

# **iEND Product Overview**

## **M2M Device Platform Service**

**June, 2014**

**Valley Campus Japan, Inc.**

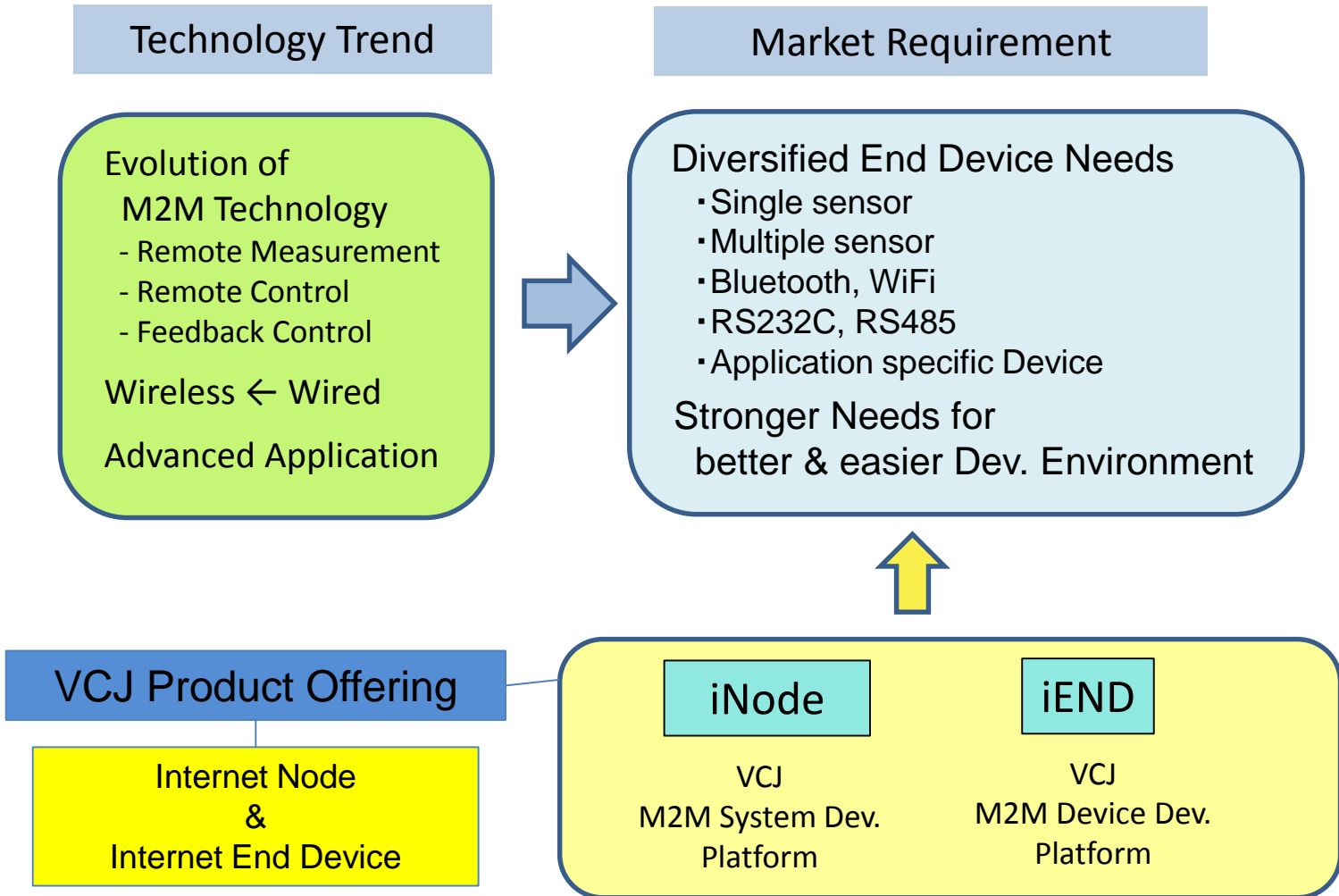
# M2M Application Examples

## M2M Application: Monitoring & Control (Wired or Wireless)

- Smart Home/Smart Office/Smart Hotel (Energy Saving)
- Smart Factory/Smart Hospital/Smart Station (Energy Saving)
- Smart City (Energy Saving)
- Smart Energy (Energy Saving)
- Medical Instrument Monitoring (Health Care)
- Device Remote Monitoring (Factory Automation)
- Stock management and tracking (Supply Chain Management)  
(Vending Machine, Warehouse, Shop)
- ITS (Intelligent Transport System)
- Environment Remote Monitoring: Forest, Farm, Park, Ocean etc:  
Draught, Earthquake, Tsunami, Flood,
- Animal/Fish Remote Monitoring

