

**The IoT Platform  
that gives you the  
power!**

# DAYTECH

Modular IoT SmartNode | Wireless Mesh Sensors & Controls

## INTRODUCING DAYTECH

At DAYTECH, we research and develop, manufacture and integrate, state of the art electronic and software systems for Industrial Automation and Control. We specialise in developing Wireless Mesh Networks, Rugged Edge Computing, Cellular M2M, Smart Microprocessor Wireless Sensor and Control Technology, Off-Grid battery powered systems, together with Full-Stack IoT software and Edge Intelligence.

It get's complicated and can be expensive to build advanced, interoperable IoT systems. That's why we developed the SmartNode™ and ControlMesh™ platforms, to be rugged, cost effective and easy to use, so that you can specialise in what you do best and reduce time and cost to take your automation and control system to the next level!



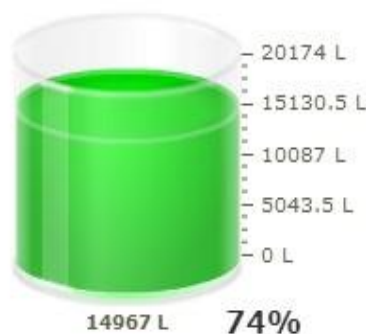
**MODULAR | INTELLIGENT | RUGGED**  
**Building Blocks for Easy IoT**

## SMARTNODE TECHNOLOGY

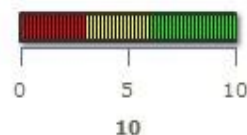
The modular hardware is designed from the ground up to be easily connected to the internet for remote monitoring or control – collectively known as ‘Internet of Things’. Our platform empowers you, through an easy to use modular “building blocks” approach, similar to the concept of Lego. The SmartNode™ and ControlMesh™ Platform, might be fun to use, however, being industrial grade it’s far from a toy.

“Build your own IoT system – create your own Apps!”

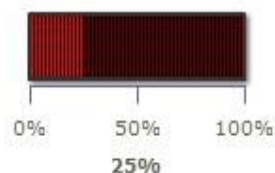
Tank Level



Signal Strength

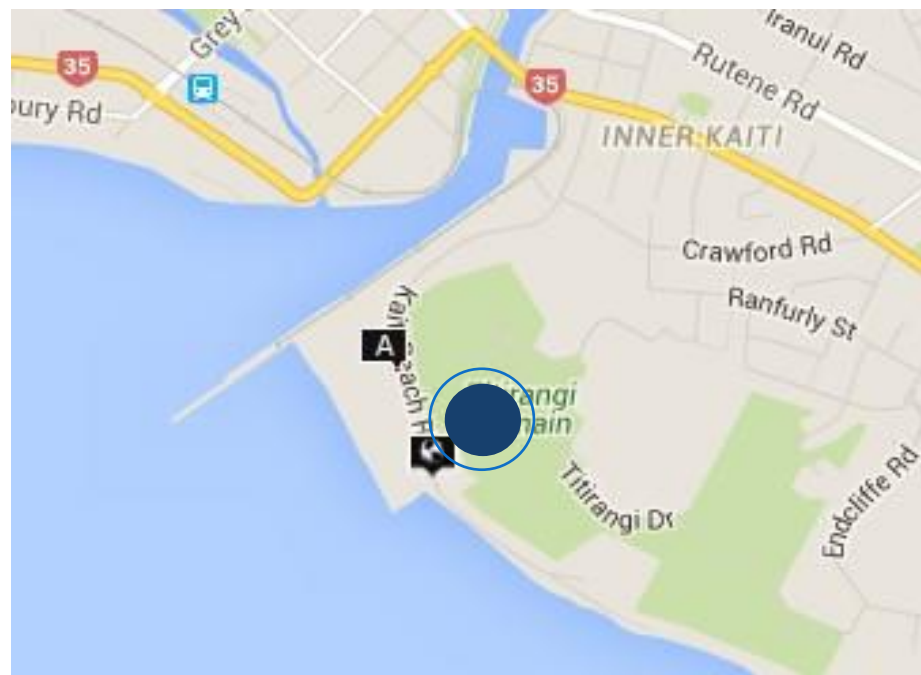


Battery Level



We have been developing technology for the **Industrial IOT boom** for over 8 years and have invested heavily in R&D, allowing you to leverage the digital revolution and merge your physical and digital worlds.

