Ectron CORPORATION®
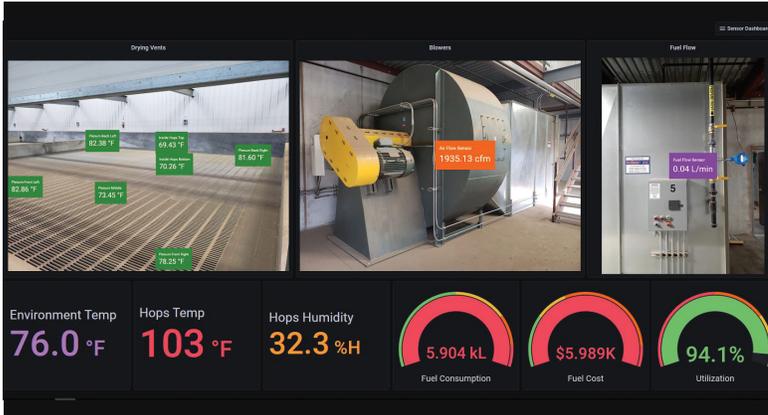
Measure all aspects of your Hops Drying process to optimize settings, track production profile deviations in real-time, compare machine performance, reduce energy consumption and implement preventative maintenance.

- Drying Bed Temperature, Humidity
- CFM, Temperature of Air from Fan Duct
- Blower VFD Drive Energy Usage
- Natural Gas Consumed in Heater/Kiln
- Environmental Data (e.g., Temperature, Humidity)
- Set-Up, Hold, Cool Down Times
- Amount of Material used in the job
- Yield Per Job
- Job Duration
- Cost Per Run (Material and Energy)
- Machine Utilization/Uptime

Ectron's Market Ready Kit is plug-and-play. Start measuring data and get analytics to optimize production and save costs. Make your operation more efficient and product quality more consistent.

- Monitor machine characteristics for anomolies during production run.
- Determine optimal duration of drying and setting by strain of HOPS.
- Confirm optimal environmental conditions for the drying process.
- Adjust machine settings in real-time to maintain consistent product quality.
- Compare product quality and cost efficiencies of each bed.
- Root cause product nonconformance caused by equipment deviations.
- Pinpoint equipment deviations for predictive maintenance and repairs.
- Monitor usage for production scheduling and energy efficiency.
- Forecast and track per run production cost (including energy cost)
- Track environmental effects on product quality and machine performance.
- Check machine usage hours to trigger notification for routine maintenance.
- Run simulations to see what changes in the process yield efficiencies.
- Utilize energy data to support a Sustainability Program.

The entire kit is built around Ectron's Edge Node (for Cloud data analytics) or Intelligent Edge Node (for Edge data analytics). Both aggregate and interpret sensor data. The data can be viewed on a customized dashboard or sent directly to your existing ERP solution or other business intelligence software.
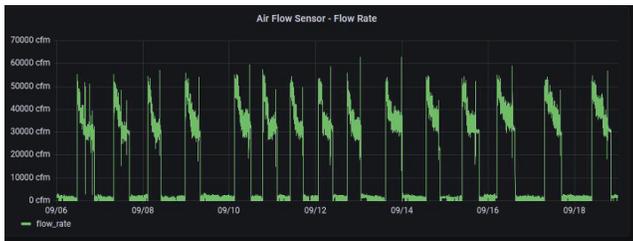
Standard Configuration of the Market Ready Kit is:

- 1 Edge Node or Intelligent Edge Node
- 7 Drying Bed Temperature, Humidity Sensors
- 3 Environmental Sensors
- 1 VFD Drive Power Usage Sensor
- 1 Air Duct Sensor for Temperature, Humidity and CFM Air Flow
- 1 Power Sensor Module
- 1 Computer Tablet for Operator Data Entry

- Plug-and-Play
- Installed in 1 Day
- No Changes to Equipment
- No Engineering or IT Staff Required
- Instant Access
- Installation Assistance Available

Multiple Variables Available For Edge And Cloud Analytics

Air Flow Sensor - Flow Rate

Management Level Dashboard

User Interface

This Market-Ready Kit
is offered by Ectron
and its partner Balluff

BALLUFF