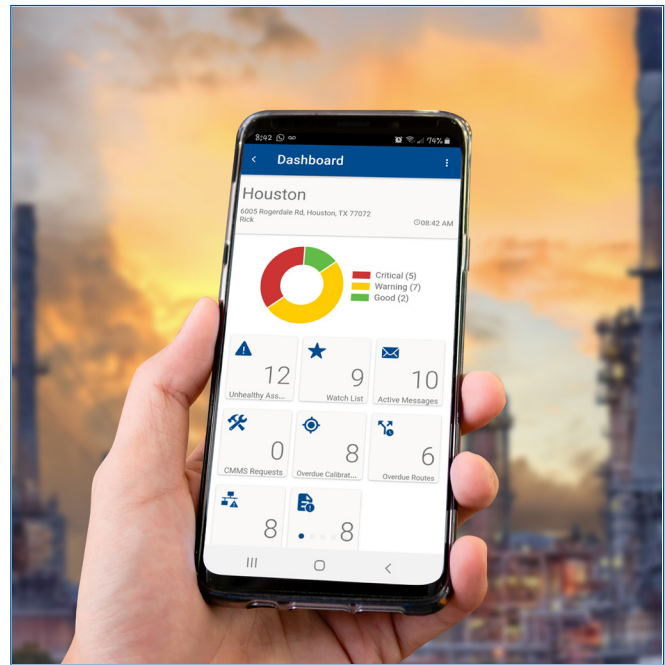


# Plantweb Optics

- Provides a collaborative environment to improve plant reliability and operational performance.
- Connect experts to their assets with Augmented Reality and mobile solutions.
- Integrates multiple interfaces for a holistic view of asset health.
- Resides in a secure yet flexible architecture.
- Offers workflow integration to drive proactive operations with CMMS integration.
- Provides a built-in historian for immediate asset health and parameter history.



Use the Plantweb Optics mobile app to stay on top of developing issues.

## Enabling an Integrated Workflow

Plantweb Optics asset performance platform improves reliability and availability by enhancing the visibility into asset health. Experts in the facility are always connected to assets they care about most. Through open protocols, operational data is centralized and contextualized from disparate data sources. The data is delivered to experts with personalized content and dashboards. Plantweb Optics provides the information needed in a collaborative environment to enhance workflows and drive corrective actions.

## Plantweb Optics to Manage Your Assets and Prioritize Work

Plantweb Optics is Emerson's asset performance platform for managing holistic asset health. Plantweb Optics combines the data from multiple applications into asset-centric information, then delivers persona-based alerts and KPIs for improving the reliability of assets throughout the facility. Health scores for assets are calculated automatically to start providing immediate insights to the assets that need attention most.

Plantweb Optics uses custom API's called Asset Source Interfaces (ASIs) to connect and contextualize asset data. This secure connectivity creates more visibility into asset status.

Built on SQL and utilizing thin clients, Plantweb Optics installation and maintenance processes are simple and non-intrusive. The platform allows for flexible installations within complex network architectures.

## Plantweb Optics CMMS Interface

The Plantweb Optics CMMS interface integrates directly to SAP and IBM Maximo CMMS. This significantly reduces the time spent generating work notifications, so experts can spend their valuable time focused on the most productive activities.

The Plantweb Optics CMMS interface maps assets from Plantweb Optics to your CMMS systems, so CMMS notifications are created proactively before process upsets occur in the facility. This allows you to integrate your workflow and drive corrective actions.

Plantweb Optics also allows for creation of CMMS work notifications directly from analytics or monitoring alerts. With a mobile solution, CMMS work notifications can be created from anywhere and the status of existing notifications can be viewed from anywhere. The ability to see open and completed notifications reduces the chance of a duplicate entry and can help identify any bad actors in the facility.