The end to end platform allows you to build incredible automation systems, with IoT capability including apps for your company or customers, remote access, monitoring and control, sophisticated wireless mesh networks (including LoRa and Zigbee) and cellular 3G/4G gateways, with minimal learning curve and low barriers to entry.

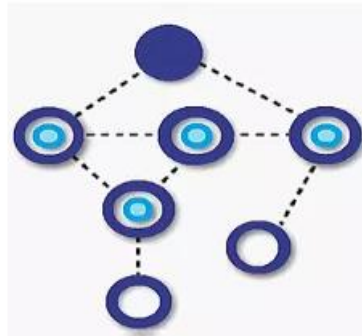






### IoT - MONITOR & CONTROL

Industrial grade IoT - Internet of Things Technology - software development, rapid prototyping, product engineering, smart gateways, nodes and sensors, Ready for Industry 4.0!



### WIRELESS SENSOR NETWORKS

Zigbee, LoRa, WiFi - Industrial grade Wireless Sensor Networks - intelligent mesh networks, product design & engineering, remote sensor monitoring and control.



### SENSORS AND ACTUATORS

Industrial grade sensors and actuators for control and monitoring, product engineering, industrial automation and IoT applications.



### M2M COMMUNICATIONS

Industrial grade M2M Technology - gateways, 3G/4G modems, remote access and control, communications systems integration.



### INDUSTRIAL COMPUTERS & HMI

Industrial grade fanless PCs, touchscreens and Human Machine Interfaces, remote control, GUI software systems development & integration.



