

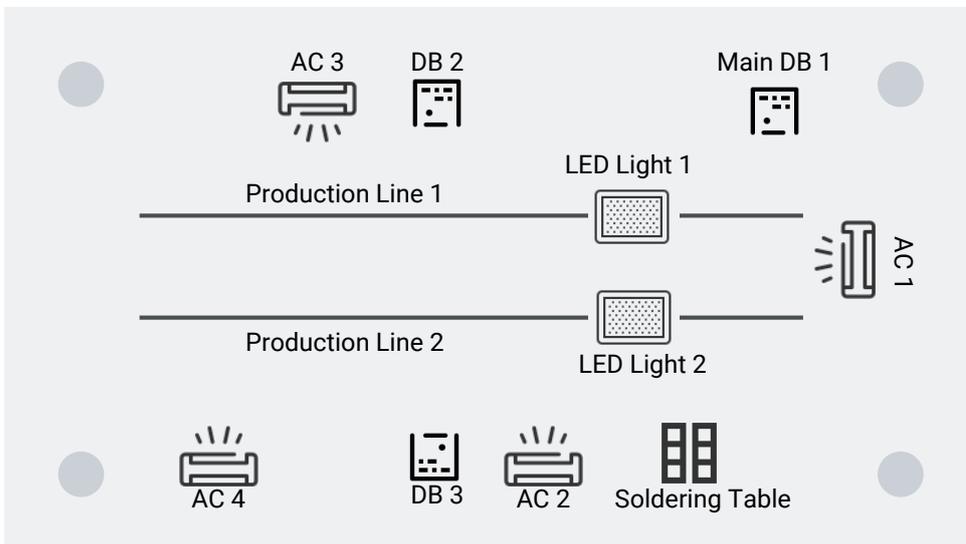
CASE STUDY

ELECTRONICS FACTORY

PROBLEM STATEMENT

The facility exhibited high variability in monthly energy cost. The company wanted to understand how energy was being used in the two production lines as well as in the air conditioning and lighting as a first step to implementing an energy management program.

FACTORY SCHEMATIC FLOOR PLAN



CLIENT COMPANY OVERVIEW

- Small/medium enterprise with offices in Singapore and China
- Single-floor electronics fabrication and assembly facility
- Energy costs up to S\$3000 per month



In picture: AmpoHub
The AmpoHub is a wireless-enabled power meter and IoT gateway.



SOLUTION IMPLEMENTED

Ampotech installed a power monitoring system at each of the electrical sub-distribution panels. Each panel was fitted with one AmpoHub field gateway connected to a number of AmpoSense non-invasive current measurement devices and current transformer (CT) sensors. A 3G router was used to transmit data to the AmpoCloud platform. Ampotech collected and analyzed the data over a period of months to produce an energy audit report.

RESULTS



An energy usage breakdown revealed that the manufacturing line equipment was responsible for around 60% of the site's energy consumption.



Reducing machine idle time in the production lines could save 2-6% per month in energy costs.



Air conditioning was being used to cool production line areas even when they were not operating, leading to energy waste. Another 7% could be saved by turning off air-conditioning when machinery was not in use.

ABOUT AMPOTECH

Ampotech is a Singapore-based company specializing in the collection and analysis of electricity usage data from the built environment. Ampotech's products use non-invasive sensing technology to provide circuit-level energy usage data that can be attributed to specific spaces or equipment in a facility in real-time. Since launching in 2015, Ampotech's products and software have been used to identify energy conservation measures for commercial and light industrial facilities, and to perform remote asset monitoring for infrastructure savings via lighting control or retrofit.