## Plantweb Optics Augmented Reality

Plantweb Optics Augmented Reality (AR) helps field workers improve productivity in the field, make better decisions for maintenance operations, and enables collaboration in real-time with subject matter experts. AR helps you:

- Increase productivity of field workers by providing relevant asset and process data and locating assets quickly using AR visualization.
- Reduce cost, safety risks, and repair times with Remote Assistance via live video, audio calling and messaging.
- Improve training and knowledge transfer with AR-supported documentation such as annotated videos and digital step-by-step procedures.

Once work is scheduled, Plantweb Optics Augmented Reality provides the tools your maintenance team needs to complete work efficiently and safely.



*Plantweb Optics Augmented Reality shows asset data out in the field.*

## Plantweb Optics Historian

To improve process reliability, you need to be able to see the status of your critical assets and know how they've performed over time. Being able to trend historical values can provide insights that will help you troubleshoot and identify the root cause faster.

The Plantweb Optics historian is embedded into every Plantweb Optics asset performance platform. Once installed, the historian requires no configuration to start storing the history of every parameter associated with an asset. This ability to store all parameters gives the most complete view of historical health and performance. Because Plantweb Optics historian is already built into the platform, users can quickly bulk select which assets they want to historize and the historization process immediately starts.

## Plantweb Optics Asset Source Interfaces

Functionality is added to Plantweb Optics by installing ASIs. Each interface creates connectivity between Plantweb Optics and specific asset types while providing information and diagnostic capabilities specific to the asset class. Available interfaces:

**AMS Device Manager ASI** – Connect existing AMS Device Manager installations to Plantweb Optics and allow users to monitor device health from anywhere.

**AMS Machine Works ASI** – Gain predictive analytics for data acquired through the Emerson Wireless Gateway and AMS Device Manager using AMS 9420 Wireless Vibration Transmitter and also the AMS 6500 ATG.

**Plantweb Insight ASI** – Gain analytics based on decades of process and industry experience into Plantweb Optics. Plantweb Optics users now have timely, actionable information about key assets such as Pumps, Heat Exchangers, Steam Traps, and Air-Cooled Heat Exchangers.

**AMS Machinery Manager ASI** – Connect existing Machinery Manager installations to Plantweb Optics for discovery, monitoring, and reporting of rotating equipment assets.

**Emerson Wireless Gateway ASI** – Connect 1410/1420 gateways and Cisco 1552 WU to Plantweb Optics for discovering and reporting on the health of all devices connected to the gateway.

**DeltaV Control Loop ASI** – Understand which control loops need maintenance or tuning and have full insight into which processes are currently running in manual mode.

**KNet ASI** – Gain performance, health, and energy insights by running analytics from pre-built asset templates or leverage machine learning capabilities.

**AMS Asset Monitor** – Use Emerson’s edge analytics solution with automated analytics and actionable alerts for unmonitored assets.

**UE Systems** – Connect the Ultratrend DMS 6 database and be better informed of ultrasound condition monitoring activities.

Each ASI has an individual datasheet available with more information.

## Plantweb Optics Applications

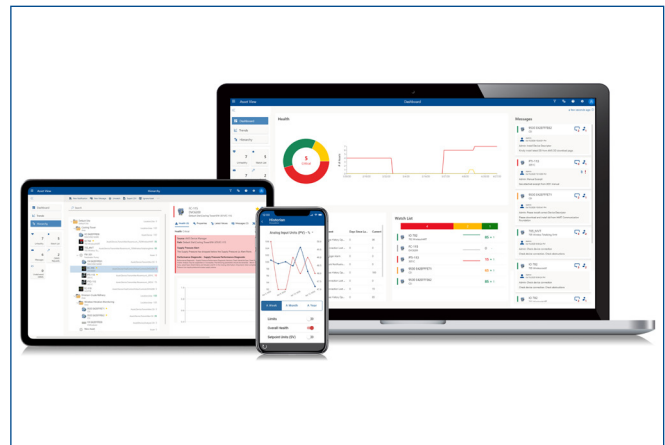
Plantweb Optics is built using intuitive interfaces and applications to streamline setup and navigation:

