



Billion SG110-DFX Temperature and Humidity Data Logger Sensor

Ideal for

Auto-Temp. &
Humidity Monitoring
Solution

High Accuracy Temperature & Humidity Monitoring in Extreme Environments

- Billion SG110-DFX integrates with high-precision temperature & Humidity sensors with extendable sensor probing head which makes measurement easier in extreme environments, enabling reliable data transmission from/to host server via ZigBee wireless technology.

Internal Memory Storage Enabled, Digital Panel Displays Instant Status

- SG110-DFX measures air temperature and relative humidity based on different locations with more than 10,000 data records that can be stored in SG 110-DFX internal memory. Users are able to check the instant environmental temperature and humidity status on the display panel.

Zigbee Technologies Open Real-Time Exchange of Sensory Data

- Through the Zigbee wireless technology, SG110-DFX can transmit data information to personal PC, laptop and mobile phone (Gateway required), allowing users to monitor and analyze sensory data in real-time. With the embedded high accuracy detecting chip, SG110-DFX can also be used as the correction tool for other temperature & humidity sensors.

Cost Effective Freezer Sensor Supports a Wide Range of User Applications

- SG110-DFX, Temperature and Humidity Data Logger Sensor, not only can decrease management expenses, but also shorten development timeline to further reduce R&D costs. The sensor can be applied in office, school, night market, restaurant, library, warehouse, museum and greenhouse, and etc.

An End-to End, Comprehensive Freezer Management Solution

- Furthermore, SG110-DFX can be used in fridge and freezer by transmitting temperature & humidity data to Smart Gateway and Cloud Smart Energy Management System. To ensure all fresh fruits and vegetables, as well as high value fish are well preserved under optimal temperature control, the Smart Energy Management System (SEMS) will deliver instant alarm notification to administrators for any abnormal event such as equipment malfunction and temperature anomaly to further avoid large amount of food waste and financial loss.

- Built in high-accuracy temperature & Humidity sensor. Designed not only for measurement but precision control.
- Easy expansion to add new measuring point via wireless transmission technology. The host server can be installed in the dust-free environment and no wiring needed.
- Quickly check instant temperature & humidity data by pressing the bottom of the display panel.
- Meet standard Zigbee home automation specification. Compatible with other Zigbee HA certified receivers, increasing the flexibility for users' selection.
- Instant alarm notification while temperature and humidity exceed the regular value.
- Provide Zigbee based Energy Management Solution for business partners.
 - ESCO company
 - Commercial Building Contractor
 - Zigbee Network System Integrator and Planner

Product Specification

Network Protocols and Features

- Fully IEEE 802.15.4 and ZigBee 2007/PRO compliant
- RF: ZigBee 2.4GHz ISM Band IEEE 802.15.4
- Transmitting Protocol : ZigBee: HA profile
- RF Output Power : 18dBm
- Network Topology : Star/ Tree/ Mesh
- Measurement Acc : Temperature +/-0.5°C (-15 to +80°C)
Humidity +/-4% (5% to 95% RH)
- Receiver Sensitivity : -92dBm
- Sensing Range : -40 to +125°C
- Transmit Interval : 1 to 1000 minutes at intervals of 1 minute
- Power Consumption : 40 mA, Alarm 80 mA at 12V

Physical Interface

- Addressing : Set by the push button
- Weight : 346g / 12.2oz
- Dimensions: 5.12" x 2.95" x 1.30"
(130mm x 75mm x 33mm)

Power Requirements

- Power supply : USB 5V (mini USB connector)
- Backup Battery : 3.7V / 2400 mAh

RF Specifications

- ZigBee 2.4GHz ISM Band IEEE 802.15.4

Operating Environment

- Operating temperature : -10°C – 50°C/ 14 – 122°F
- Operating Humidity : 0% – 95% RH

Application Scenarios –SG110-DFX's Hybrid Energy Management

SG110-DXF can report real-time temperature and humidity information to Billion's Smart Energy Gateway (SG6300NZZL) to monitor and examine the operational efficiency of refrigerators. When SG110-DFX detects that the temperature or humidity exceeds the normal range, the freezer sensor will report to the gateway, which triggers the alarm and pushes notifications to the administrator to notify equipment failure incidents to protect the frozen food assets.