M2M: Machine to Machine/Management/Mobile through Network

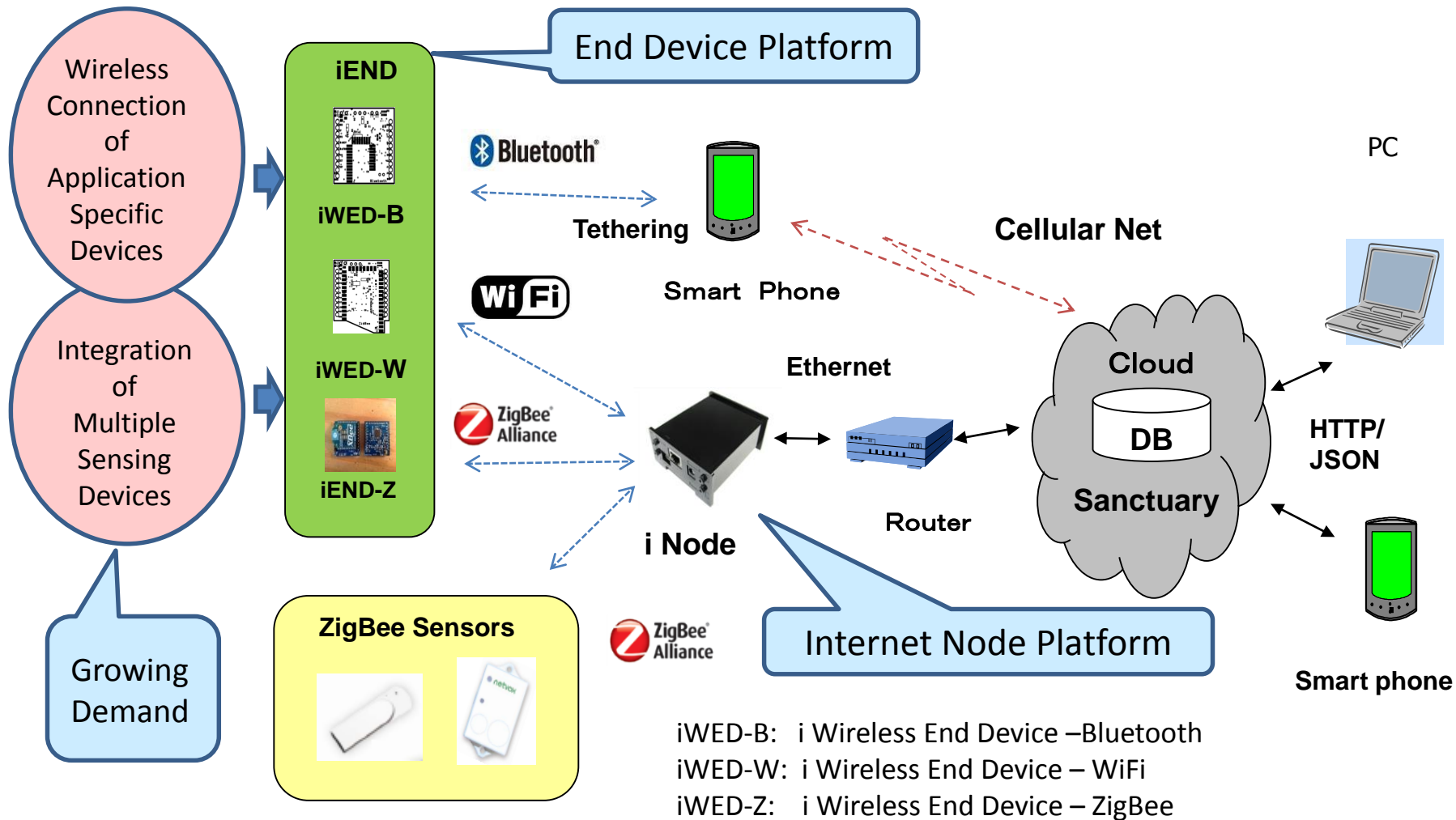
# VCJ M2M Platform Service Position



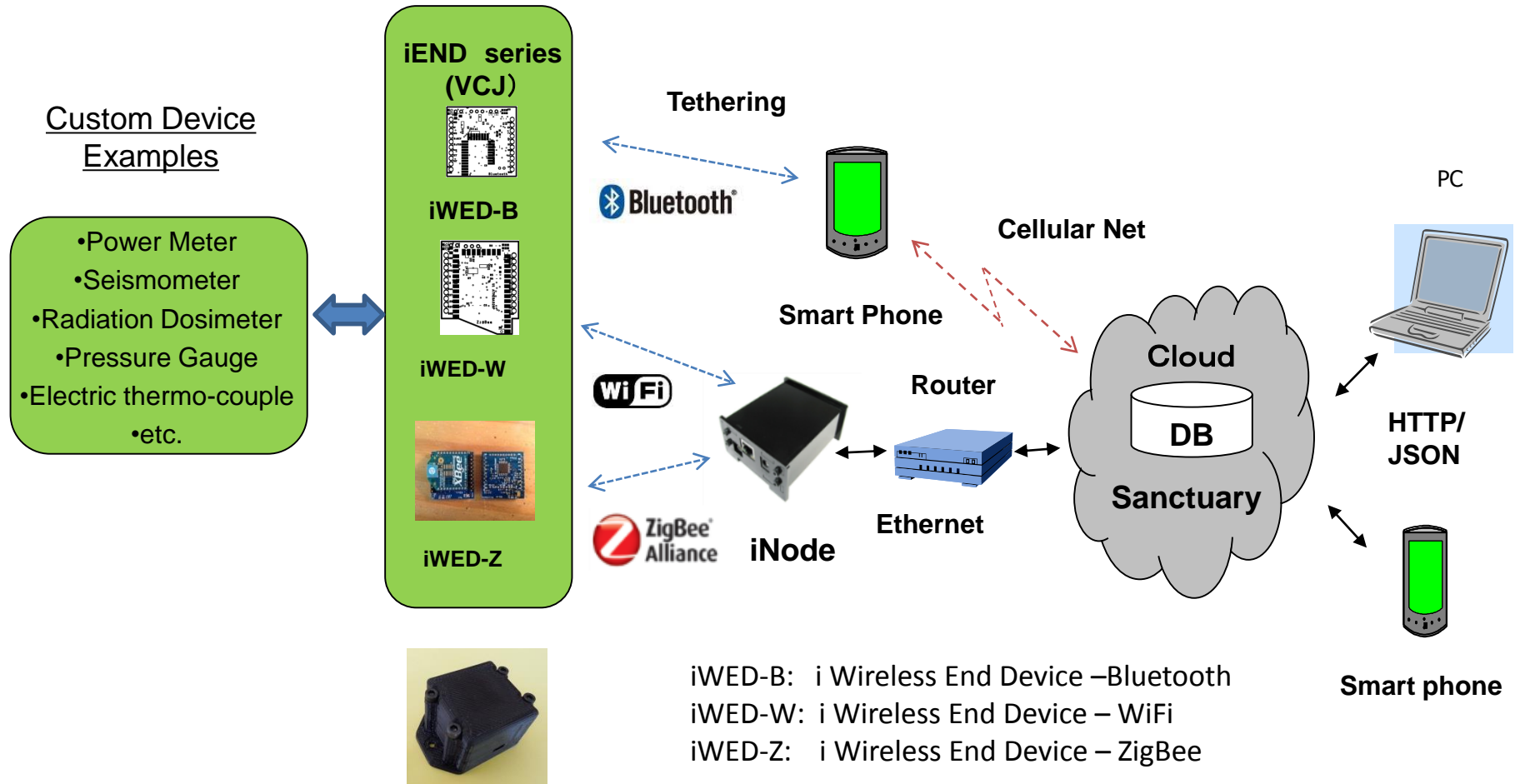
## *M2M Now! VCJ iEND series*

- **Wireless M2M End Device Development Platform**
  - **Wireless M2M End Device (Sensor Products)**
  - **Very small size, Very low power consumption**
  - **High Performance, High Reliability**
- 
- **Easy Custom Development of Application Specific sensor devices**
  - **Easy I/F with Application Specific sensor devices**
  - **Easy Algorithm Porting**
  - **Multiple Sensor Integration into a Single End Device**
  - **Multiple Wireless I/F : Zigbee, Bluetooth, WiFi**
  - **Wired I/F, such as Ethernet, is available upon order**
  - **Easy connection with a smart phone, iNode (MDK-Shiba), PC**
  - **Easy migration from prototyping phase to production phase**
  - **VCJ Sanctuary Service (Cloud Service) is available**
  - **Lithium Battery**

# VCJ iEND Concept



# iEND: Custom Device Built-in Type (Upon order)



# iEND : Sensor Integration Type

**iEND Series (VCJ)**

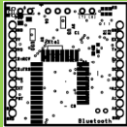
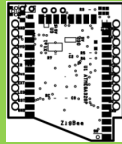