The **Asset View** application provides a dashboard view and valuable KPIs of monitored assets and alerts on developing issues on any asset defined as critical to production. The interface is similar across desktop/tablet/smart phone views for ease of use, while the Plantweb Optics Mobile App provides a multi-site view for easy review of alerts across the

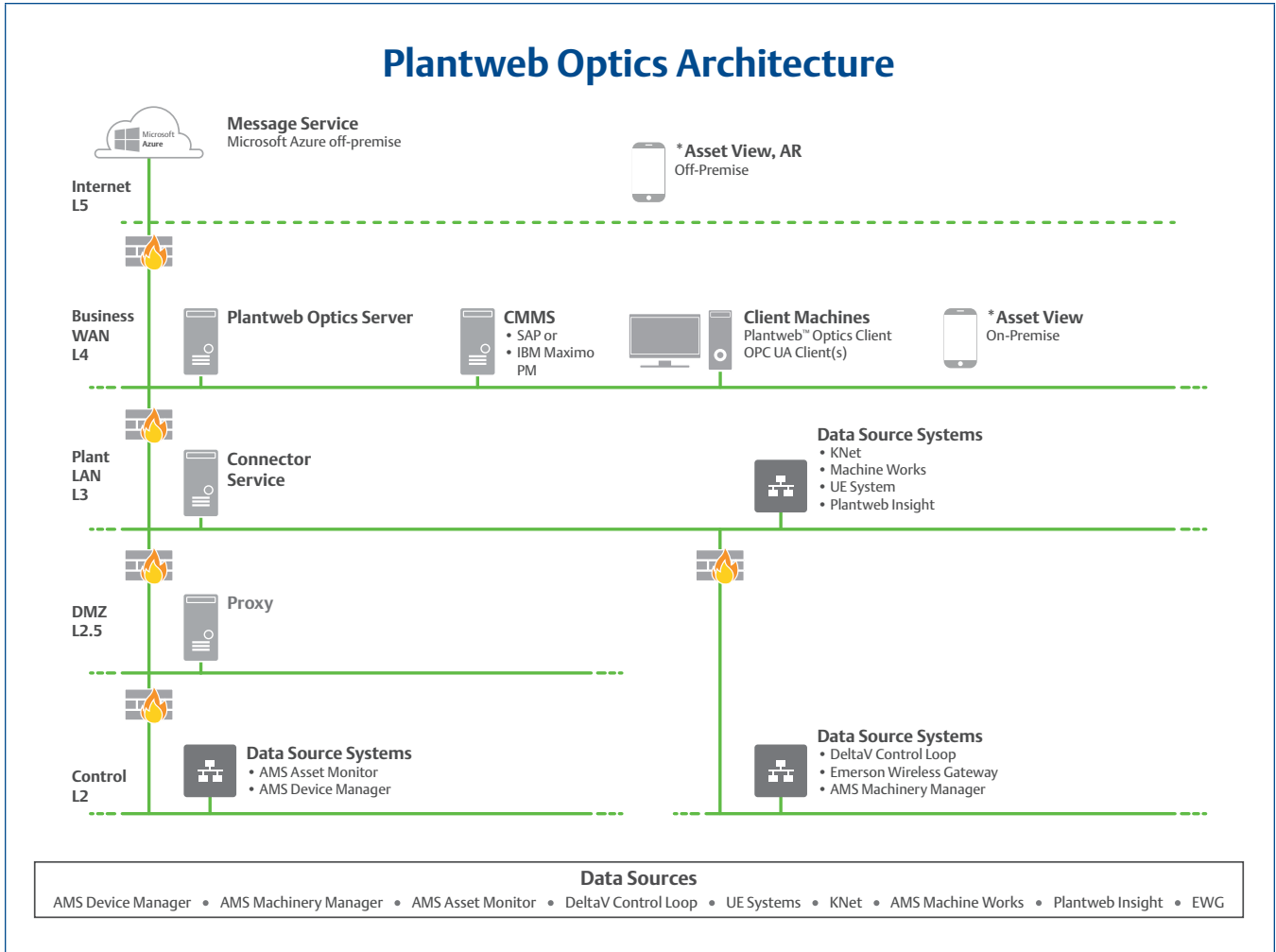
enterprise. Asset View allows users to drill down on individual alerts for more details and launch diagnostic applications for asset health diagnostics. In addition, the asset hierarchy provides a top down view with rolled-up health scores to easily identify which areas need attention. The persona-based viewing makes sure users can quickly focus on the asset they care about most, and notifications can be setup for critical assets for immediate alert of degrading health around assets needed for production.

