# Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

## Contact us

# SmartSwarm 341　Asset Integration Gateway

## Features

- Configurable user business logic data processing & display engine
- Comprehensive data outputs via MQTT, email, SMS and a variety of other services and database connections
- Integrates data from WZZARD, WISE, ADAM & third party devices
- Integrates data from internet feeds
- Cellular or Ethernet connection to IIoT system
- Acts as LAN to WAN bridge for third party device connection
- Cellular (EMEA/NATAM support) and wired models available

## Introduction

**Seamlessly integrate data from diverse systems, devices and sensors into the IoT**

The SmartSwarm 341 IIoT gateway is aimed at owners of remote assets wishing to integrate data from their assets into IIoT applications like dashboarding, analytics or predictive maintenance. Data can be collected from a number of sources, including web feeds, databases and files, as well as from locally connected physical devices and sensors. SmartSwarm 341 includes an interface and manager for B+Bs Wzzard wireless sensor platform that provides robust acquisition and transmission of sensor data without installing cables. For bulk I/O requirements where cabling is not an issue, it is also compatible with WISE and ADAM Ethernet connected I/O modules.

### User Applications

SmartSwarm 341 offers flexible data acquisition, processing and handoff via an inbuilt Node-RED user application environment. Node-RED is a powerful, yet simple to use, application programming environment optimized for processing data streams. Users drag and drop function nodes to acquire, processes and output data, via an internal web server interface provided by the SmartSwarm 341. Crucially, the Node-RED environment is contained, meaning that any user error made in programming cannot crash the gateway, which will remain connected and available for remote management in order to correct errors without site visits. In addition to offering local data processing, the Node-RED environment is also able to create and serve local dashboards, providing a mechanism to serve summary data to engineers, managers or operational staff.

## Specification

### WZZARD RADIO - 802.15.4E, 2.4 GHZ

| | | |
|---|---|---|
| **Number of Channels** | 15 | |
| **Channel Separation** | 5 MHz | |
| **Channel Clear Frequency** | 2405 + 5* (k-11) MHz | |
| **Modulation** | IEEE 802.15.4 Direct Sequence Spread Spectrum (DSSS) | |
| **Raw Data Rate** | 250 kbps | |
| **Range (25 °C, 50% RH,** | Indoor | 100 m |
| **+2 dBi omni-directional** | Outdoor | 300 m |
| **antenna, antenna 2m)** | Free Space | 1200 m |
| **Receiver Sensitivity** | Packet Data Error Rate (PER) = 1% | -93 dBm |
| **Receiver Sensitivity** | Packet Data Error Rate PER = 50% | -95 dBm |
| **Output Power** | High Calibration Setting | 8 dBm |
| **(delivered to a 50 Ω load)** | Low Calibration Setting | 0 dBm |

### Ports, LEDs, Antennas

| | |
|---|---|
| **(2) Ethernet Ports** | RJ45, 10/100 Mbps |
| **SIM** | (2) Mini SIM, 2FF, 1 supported (rear panel) |
| **LED Indicators** | PWR, DAT, WAN, ETH, SIM, USR, POE, IN0, IN1, OUT |
| **Wzzard** | R-SMA connector |
| **RST** | RESET button (rear panel) |
| **\*Optional-3x ANT-ANT, DIV** | SMA connectors |
| **SD** | Available for file storage from Node-RED applications |
| **(USB)** | (currently unsupported) |

### Power

| | |
|---|---|
| **\*Optional - Power Supply** | 10 – 60 V$_{DC}$ (2–Way Molex connector) |
| **Power Consumption** | Idle: 2.5 W |
| | Average: 4 W |
| | Peak: 11 W |
| | Sleep Mode: 10mW |

### Environmental

| | |
|---|---|
| **Temperature Range** | Operating: -40 to +75 °C |
| | Storage: -40 to +85 °C |
| **Temperature Range LTE450** | Operating: -20 to +60 °C |
| | Storage: -40 to +85 °C |
| **Humidity** | Operating: 0 to 95 % |
| | Storage (Non-condensing): 0 to 95 % |
| **Cold Start** | -35 °C |
| **Operating Altitude** | 2000 m / 70 kPa |
| **Ingress Protection Rating** | IP30 |

### Mechanical

| | |
|---|---|
| **Metal case with metal DIN rail** | |
| **Dimensions** | 55 x 97 x 125 mm (2.17 x 3.82 x 4.9) |
| **Weight** | 375 g |

### Industry Certifications & Approvals

| | |
|---|---|
| **Radio for general LTE** | ETSI EN 301 511 v9.0.2, ETSI EN 301 908–1 v5.2.1, ETSI EN 301 908-2 v5.2.1, ETSI EN 301 908-13 v5.2.1 |
| **Emissions/ Immunity** | IEC 61000-6-2:2005, ETSI EN 301 489-1 v1.9.2, EN 55022:2010 |
| **Safety** | EN 60950-1:06 ed.2 (not Hazardous Locations), EN 62311:2008 |
| **Vehicle** | E8 |
| **Environmental** | RoHS, RoHS2, REACH, WEEE |

## Ordering Information

| | |
|---|---|
| **BB-SG30000520-41** | 2 Ethernet, Dust (no power supply) |
| **BB-SG30000525-41** | 2 Ethernet, Dust, International Power Supply |
| **BB-SG30300520-41** | 2 Ethernet, LTE-EMEA, Dust (no power supply) |
| **BB-SG30300525-41** | 2 Ethernet, LTE-EMEA, Dust, International Power Supply |
| **BB-SG30500520-41** | 2 Ethernet, LTE-NATAM, Dust (no power supply) |