Overview

Element-U (model EU2, EU3) is a wireless, battery-powered Internet of Things (IoT) smart sensor that continuously monitors the real-time availability and usage of any powered instruments. The Element-U comes with a custom clamp and two thumbscrews that secures to most power cables. Installation does not interrupt the power circuit and can even be done safely while the machine is on. Usage data is securely transmitted to the Elemental Machines Insights Dashboard where it is analyzed as the software digitally records and visually shows the usage timeline and percentage. The Usage Solution empowers agile lab operations to help guide the service, movement, efficiency, and purchase of lab equipment to optimize operating resources.

Performance Highlights

- Proprietary sensor array enables the visualization of real-time and historic equipment usage
- Non-Invasive installation does not interrupt power chain nor void the warranty of sensitive equipment
- Wireless, battery-operated device that reduces the number of wires in crowded spaces
- Installation takes less than one minute
- Expandable platform can easily add more devices with cellular backup

Device Readout

- **Real-Time Usage Status:** List of equipment that is currently In-use, Idle, Off, or Offline status

Communication

- **Wireless Communication:** Data transmission via low energy 2.4 GHz requires the Elemental Gateway connected to the WiFi/Ethernet network
- **Security:** Google Cloud Platform’s (GCP) SOC2 compliant services keeps data safe
- **Wireless Range:** ~100 ft (~33 m)

Actionable Insights

- **Utilization Time** shows the duration in hours per week, month or within any time frame
- **Utilization Rate** shows the capacity percentage (%) per day, week, month, or within any time frame

| SPECIFICATIONS |
|-----------------|------------------|
| **Size:**       | 3.6 in x 3 in x 1.1 in (9.2 cm x 7.8 cm x 2.8 cm) |
| **Default Data Sampling Rate:** | 10 seconds |
| **Estimated Battery Life:** | ~2 years at the Default Sample Rate of 10 seconds |
| **Battery Requirements:** | Replaceable AA lithium batteries |
| **Operating Conditions:** | 41°F – 113°F (5°C – 45°C) |
Easy Installation

Mount the Element-U on the power cable (AC) and clamp it with two thumbscrews. The clamp secures to power cables between 0.20 in to 0.47 in (5mm to 12mm) in diameter. For cables thicker than 0.47 in (12mm), the clamp can be removed and three zip-ties secure the cable to ensure the cable does not move. No tools are required and setup takes less than minute to start collecting usage data.

Many Applications

- Any Lab Equipment with a Power Cable

Real-Time Availability Display on the EM Insights Dashboard