The SkyCentrics SkySnap

The Volttron enabled, ‘swiss army knife’ of Conscious, Connected Buildings

VOLTTRON Conference Presentation
San Francisco - May 16, 2017
Connected, Conscious Buildings

- **Complete** solution from sensors to apps
- **Scalable** cloud software platform
- **Customer traction** in utilities and commercial property
- **Partnerships** with major OEM for go-to-market
- **Deploying VOLTTRON** hardware in smart buildings
SkySnap 100
SkySnap 100 & 200 Front View
## SkySnap 200 Side View

<table>
<thead>
<tr>
<th>Pin Number</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>GPIO 18/:PWM</td>
</tr>
<tr>
<td>2</td>
<td>Ground</td>
</tr>
<tr>
<td>3</td>
<td>GPIO 25</td>
</tr>
<tr>
<td>4</td>
<td>Ground</td>
</tr>
<tr>
<td>5</td>
<td>0-10V output</td>
</tr>
<tr>
<td>6</td>
<td>Ground</td>
</tr>
<tr>
<td>7</td>
<td>0-10V output</td>
</tr>
<tr>
<td>8</td>
<td>RS 485 D+</td>
</tr>
<tr>
<td>9</td>
<td>RS 485 D-</td>
</tr>
<tr>
<td>10</td>
<td>Ground</td>
</tr>
<tr>
<td>11</td>
<td>Relay 1 In</td>
</tr>
<tr>
<td>12</td>
<td>Relay 1 out</td>
</tr>
<tr>
<td>13</td>
<td>Relay 2 In</td>
</tr>
<tr>
<td>14</td>
<td>Relay 2 out</td>
</tr>
<tr>
<td>15</td>
<td>1-wire</td>
</tr>
<tr>
<td>16</td>
<td>1-wire Ground</td>
</tr>
</tbody>
</table>
SkySnap 200 Interior

- Removable 2.5 Amp 5 Volt Power Supply
- SD Card
- Power Input
- 2x Relays 24 V 2 Amp
- LED (Red, Pink, Blue)
- Factory Reset Button
- Screw holes to attach to outlet
- Internal USB Port
- Internal Micro USB Port
- Security Screw
Skycentrics DREAM Solution

Apps
Device management portal for utility and owners
iOS & Android Apps

Rest API
Flexible partnerships with web / mobile apps

Cloud
Private or shared cloud Enterprise-grade security
Scalable and redundant

Firmware
2-way comms, OTA updates, TLS/SSL to cloud,
MQTT FMB, 5s resolution, low latency

Hardware

Demand
Response
Environment & Asset
Management
SkyCentrics Energy Ecosystem

SkyCentrics Cloud Platform & Apps

Requests → Load Shift
Requests → Occupant Comfort Energy Savings

Data /Utility Agents
- Weather, ToU pricing, AMI data

Real-Time Device
- Monitoring
- Co-ordination
- Control

CTA-2045

Bacnet /MODBUS

Hot Water Heater
Thermostat
Sensors / Controls
HVAC

Lifetime Data Analysis
- OEM Troubleshooting
- Utility Planning
- Utility Rate Design
- Building Design Learning
Skycentrics Hardware

CTA-2045 Appliance Controllers

USNAP (AC)
Water Heaters, Pool Pumps
PTAC / AC

USNAP (DC)
Thermostats, EV Chargers
Water Heaters, Mini-splits

Device Controls & Sensors

SkySnap 200
BLE Gateway
7 Circuit Sub-Metering
1-wire Temperature sensors
2 relays, 4 0-10V dimmers

SkySense 100x
BLE Sensor, Temp,
Humidity, Pressure,
Water Leak, Occupancy

Networking Options:
- WiFi
- 4G LTE
- LoRa
- Bluetooth
- USNAP Alliance
CTA-2045 OEM

Electric Vehicle Chargers

Hot Water Heaters

Thermostats, Mini-Splits, PTACs

Pool Pumps

Brands:
- Siemens
- A.O. Smith
- Emerson
- Pentair
- Mitsubishi
- Islandaire
- GE
- Emery S. Vaughn
Skycentrics Apps – Customer & DRMS