

# XNode



IoT connectivity application training equipment based on wireless personal network (WPAN) and low-power wide area network (LPWAN)

By using the mesh network method, it can be used in large quantities in a wide range of areas such as wireless control and monitoring, and a wide range of communication is possible

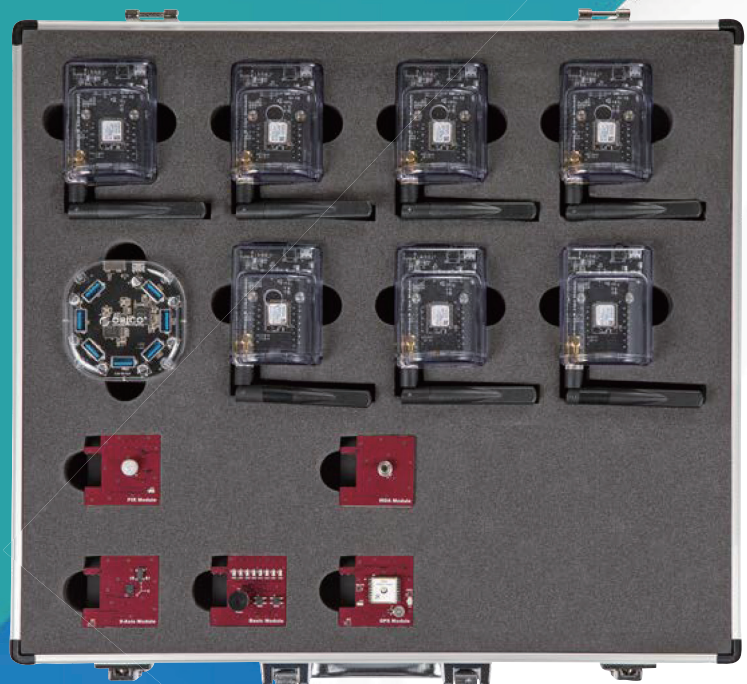
Provides sensors such as GPS, IR THERMO, IMU, and PIR in addition to the Basic Module

Provides 2100mA battery, LED for indicator, light sensor based on lux unit and temperature/humidity sensor for independent operation of sensor node

Sensor node supports interpreter-style Python 3 so that control programs can be easily and concisely written

Visual Studio Code-based integrated development environment for professional application development

Provides training contents for Python-based sensor nodes



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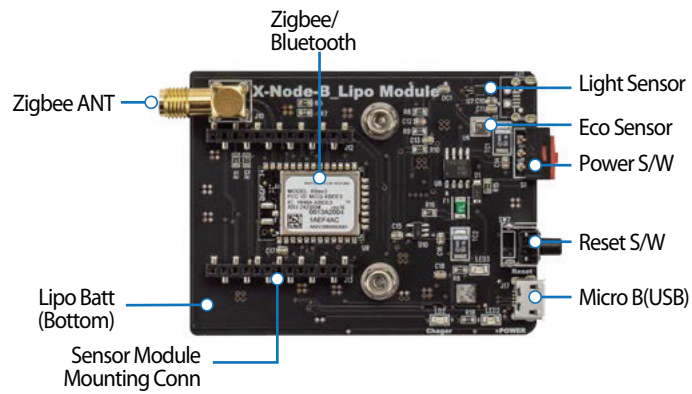
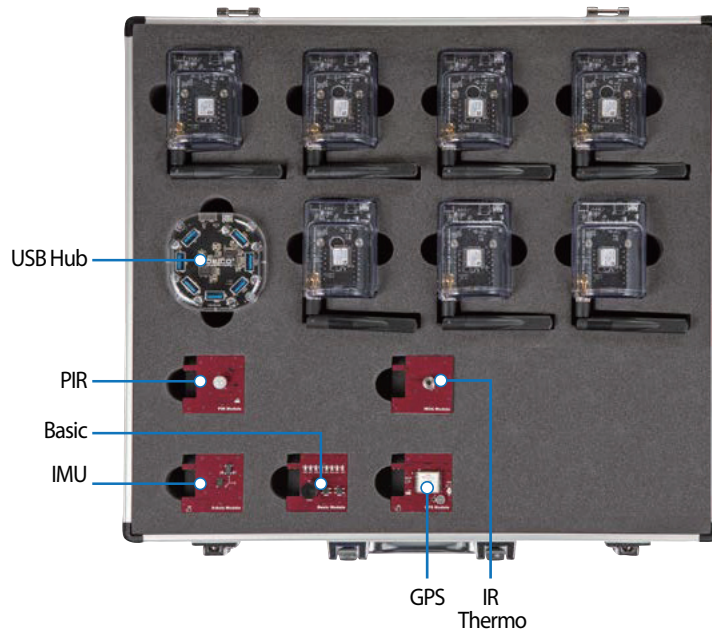
## Software Specifications

List	Specifications
Node	MicroPython 3 (built in node)
	Soda IDE
	Configuration Software (compatible with Linux, OS X and Windows)
	Remote Terminal & Remote Desktop support
	Pop Library
	Output Object: LED, Buzzer Input Object: Switch, PIR, Thermopile, 9Axis IMU, GPS

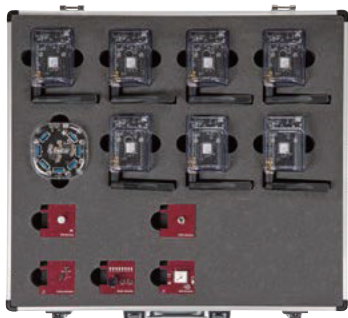
## Hardware Specifications

List	Specifications	
Node (7EA)	RAM: 128KB	
	Flash Memory: 1MB	
	Interface: UART, SPI, I <sup>2</sup> C, ADC, PWM, GPIO	
	Indicator: LED	
	ZigBee 3.0	Frequency: 2.4GHz Range: Max 3200m (outdoor), Max 90m(indoor) Data rate: 250kbps   Sensitivity: -103dBm Output Power: 19dBm   Receiver Sensitivity: -100 dBm Bluetooth support
	Light Sensor	Illuminance: 1 ~ 65535(lx)   Interface: I <sup>2</sup> C
	HUMIDITY & TEMPERATURE Sensor	Humidity Resolution: 12bit(0.04%RH), 8bit(0.7%RH) Humidity Accuracy: +-3%RH Temperature Resolution: 14bit(0.01C), 12bit(0.04C) Temperature Accuracy: +-4°C   Interface: I <sup>2</sup> C
	Power	Micro USB B type(+5V)   Expansion Connector (+5V) Li-Po Type 3.7V/2100mAh (1EA)
	Basic	Input Device: Tact Switch x2EA(GPIO)   output device: LED 8EA(I <sup>2</sup> C) Actuator: Passive Buzzer(GPIO)   Size: 46x44(mm)
	Expansion Module	IMU
PIR		Sensing Range: 110°   Spectral Response: 5 ~ 14 um I/O Interface: Digital Out   Size: 46x44(mm)
IR Thermo		Measurement resolution: 0.02°C   Measure range: -40°C ~ +125°C Interface: I <sup>2</sup> C   Size: 46x44(mm)
GPS		Sensitivity: -165dBm   Update Rate: up to 10Hz AGPS Support for Fast TTFF   Consumption current(@3.3V) Acquisition: 25mA Typ   Tracking: 20mA Typ Size : 46x44(mm)

## Layout



## Composition



Platform USB  
1EA



Micro USB Cable  
7EA



User Guide book  
1EA