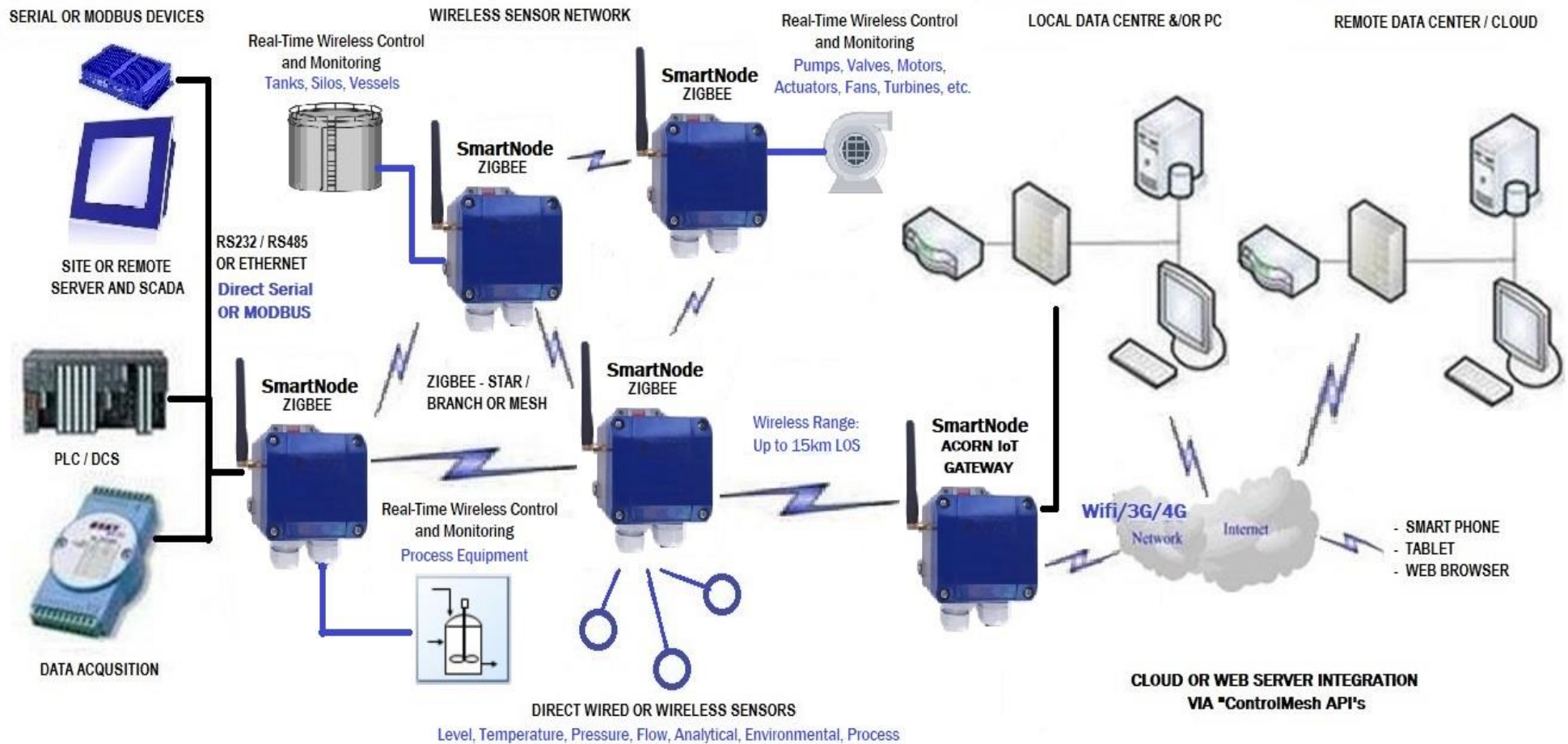
### SOLAR AND BATTERY POWER

Industrial grade solar and battery powered systems - packaged solutions, product engineering, remote monitoring and off-grid powered equipment.

**DAYTECH**

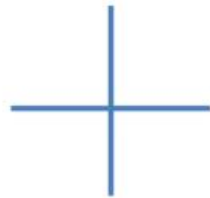
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## IoT-SmartNode – Zigbee Mesh Wireless Network Topology – In Field Example



# **DAYTECH** SMART SENSOR TECHNOLOGY + COIN

Go wireless and control your process and equipment directly from DAYTECH smart sensors.



Wireless smart temperature and pressure – complete with digital display setup for switching at setpoints for remote wireless control.



Wireless flow switch – complete with sensitivity control for switching flow at setpoints for remote wireless control.



Wireless level sensor – point to point for control and switching pumps, motors or valves wirelessly for tanks, dams or bore level control.

You're only limited by your imagination – the possibilities are endless!