The **Asset Explorer** application allows users to quickly define the asset hierarchy and configure data. Asset Explorer periodically polls the network architecture to discover wired and wireless assets added to or removed from installation and makes the appropriate adjustments in Plantweb Optics. Within minutes of getting started, users are able to look at the health of their assets. Additional capabilities include:

- Creating composite assets from individual primary assets. For example, a pump may consist of vibration, chassis temperature, and acoustic transmitters.
- Defining site turnarounds by allowing users to ignore specific assets that are scheduled to be fixed during the next outage.
- Historizing assets to track health and parameters over time.



*Asset View application delivers visibility to asset health from desktops, tablets, and smart phones.*



*Plantweb Optics runs in a secure network environment to deliver the information you need from your plant assets.*

## Plantweb Optics Deployment Services

To take advantage of Plantweb Optics as quickly as possible, Emerson offers install services performed by certified Plantweb Optics experts. Customized to your installation, these services include:

- Pre-install readiness plan and onsite kick-off meeting
- Network setups
- Installation and database import for software applications and ASIs
- Configuration and setup for Plantweb Optics and the mobile app
- Basic training for your team
- Documentation and backup of configurations



*Emerson-certified experts in Plantweb Optics installation will customize a plan for your site or enterprise.*

## Plantweb Optics Basic Specifications

For more details or answers to frequently asked questions, refer to *Plantweb Optics System Requirements* and *Frequency Asked Questions (FAQs)*

Plantweb Optics Server Requirements	
<b>Operating System</b>	Windows Server 2019 Datacenter Windows Server 2019 Standard Windows Server 2016 Datacenter Windows Server 2016 Standard
<b>CPU Architecture</b>	64-bit
<b>Internet Information Services (IIS)</b>	v8.0, v10 (supplied with OS)
<b>Microsoft SQL Server</b>	MS SQL Server 2017 Express or MS SQL Server 2019 Full (recommended) MS SQL Server 2017 Full
<b>Browsers</b>	Google Chrome (latest version) Microsoft Edge
<b>Processor</b>	3.2 GHz, 8-core processor, Intel Xeon-scalable or faster (recommended) 2.4 GHz, 4-core processor, Intel Xeon-scalable or faster (minimum)
<b>RAM</b>	32 GB (recommended) 16 GB (minimum)
<b>Hard Drive</b>	SSD hard drive (recommended) SAS hard drive (10K RPM) (minimum)
<b>Available Disk Space</b>	100 GB (minimum)
<b>Screen Resolution</b>	Full HD (1920 x 1080 pixels) (maximum) SXGA (1280 x 1024 pixels) (minimum)
<b>Network</b>	2 x 1 GB NIC (use 2 NICs to isolate Tier 3 traffic from Tier 2 traffic) (recommended) 1 x 1 GB NIC (supported)

Additional Specifications	
<b>Ethernet</b>	One or more Ethernet ports
<b>Internet Connectivity</b>	An internet connection is required to download installations and patches, register software, and receive alerts and messages on the mobile application.
<b>Supported Virtualization</b>	VMware 6 or newer Hyper-V 2012 or newer
<b>Software</b>	Microsoft .NET 3.5, SP1 Microsoft .NET Framework 3.5 is required to install Plantweb Optics. See KBA NK-1600-0300 for instructions.

Refer to individual spec sheets for software applications, ASIs and services for additional specifications.

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