

Team #4

Air Quality Monitor

Team #4 Members

Fue Xiong



Nick Didier



Mike Willhite



Aaron Mosher



Xiong Vue



Air Quality Monitor

Description

- ▶ Purpose of Product:
 - ▶ To monitor air quality in a home environment
- ▶ Features:
 - ▶ Monitors temperature, smoke, dust, carbon monoxide, and methane gas
 - ▶ LCD display for local monitoring
 - ▶ Local alarm for emergency situation
 - ▶ Bluetooth Connection for smartphone monitoring
- ▶ Intended Market:
 - ▶ North America

Air Quality Monitor

Key Requirements

- ▶ Cost:
 - ▶ Sales Price: \$150, Component Cost: \$60, Assembly cost & Test Cost: \$40
- ▶ Environment:
 - ▶ Indoors
 - ▶ Operating Temp Range 0° to 40°C
 - ▶ Operating Humidity Range: 0% to 90%
- ▶ Power Input(s):
 - ▶ Residential AC Power: 102 VAC to 132 VAC @ Max 200mA
- ▶ Humidity : 15-85 %RH
- ▶ Temperature : -20° - 50° C
- ▶ Methane : 500 - 8000 ppm
- ▶ Carbon Monoxide : 25 - 400ppm
- ▶ Dust : Up to 0.5 mg/m³
- ▶ At least 65% efficient

Team #4

Air Quality Monitor

Block Diagram

