



# ELEMENT-D DATA SHEET

Element-D (which stands for "Data") is an IoT data collection device that connects OEM instruments to the Cloud to automate the collection of scientific data, metadata such as maintenance and calibration records, and critical performance and utilization metrics. Element-D aggregates readings to the cloud-based Elemental Machines Insights Dashboard where predictive algorithms are used to deliver powerful, actionable insights about user workflows, machine health, utilization, and operating environments. Automated data collection and audit reporting also facilitate compliance with quality management systems and regulatory agencies.

## Performance Highlights:

- Data ingestion engine
- Seamlessly collects data from a variety of instruments
- Easily expandable platform – just add more Elements
- Sends data to the Cloud via WiFi
- Eliminate paper records
- Aggregate all data in the Cloud
- Make data available for ELNs and LIMS through our API

## Communication

- Sample rate: defined sensor readings can be sent to the Cloud every 15 seconds
- Communicates via
  - WiFi 2.4GHz and 5GHz
  - Ethernet 10/100 Mbit
- Does not require Elemental Gateway



### Data:



OEM Data

### Device Specifications:

Size	3.5" X 2.75" X 1"
Power requirements	5V 2.4A micro USB power adapter
Operating conditions	5C to 45C Relative Humidity: 0% to 95% (non-condensing)
Connectivity	Wired and WiFi ethernet, RS232/USB serial
Base processor	Raspberry Pi 3 B+ (w/32GB SD card and enclosure)



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### Installation

Element-D can be connected to a wide variety of laboratory equipment. Typical installations include lab balances, incubators, pH meters and more. To find out if we can connect to your equipment, please contact us.

### Typical Applications:

- Freezers/fridges
- Incubators
- Balances
- pH meters
- Blood glucose analyzers
- Osmometers
- Particle counters
- Water purifiers

Typical use cases for Element-D



### Dashboard

- All data stored in Cloud. Eliminates data silos. Accessible from anywhere you have an internet connection
- Alerts are fully customizable - Our robust rules engine allows you to customize alerts via SMS and/or email when your equipment or environment deviates from the norm, even during power outages. You can also automate your alerting workflow via escalating messaging so that the right people are notified at the right time.
- Claim alerts and add notations to data sets for regulatory compliance - When alerts are triggered due to non-conformances, your Quality Team can directly comment and annotate their corrective actions within the system for audit-friendly reporting.
- API allows sharing of data to LIMS/ELN or other databases
- Audit reports - automates electronic data capture to improve data integrity and record keeping for audit reports and regulatory compliance. Instrument and/or process data can be captured in accordance to 21 CFR Part 11 requirements to automatically generate audit-friendly reports, freeing up hours of time for your staff.
- Fully customizable groups and access
- 21 CFR part 11 compatible for electronic records