X Node Lite

IoT connectivity application training equipment based on wireless personal network (WPAN)

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

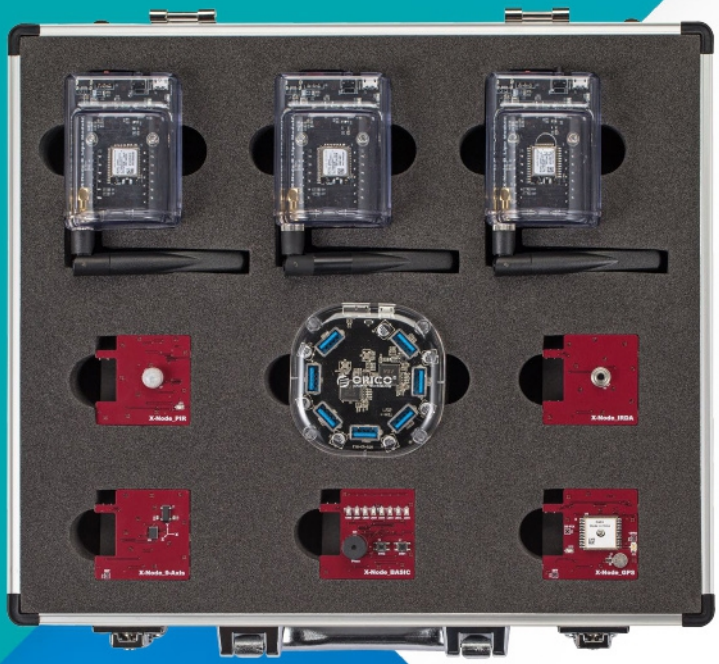
Provides sensors such as GPS, IRTHERMO, IMU, and PIR in addition to the Basic Module

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



Software Specifications

List	Specifications	
Node B	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

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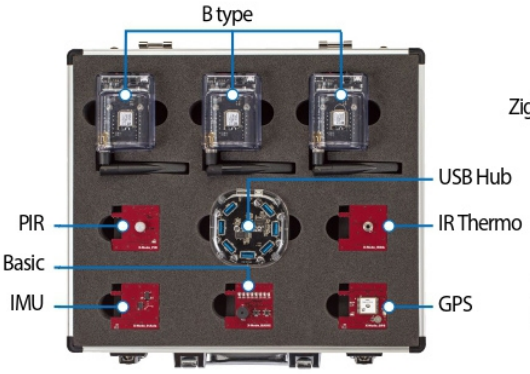
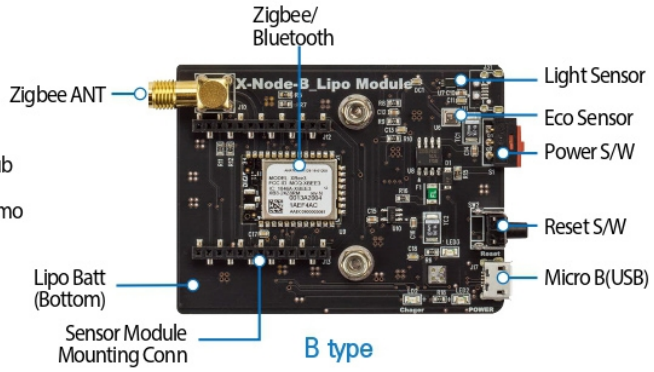
Hardware Specifications

List		Specifications
Node B (3a)		RAM: 128KB
		Flash Memory: 1MB
		Interface: UART, SPI, I²C, 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: I²C
	HUMDITY& 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: I²C
	Power	Micro USB B type(+5V) Expansion Connector (+5V) Li-Po Type 3.7V/2100mAh (1EA)

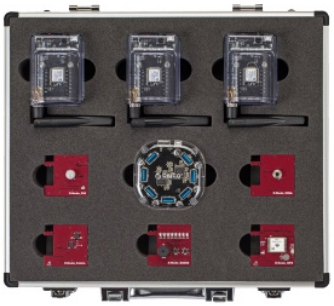
List		Specifications
Expansion Module	Basic	Input Device: Tact Switch x 2EA(GPIO) output device: LED 8EA(I²C) Actuator: Passive Buzzer(GPIO) Size: 46x44(mm)
	IMU	Acceleration ranges: 2g/±4g/±8g/±16g Gyroscope ranges: ±125°/s to ±2000°/s Magnetic field range: ±1300uT(x-,y-axis), ±2500uT(z-axis) Interface: I²C Size: 46x44(mm)
	PIR	Sensing Range: 110° Spectral Response: 5 ~ 14 um I/O Interface: Digital Out Size: 46x44(mm)
	IR Themo	Measurement resolution: 0.02°C Measure range: -40°C ~ +125°C Interface: I²C 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
3EA

User Guide book
1EA

Subject to Change

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