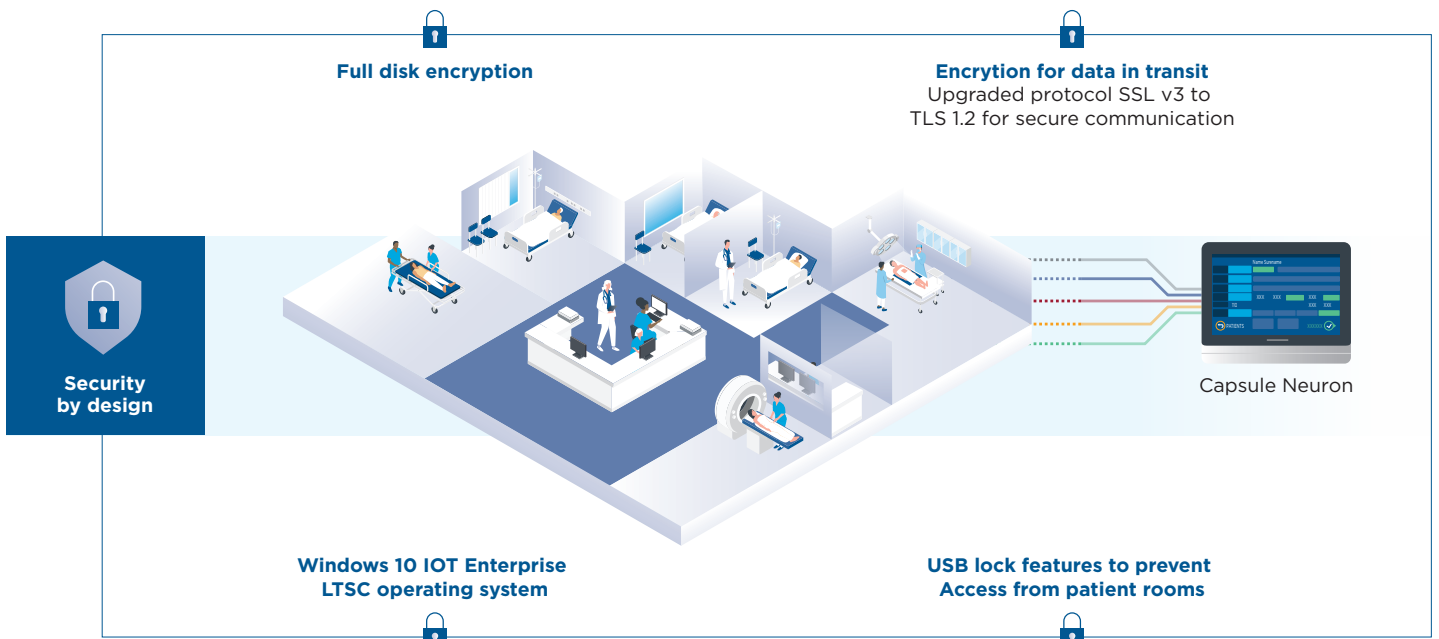
Live stream data analytics

Provides data management capabilities to transform streaming medical device data and transmit context rich information to receiving systems. Capsule Surveillance uses this data, including waveforms, to provide continuous visibility and to alert on actionable emergent events. It enables reporting and analytics such as alarm summary visualization.



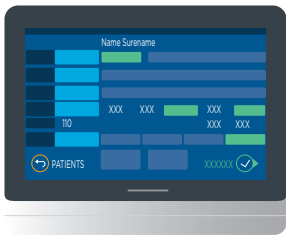
Security by design

Provides confidence that even when the system is under attack the platform can enforce authentication, authorization, confidentiality, data integrity, privacy, accountability, safety and non-repudiation requirements.

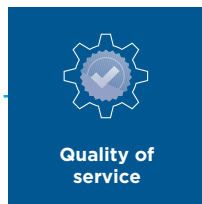


Quality of service

Provides reliable and timely access to the delivery of device data through services that are highly available and resilient. Configurable logging and troubleshooting tools help support the spectrum of deployments.



