Wireless Egg Node™

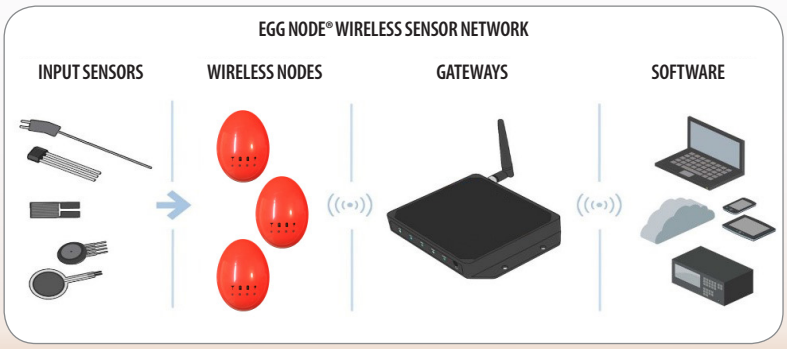
The First Wireless Egg Ever.

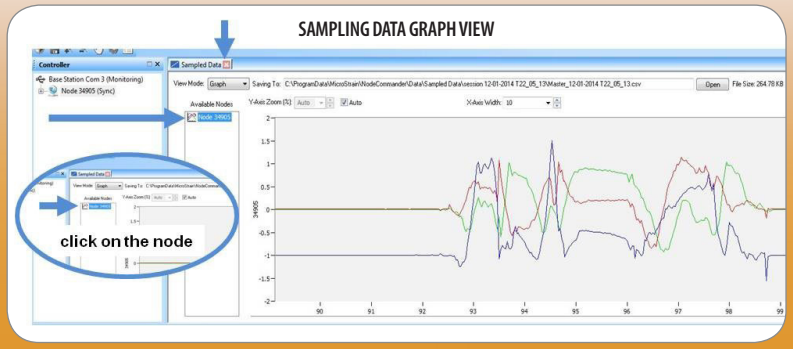
Wireless Egg Node Network enables simultaneous, high-speed sensing and real time data aggregation from multiple wireless eggs, helps in monitoring egg grading facilities and eggs transferred from the egg cage to grocery store, aiming to reduce egg cracks, breakages and losses.

FEATURES:

- True Egg shape, size and weight.
- Tri-Axis high speed accelerometer (x,y,z axis).
- Internal temperature sensor (located at the center of the Egg).
- Wireless communication allows real time data collection and review.
- Network supports simultaneous multiple wireless eggs (up to 2000 eggs).
- 3 modes of operation:
  1. **Continuous sampling:** 1 sample/hour to 512 Hz
  2. **Periodic burst sampling:** 32 Hz to 4O96 Hz (1 channel)
  3. **Data logging:** 32 Hz to 4O96 Hz (1 channel)
- High-speed sampling + - 32 microseconds
- Remotely configure and programming Egg Nodes via wireless communication (including: On/Off, sampling modes, sampling rates).
- Low power consumption allows extended use.
- Ideal for measuring vibration, tilt, inclination, shocks and acceleration in remote applications.

Specifications >





STANDARD EGG NODE SET INCLUDES:

- Carrying case
- Base station + Antenna
- USB communication cable
- 1 Wireless Egg (Red or Yellow)
- Node Commander software
- AC charger/adapter

Wireless Egg Node™

(continued)

SPECIFICATIONS	
General	
Integrated sensors	**Triaxial MEMS accelerometer,** 3 channels **Internal tempearture,** 1 channel
Data storage capacity	2 M bytes (up to 1,000,000 data points, data type dependent)
Accelerometer Channels	
Measurement range	± 2 g standard
Accelerometer bandwidth	0.5 to 226 Hz
Accuracy	10 mg
Resolution	12 bit
Anti-aliasing filter bandwidth	Single-pole Butterworth, -3 dB cutoff at 500 Hz (factory adjustable)
Integrated Temperature Channel	
Measurement Range	-40 °C to 70 °C
Accuracy and resolution	± 2 °C (at 25 °C) typical , 12 bit
Sampling	
Sampling modes	Synchronized, low duty cycle, data logging
Sampling rates	**Continuous sampling:** 1 sample/hour to 512 Hz **Periodic burst sampling:** 32 Hz to 4096 Hz (1 channel) **Data logging :** 32 Hz to 4096 Hz (1 channel)
Sample rate stability	± 3 ppm
Network capacity	Up to 2000 Egg Nodes per RF channel (and per gateway) depending on the number of active channels and sampling settings. Refer to the system bandwith calculator.
Synchronization between nodes	± 32 µsec
Operating Parameters	
Radio frequency (RF) transceiver carrier	2.405 to 2.470 GHz direct sequence spread spectrum over 14 channels, license free worldwide, radiated power programmable from 0 dBm (1 mW) to 16 dBm (39 mW); low power option available for use outside the U.S.A.- limited to 10 dBm (10 mW)
Range for bi-directional RF link	70 m to 2 km line of sight with RF power setting
RF communication protocol	IEEE 802.15.4
RF data downloading	4.5 minutes to download full memory
Power source	Internal: 3.7 V dc, 220 mAh, rechargeable lithium polymer battery
Power consumption	See power profile
Operating temperature	-20 °C to + 60 °C (-40 °C to + 85 °C electronics only)
Acceleration limit	500 g
Physical Specifications	
Dimensions	72 mm x 48 mm
Weight	40 grams
Environmental rating	Indoor use
Enclosure material	ABS plastic
Integration	
Compatible gateways	Egg Node Base Stations
Software	Node Commander®, Windows XP/Vista/7 compatible
Software development kit (SDK)	Data communications protocol available with EEPROM maps and sample code (OS and computing platform independent)
Regulatory compliance	FCC (U.S.), IC (Canada), ROHS