

# EE-595

# Extra Yield, Extra Safety

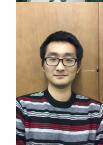
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Team 9



<http://www.crowdfundmafia.com/wp-content/uploads/2013/06/iSmart-Alarm-home-security-system.jpg>

- Kyle Schmidt
- Yipei Wang
- Jingmin Dan
- YuChen Pan
- Du Kim



# EE-595

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## Extra Eyes, Extra Safety

- **Purpose of Product** – Detect illegal intrusion for homes and inform the home owner through mobile device through text messaging
- **Feature 1:** System can be controlled with mobile app
- **Feature 2:** Local Alarm and cellular text alert
- **Feature 3:** Battery Backup to deter tampering
  
- **Market:** USA

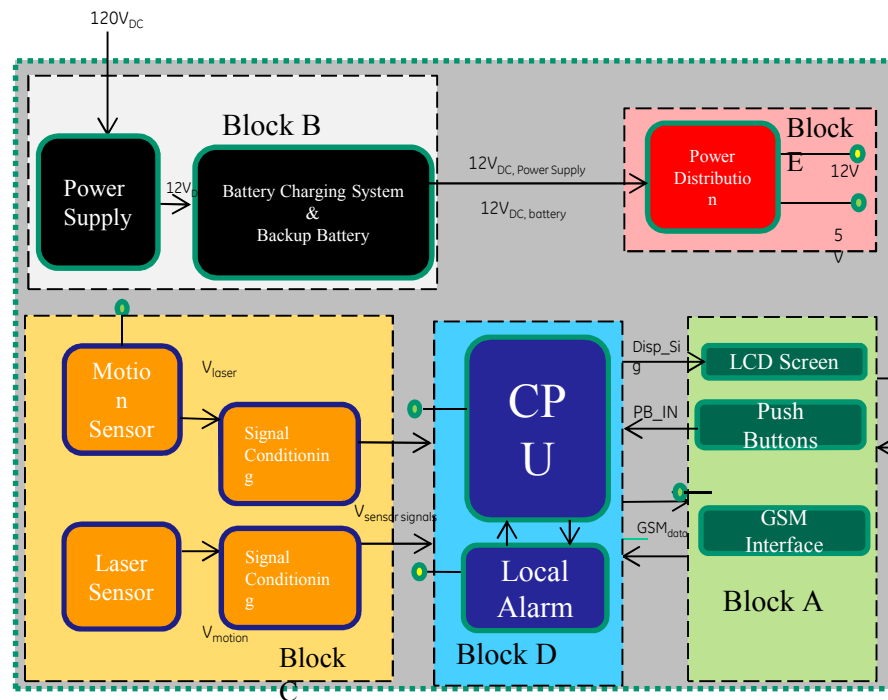
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## Key Requirements

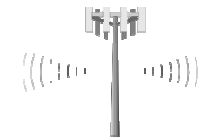
- **Cost**
  - Sales Price: \$180
  - Component Cost: \$95
  - Assembly & Test Costs: \$25
- **Environment**
  - Indoor
  - Operating Temp Range: 0°C to 40°C
  - Operating Humidity Range: 0 to 100
- **Power Input(s)**
  - **Residential AC Power:** 102V – 132VAC @ 2 Amps Max
  - **Battery Power:** 1 of lead-acid type 12V @ minimum 10 hours
- **Major Functions**
  - Functions: On, Off
  - Laser sensor: resolution: 0.3mm, accuracy: +/-2.5mm
  - PIR: range: horizontal angle: 120° vertical angle 60°, detecting distance: 4-7m, transmitting distance:10-15m, update rate: 1s
  - SPL alarm: 120dB
  - Power efficiency: 88% min, load regulation: <1%, line regulation: <1%

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## Block Diagram



Block A: Kyle Schmidt  
Block B: Yuchen Pan  
Block C: Yipei Wang  
Block D: Jingmin Dan  
Block E: Du Kim



Cell  
phon  
e