Capsule Neuron



Connection



Node1.domain



Node2.domain



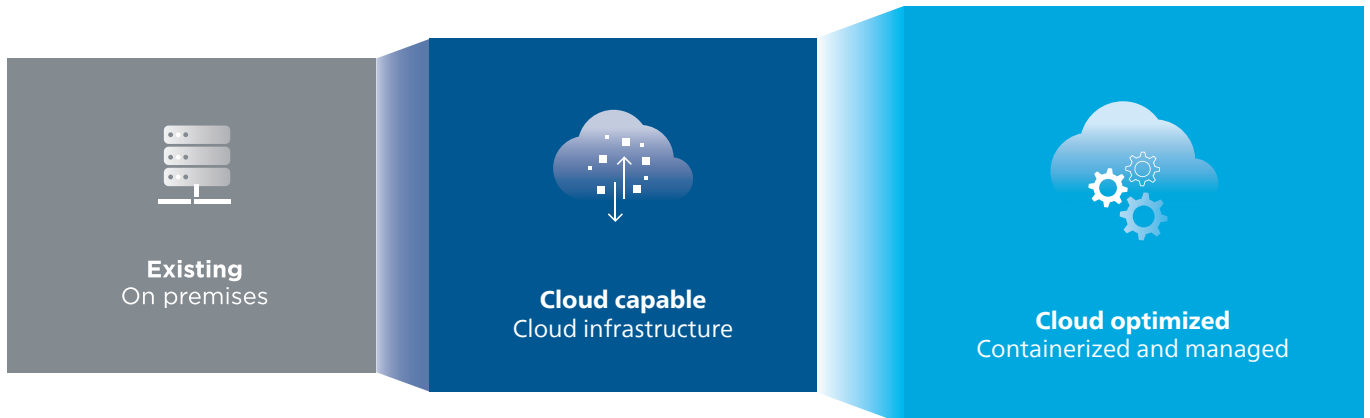
Node3.domain

Configuration

Replication

Cloud capable

Provides the option to deploy remote servers in the cloud, reducing hardware and support requirements while enabling rapid deployment. Data is encrypted at rest and in transit and is stored to support our clients in complying with HIPAA privacy standards. Ensures a transition path from on-premise to cloud hosted.



The MDIP in action

Each of the three Capsule solutions leverages the capabilities of the single MDIP platform to support countless benefits across all hospital departments and the entire health system.



Medical Device Integration

Powers IT system of your choosing with streaming medical device data

- Unlocks data from any medical device and provides user configurable tools to select and transform (filter, tailor, contextualize) from all available data parameters to send to one, or multiple systems via industry standard output profiles.
- Handles the auto-detection of connections, device drivers, centralized management, and provides insights into the operational analytics of the connectivity infrastructure.
- Provides powerful data management capabilities including the ability to tailor format, and sampling rates for simultaneous outbound data feeds.



Patient Monitoring

Simplifies patient vitals acquisition and enhances utilization in non-critical care departments

- Provides scalable plug-and-play bedside connectivity and streamlined vitals capture with bedside observations sent directly to the EMR to advance efficiency, documentation accuracy, and care team communication in patient monitoring across care settings.
- Offers a flexible upgrade path to turn existing spot monitors into connected monitors using Chart Xpress, and then transition to an all-in-one smart connected monitor, Vitals Plus.
- Centralized, remote management of Vitals Plus monitoring fleet eases software updates, connectivity and maintenance.
- Detects potential patient deterioration at the bedside and seamlessly transmits critical patient information to the intelligent algorithms of Capsule Surveillance.