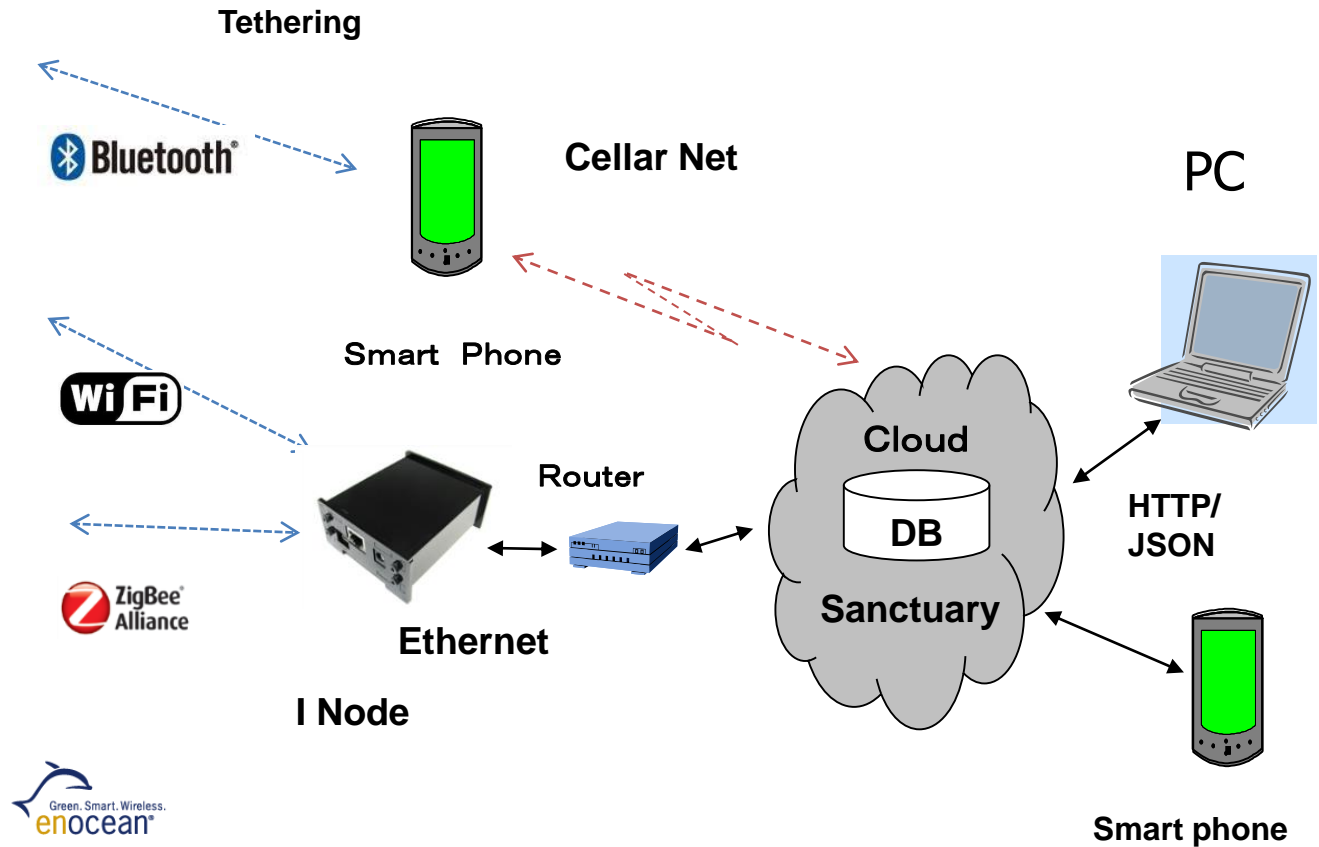
**Built-in Sensors**

Temperature  
Humidity  
Light  
Power  
Acceleration

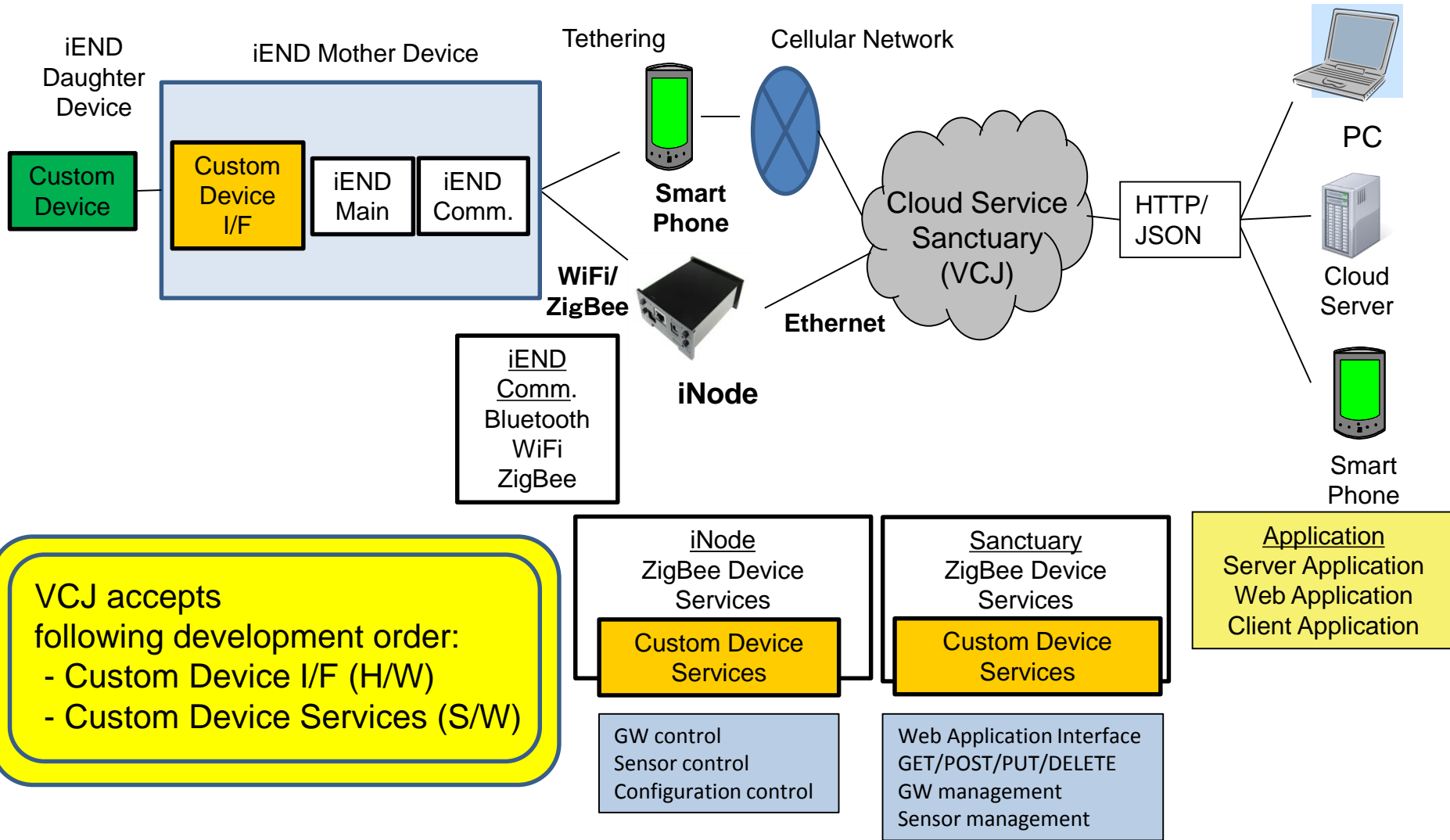
iWED-B

iWED-W

iWED-Z

# VCJ M2M Device Platform Service



VCJ accepts following development order:

- Custom Device I/F (H/W)
- Custom Device Services (S/W)



# iEND Series Summary

- **Wireless M2M End Device Development Platform**
- **Wireless M2M End Device (Sensor Products)**
- **Easy Connection with a smart phone, iNode (MDK-Shiba), PC**
- **Easy migration from prototype to production device**
- **Very small size, Very low power consumption**
- **High Performance, High Reliability**

