







InVanse® BirdsEye












InVanse BirdsEye is a comprehensive modular software system that is designed to increase plant-wide awareness and drive accountability. BirdsEye provides both **Production Control** monitoring and detailed **Process Analysis** to ensure maximum longevity, throughput and uptime of all automated machinery. Designed to use existing controls architecture, BirdsEye decreases upfront cost of integration. BirdsEye also interfaces directly to many other common devices via wired and wireless technologies.

 <p><i>Real-Time Viewing</i> Desktop/Laptop Android App Web Browser</p>	 <p><i>Real-Time Monitoring</i> Recipe Change PLC I/O Force Downtime</p>	 <p><i>User Toolkits</i> Engineer Tools Programmer Tools</p>
 <p><i>Predictive Maintenance</i> See Below</p>	 <p><i>Automated Alerting</i> User Definable Team Definable</p>	 <p><i>Value Add Services</i> User Training Theoretical Education System Support Virtual Engineering</p>

InVanse® BirdsEye Predictive Maintenance

The application of BirdsEye statistical process analysis allows plants to “predict” soon-to-be urgent issues and “prescribe” appropriate courses of action, before unplanned downtime occurs.

















These are some of the elements that can be measured and automatically analyzed:

 <p><i>Vibration</i> Motor Bearings Pump Cavitation Reducer Gears</p>	 <p><i>Temperature</i> Motors Pumps Drives</p>	 <p><i>Pressure</i> Counter-Balance Cushion etc.</p>
 <p><i>Strain</i> Tonnage Robot Wrist</p>	 <p><i>Current</i> Magnetic Belts</p>	 <p><i>Fluid Flow</i> Flow Rates</p>
 <p><i>Vacuum</i> Evacuation Time Seal Quality</p>	 <p><i>Energy</i> kWh Robot VFD</p>	 <p><i>Servo</i> RMS Current Peak Position Error</p>
 <p><i>Repeatability</i> Clutch/Brake (Wear) Cycle Time (Belt Tensions)</p>	 <p><i>Network Reliability</i> Unusual Packet Retries Noise</p>	

InVanse® BirdsEye Standard Attributes

BirdsEye was designed to encompass the widest array of physically obtainable machine data; first interfacing what already exists (PLC I/O), than adding additional devices (IIoT, Instrumentation, etc.) when deemed necessary. All software modules are graphical as to reveal the true “nature” of any machine kinematics.

These are some of the standard attributes of all InVanse software systems:

 <p><i>Platform Independent</i> Any PLC Any Sensor Any Supplier</p>	 <p><i>Highly Scalable</i> Server PC Add-on Coprocessor PC's</p>	 <p><i>Centralized Monitoring</i> Centers of Expertise</p>
 <p><i>Uses Existing Infrastructure</i> No Resource Overload</p>	 <p><i>Unlimited User License</i> Every Employee Every Corporate Level</p>	 <p><i>Ready Interfaces</i> Helm Tonnage Monitoring Schmalz Vacuum Control Wintriss Press Monitoring Et al.</p>
 <p><i>Recipe Based SPC</i> Detailed Graphical Statistics Recipe Correlations</p>	 <p><i>Real-time & Historical</i> Everything in Real-Time Everything Stored Permanently</p>	 <p><i>Any Network</i> EtherNet/IP • PROFINET Ethernet TCP/IP • MODBUS ControlNet • MelsecNet DH+ • RS232/422/485</p>
 <p><i>Any PLC</i> Minimal Logic Minimal Memory Minimal Network Bandwidth</p>	 <p><i>Battery Powered Wireless IIoT</i> Banner KCF Siemens Et al.</p>	 <p><i>Hardwired Sensors</i> Rockwell Conditions Monitoring</p>
 <p><i>Remotely Managed</i> Private Cloud VPN</p>	 <p><i>Inherently Secure</i> Unhackable Network Interface</p>	 <p><i>Full Diagnostics</i> Infrastructure</p>
 <p><i>LEAN Support</i> Manufacturing Maintenance</p>		