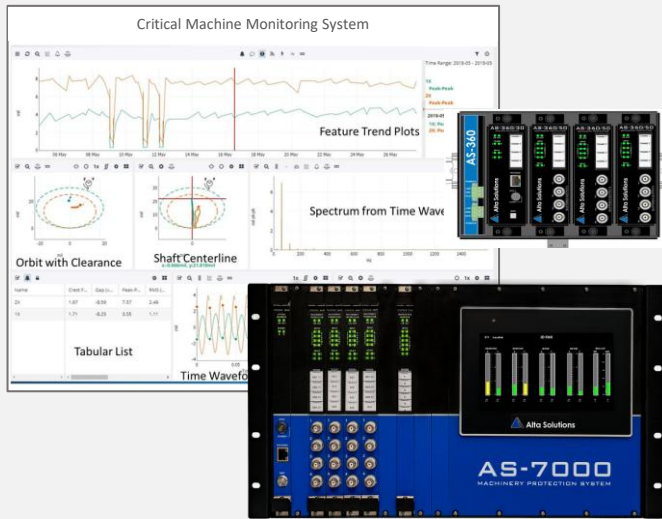




Protect your critical assets and personnel

Avoid catastrophic failures and limit further damage

Drop-in replacement/upgrade for legacy systems

Monitoring system isolated from control network

Machine Protection System

Critical Equipment Protection System with Integrated Condition Monitoring



Real-Time Machinery Shutdown

Cutsforth has partnered with Alta Solutions for a fully-integrated real-time machinery protection system for turbines (gas, hydro, steam), compressors, FD and ID fans, boiler feed pumps, circulation pumps, and other critical rotating equipment.



Compact and High-Channel Count Options

The AS-360 Compact Machinery Protection System comes in configurations up to 8 slots and 28 channels. The AS-7000 Rack-Based Machinery Protection System fits in a 19-inch rack with up to 18 slots and 64 channels.



Isolated Monitoring System for Security

The Gateway Interface is completely isolated from the control system through a one-way ethernet connection. The monitoring system sits on your business network, passing vibration and other signals directly to InsightCM over ethernet.



Monitoring System Integrated with InsightCM

InsightCM is the central hub for all your multiphysics monitoring data where you can view and diagnose potential faults from one screen. From InsightCM, you can share data with your PI Historian and other enterprise systems.



Drop-In Upgrade for Legacy Systems

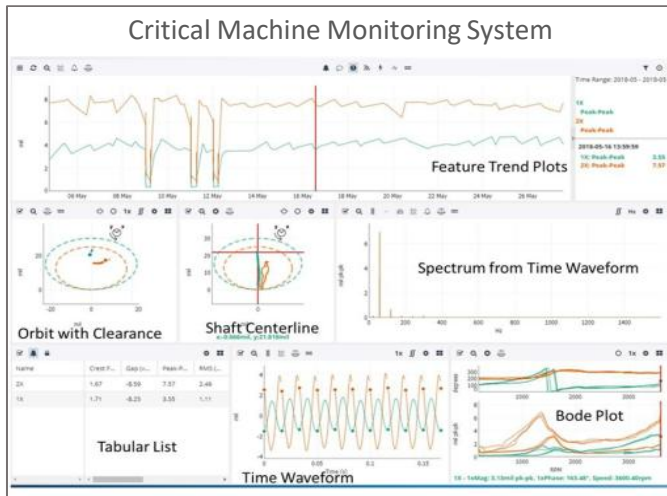
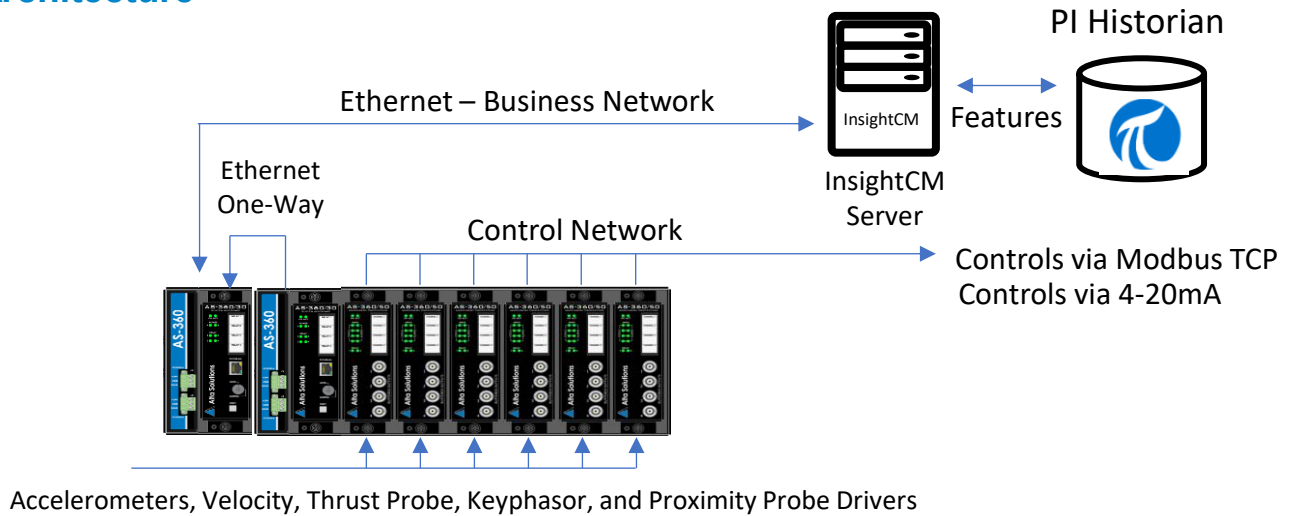
Replacing aging or obsolete protection systems is straightforward. The AS-7000 is a drop-in replacement for the BN 3500. The form factor matches the same dimensions, and the sensor inputs use the same connectors.



Broad Measurement Range

Both systems feature the same measurement capabilities, including air gap, axial position, radial vibration, eccentricity, differential expansion, speed and reverse rotation, temperature, and more.

System Architecture



InsightCM Multi-Physics Monitoring Platform

Integrate monitoring data with InsightCM without impacting your critical machine protection system:

- Configure data collection based on time interval (per minute, per hour, per day)
- Trigger data capture when engineering units change or alarm limits are met
- Automatically calculate vibration data features that indicate faults: peak-peak, Overall, 1X Mag/Phase, 2X Mag/Phase, subsynchronous, custom bands, and more...
- Configure run-up and coast-down settings

Alta Protection Modules

Protection Features:

- Universal Sensor Capability
- Buffered Outputs
- Module OK Status LEDs
- Channel Status LEDs
- Activity Status LED
- Alarm Status LEDs
- Relay Status LEDs
- Recorder Outputs (4-20 mA)
- Intelligent Relay Outputs (Boolean Logic)
- Controls connectivity vis Modbus TCP

Measurements Supported:

- Air Gap
- Axial Position
- Radial Vibration
- Shaft Absolute Radial Vibration
- Eccentricity
- Acceleration and Velocity
- Aero Derivative Acceleration and Velocity
- Differential Expansion Single
- Differential Expansion Complementary
- Differential Expansion Single Ramp
- Differential Expansion Dual Ramp
- Case Expansion Single
- Case Expansion Pair
- Valve Position
- Speed and Reverse Rotation
- Zero Speed
- Temperature (i.e., 10 mV/deg C)