HOPS DRYING
MARKET READY KIT

Smart EYE™

Measure all aspects of the HOPS drying process to optimize settings on airflow, heat and other KPIs, as well reduce energy consumption.

- ☑ HOPS 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)

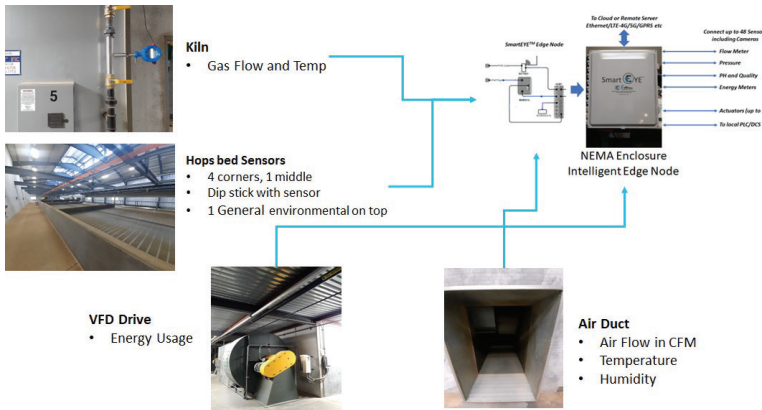**Use the data to get real time analytics by the type of HOPS:**

- ☑ What should be the duration of drying and setting by strain of HOPS?
- ☑ How do environmental factors affect the drying process?
- ☑ How much energy is used and the cost (Power and Gas)?

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

The entire kit is built around Ectron's AI/ML capable Intelligent Edge Node that aggregates the sensors and performs edge analytics.

Ready to use no-code out-of-the-box Intelligent Edge Node and sensors.
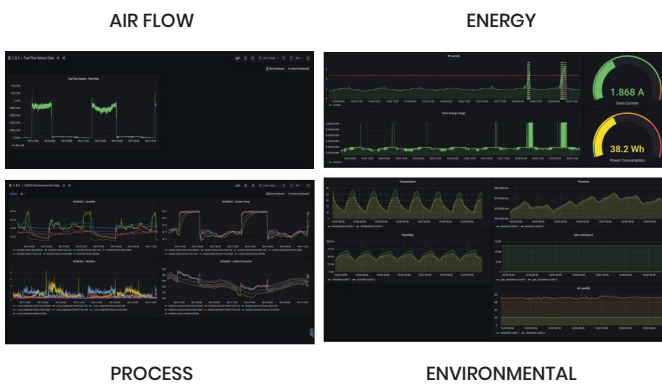Installation assistance is available.

Kiln
- Gas Flow and Temp

Hops bed Sensors
- 4 corners, 1 middle
- Dip stick with sensor
- 1 General environmental on top

VFD Drive
- Energy Usage

Air Duct
- Air Flow in CFM
- Temperature
- Humidity

SmartEYE™ Edge Node

To Cloud or Remote Server Ethernet/LTE-4G/5G/GPRS etc

Connect up to 48 Sensors including Cameras
- Flow Meter
- Pressure
- PH and Quality
- Energy Meters
- Actuators (up to 5)
- To local PLC/DCS

NEMA Enclosure Intelligent Edge Node

Standard configuration of the Market Ready Kit is:

- ☑ 1 Intelligent Edge Node (for 3 beds)
- ☑ 15 HOPS Bed Sensors
- ☑ 3 Environmental Sensors
- ☑ VFD Drive Power Usage Sensors
- ☑ Air Duct Sensor for Temperature, Humidity and CFM Air Flow
- ☑ Computer Tablet for Operator Data Entry

Add-On (Optional)
- ☑ Gas Flow Meter with Gas Usage

MULTIPLE VARIABLES AVAILABLE FOR EDGE AND CLOUD ANALYTICS

AIR FLOW | ENERGY

PROCESS | ENVIRONMENTAL

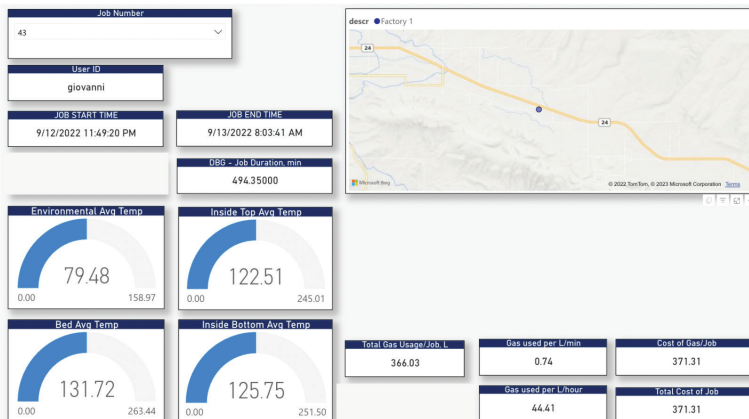### Operator Entry (Tablet Computer)

Operator Enters ID, Job #, Material used, Station ID Amount of Material used, Starts Job

Operator can put in more data after job starts such As material cost, power etc.

From summary tab one can view all the jobs run on the station

MANAGEMENT LEVEL DASHBOARDS WITH GEO-LOCATION DATA AND PRODUCTION SUMMARY

The HOPS DRYING Market Ready Kit is offered by Ectron and its partners Balluff and Intel for the HOPS Growing Industry.

https://www.ectron.com/

intel. BALLUFF