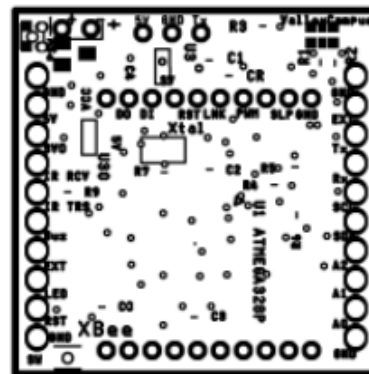
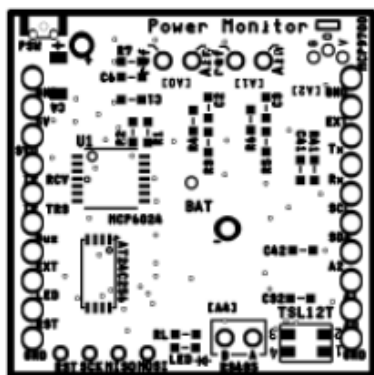
## <Strength>

- **Easy Custom Development of  
Application Specific devices  
Application Specific sensor devices**
- **Multiple Sensor Integration into a Single End Device**
- **Multiple Wireless I/F : Zigbee, Bluetooth (Tethering), WiFi**
- **Easy Algorithm Porting**
- **VCJ Sanctuary Service (Cloud Service) is available**
- **Very small size (3cmx3cm), Very low power consumption (xxw)**
- **Lithium Coin Battery**
- **Wired I/F, such as Ethernet, is available upon order**
- **Bare circuit boards only also available (w/o Box)**
- **RS232C & RS485 can be wireless with iEND**