Clinical Surveillance

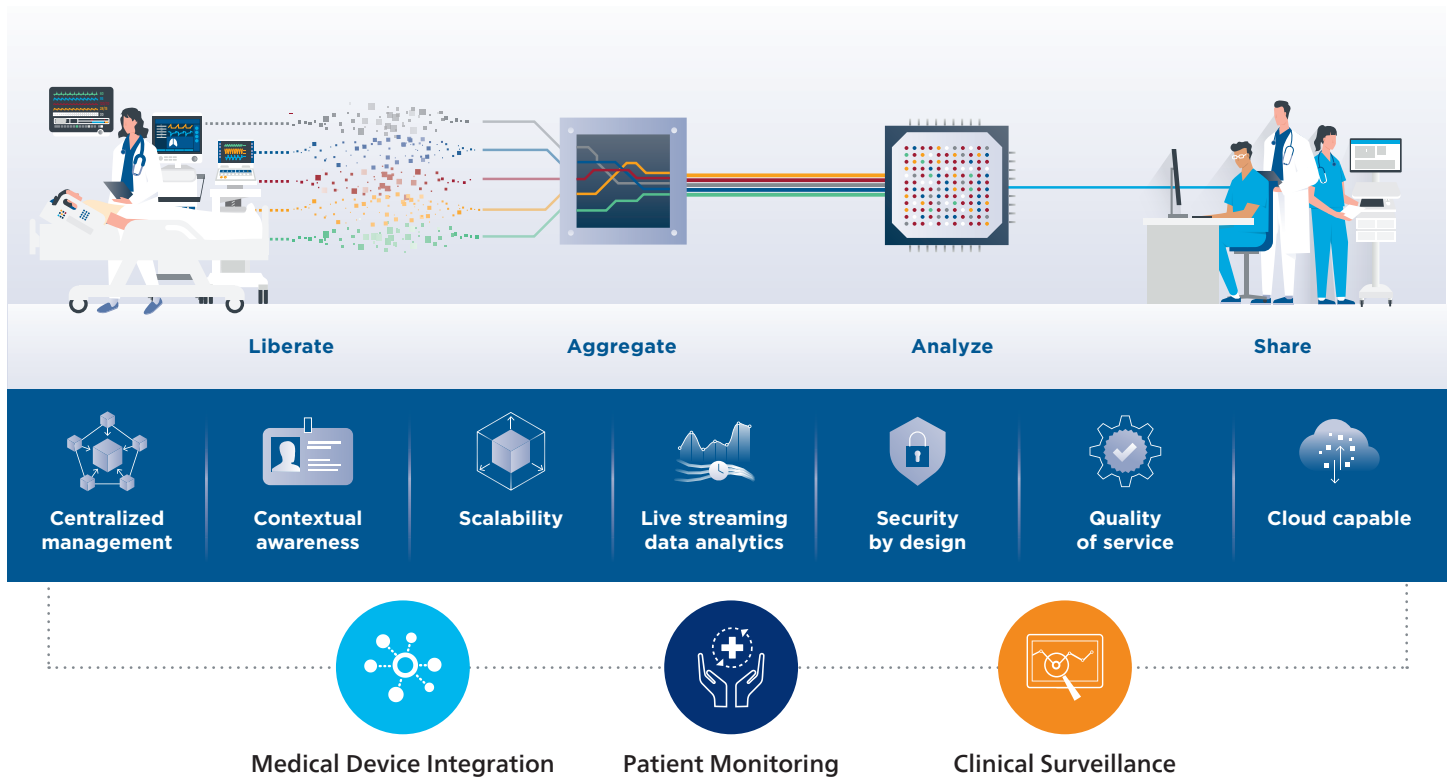
Helps identify at-risk patients

- Connected medical device data is continuously available to be viewed remotely at the workstation and notifications are routed to care team members.
- Smart Rules analyze live, streaming data from medical devices to alert upon detecting emergent, clinically actionable patient events based on the hospital's clinical practice and policy.

The platform that best supports healthcare innovation

Innovation requires high quality, high fidelity, reliable data from devices and systems and Capsule's MDIP gives organizations immediate access to this data for all your data initiatives. By powering the Capsule portfolio of solutions, the MDIP provides configurable, coordinated and comprehensive value that will continue to expand and evolve across medical device integration, patient monitoring, clinical surveillance, and the creation of timely insights for healthcare providers.

Capsule Medical Device Information Platform



Selected specifications

MDIP server software

Cloud/Hybrid Compatible Option*
Operating System: Windows Server
Microsoft .NET Core 3.1 with ASP.NET Hosting
Microsoft .NET Framework
Internet Information Services (IIS) Web Server
MSMQ message queueing
Active Directory Authentication
A maximum of 256 Neurons per server

Security/authentication

Active Directory Authentication
Wireless authentication:

- WPA-Personal (PSK) — TKIP
- WPA2-Personal (PSK) — AES (CCMP)
- WPA2-Enterprise (PEAP-MSCHAPv2) — AES (CCMP)
(Capsule Neuron or SmartLinx Axon only)

Supported browsers

Edge 40 and higher
Chrome 45 and higher
Firefox 35 and higher

MDIP database server

SQL Server

Integration standards

HL7 2.3
IHE PCD-01, PCD-04, WCM
Capsule Data Standard (Rosetta Terminology Mapping)

**Private preview only*

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