# iWED-Z(ZigBee)

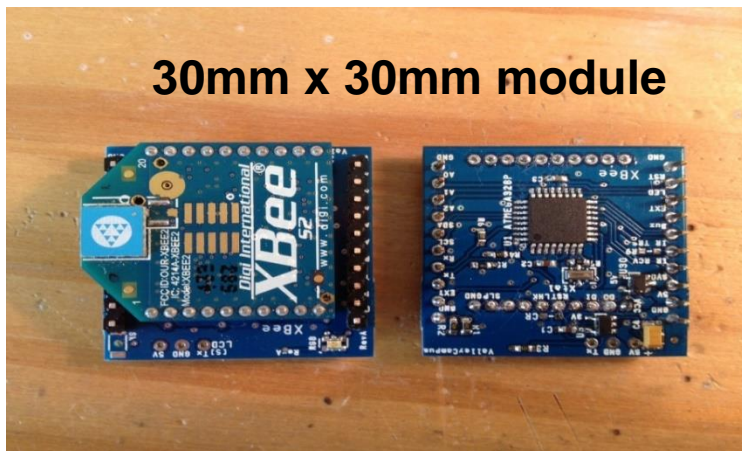
Wireless End Device with 



CT/Temp/Humid  
Light/RS422,485

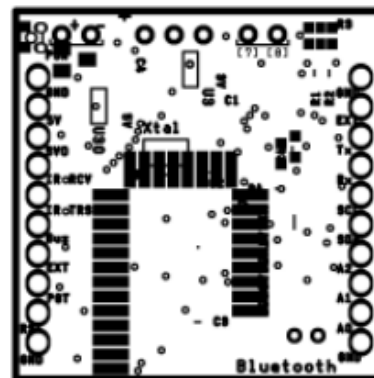
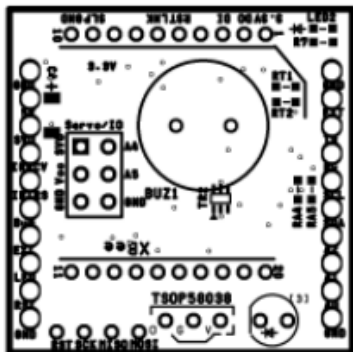
XBee

**30mm x 30mm module**



# iWED-B(Bluetooth)

Wireless END Device with  Bluetooth®

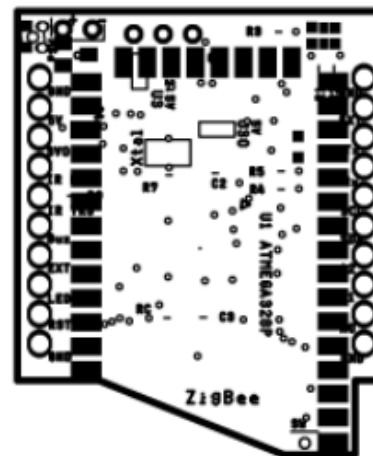
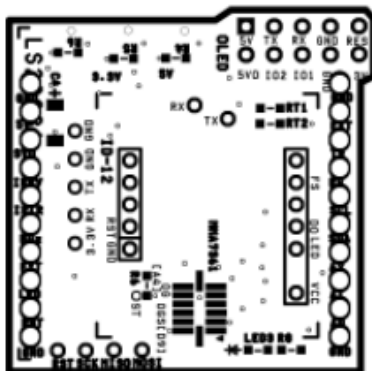


Servo/XBee  
IR trns/rcv

Bluetooth

# iWED-W(Wifi)

Wireless END Device with

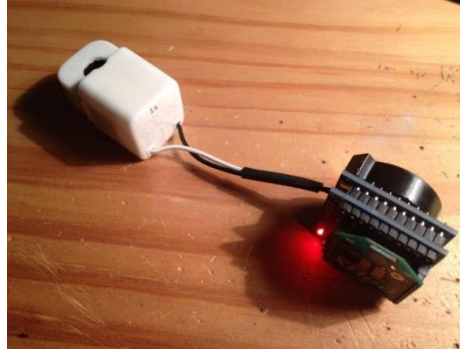


1.5inch LCD/RF-ID  
GPS/Gyro

WiFi

# iWED-Z Device Example (1)

## Wireless ZigBee END Device (Power Meter)

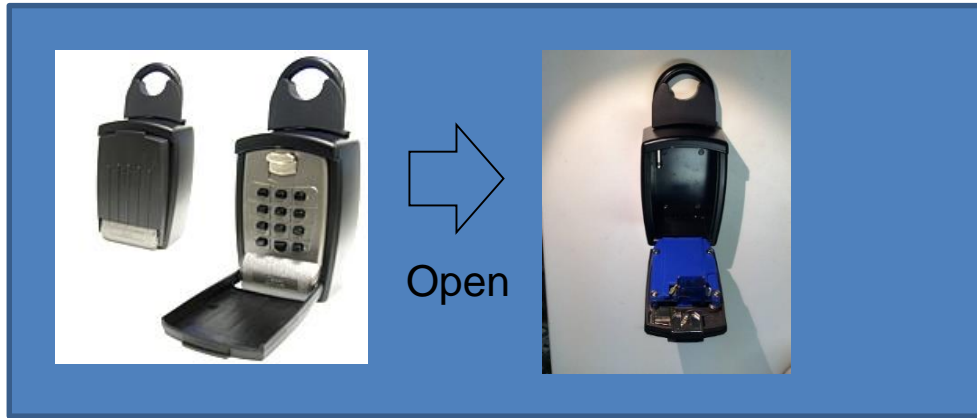


**30mm x 30mm module**

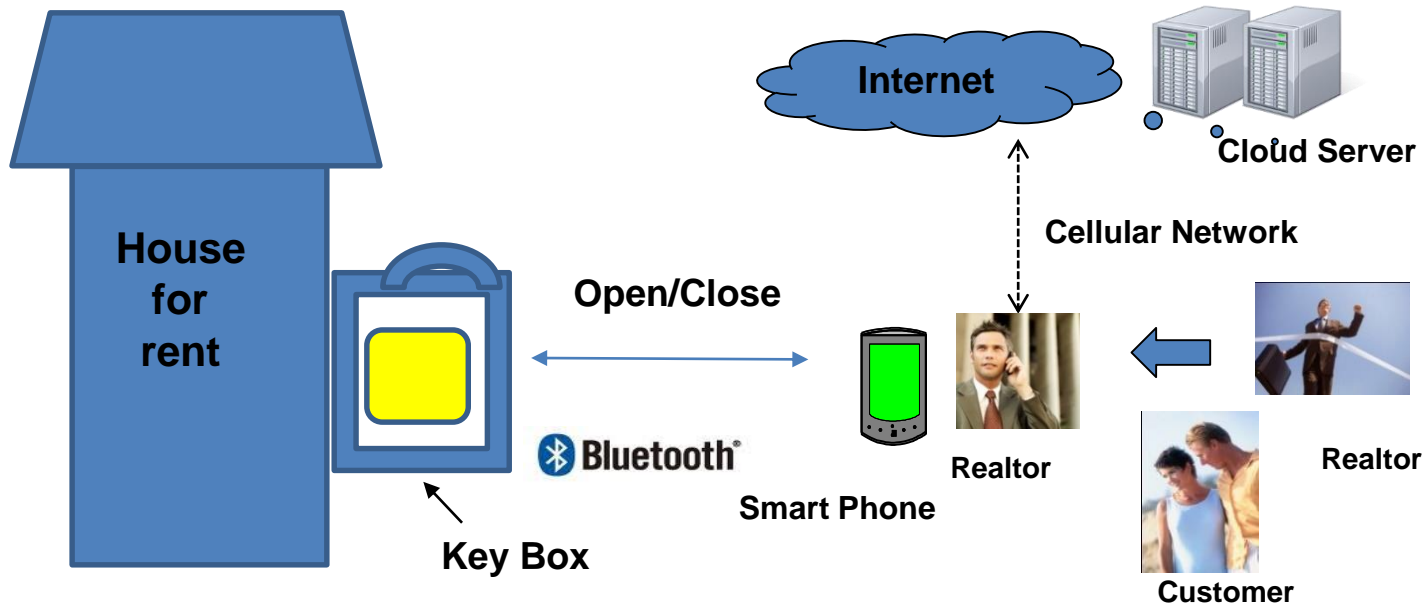


# iWED-B Device Example (2)

## Bluetooth Key Box (Pre-Production)

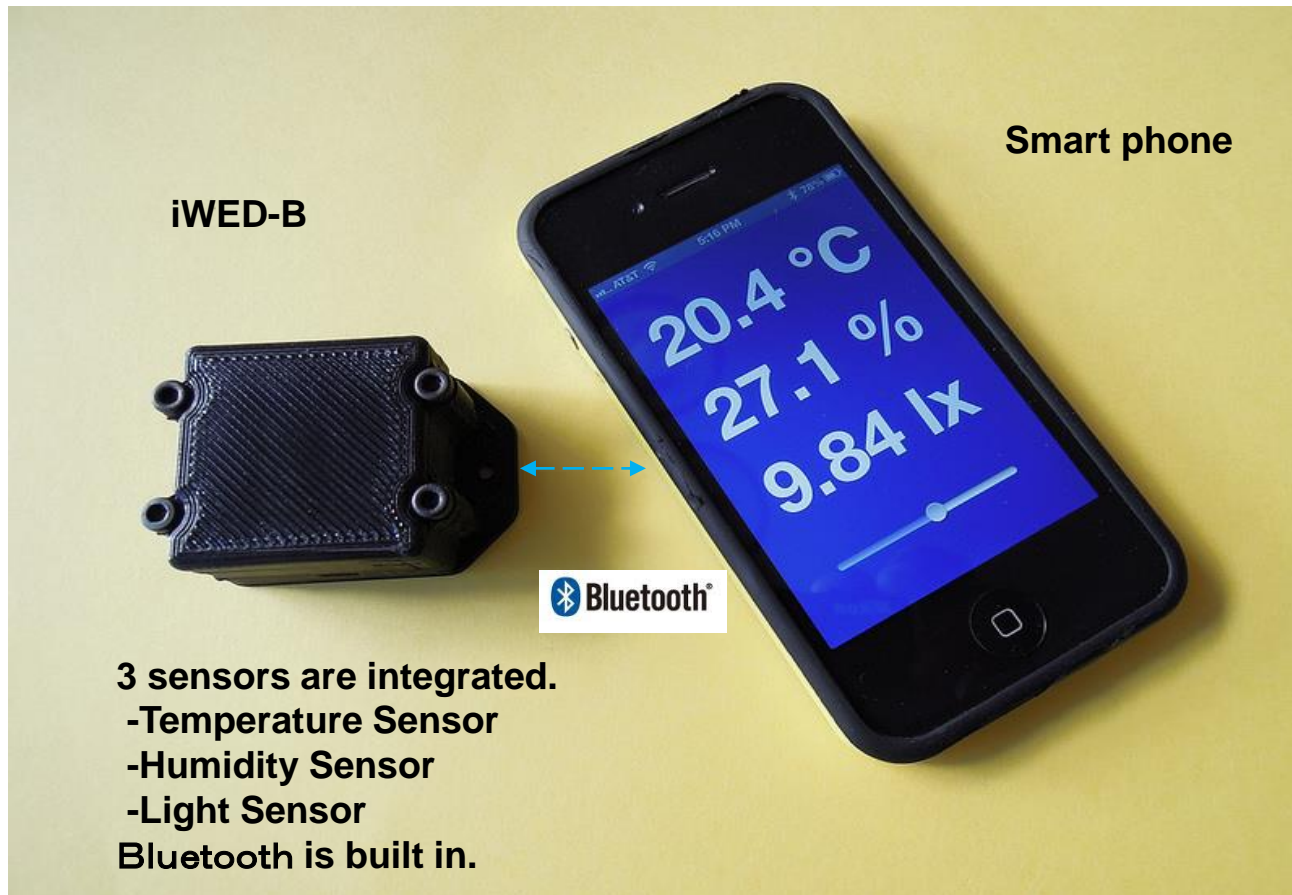


- Target Application**  
**Mgmt. of the following**
- House for Rent
  - House for Sale
  - Office for Lease
  - Warehouse for Lease

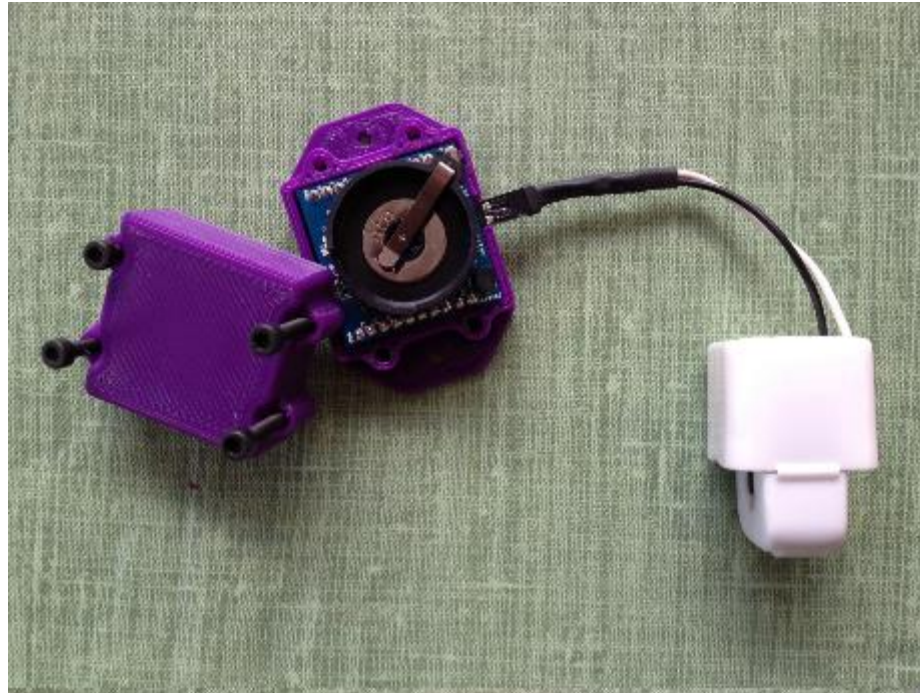


# iWED-B Device Sample (3)

Bluetooth iWED-B Integrated Sensor  
(Temperature/Humidity/Light)



# i END Coin Type Lithium Battery





# Short Range Wireless Technology

	ZigBee	Bluetooth	WiFi	
Standard	IEEE802.15.4.	IEEE802.15.1.	IEEE802.11b/a/g	
Frequency	2.4GHz	2.4GHz	2.4GHz, 5GHz	
Distance	10m-75m	10m-100m	100m-300m	
Speed	250kbps	1Mbps	11Mbps, 54Mbps	
Power	>60mW	>120mW	3W	
Network Capacity	Apr. 65,000	Max. 7	Max. 32	
App.	Monitoring & Control	Audio	LAN & Internet	

(For reference)