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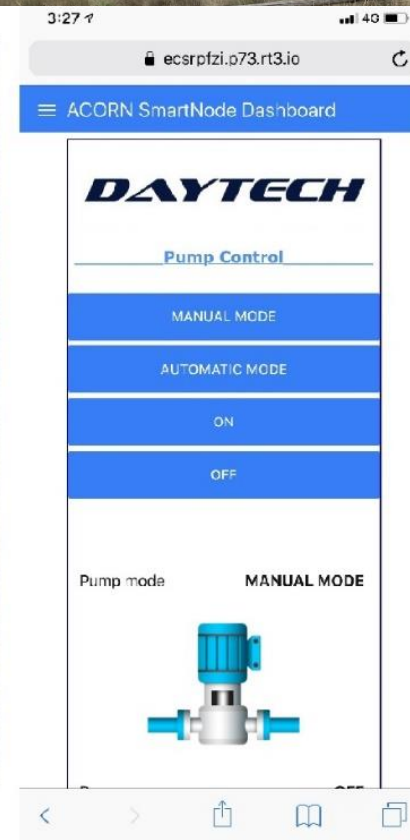
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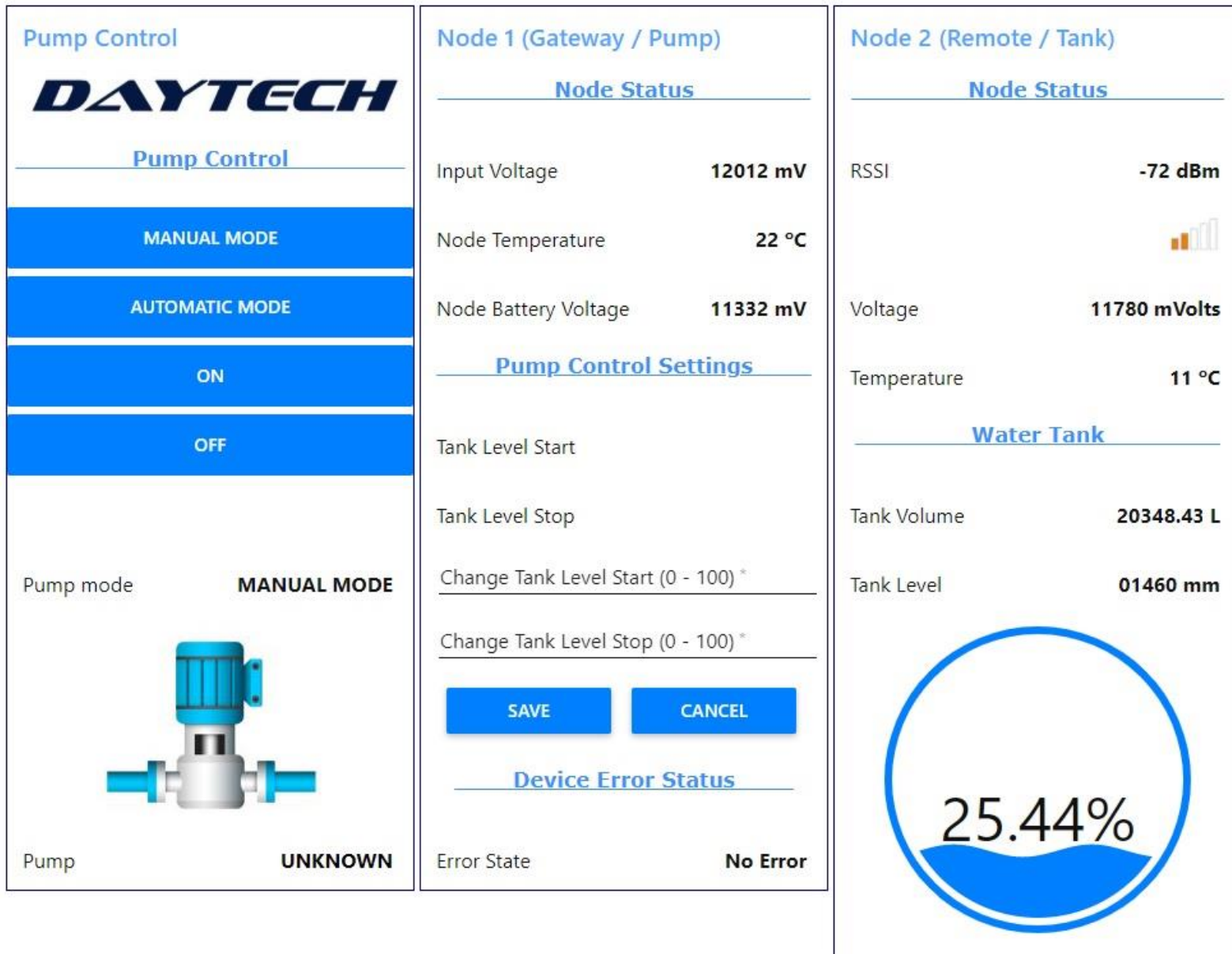


## IoT-SmartNode-Gateway – Automation Application Example – Pump Control

In this example, the IoT-SmartNode-Gateway has been used as a remote pump monitoring and automation system. Multiple remote SmartNodes are wireless connected on the mesh network to the SmartNode-Gateway.

Water level in the tank, dam and the bore is monitored and the pump is controlled in manual or automatic mode, with user defined control setpoints, email notifications, data historian for collecting and saving time/date stamped data to CSV, graphics for tank level gauges, trend graphs, maintenance and configuration.





## IoT-SmartNode-Gateway – Node Configuration, IO/Comms Status Dashboards – Examples

SmartNode Dashboard

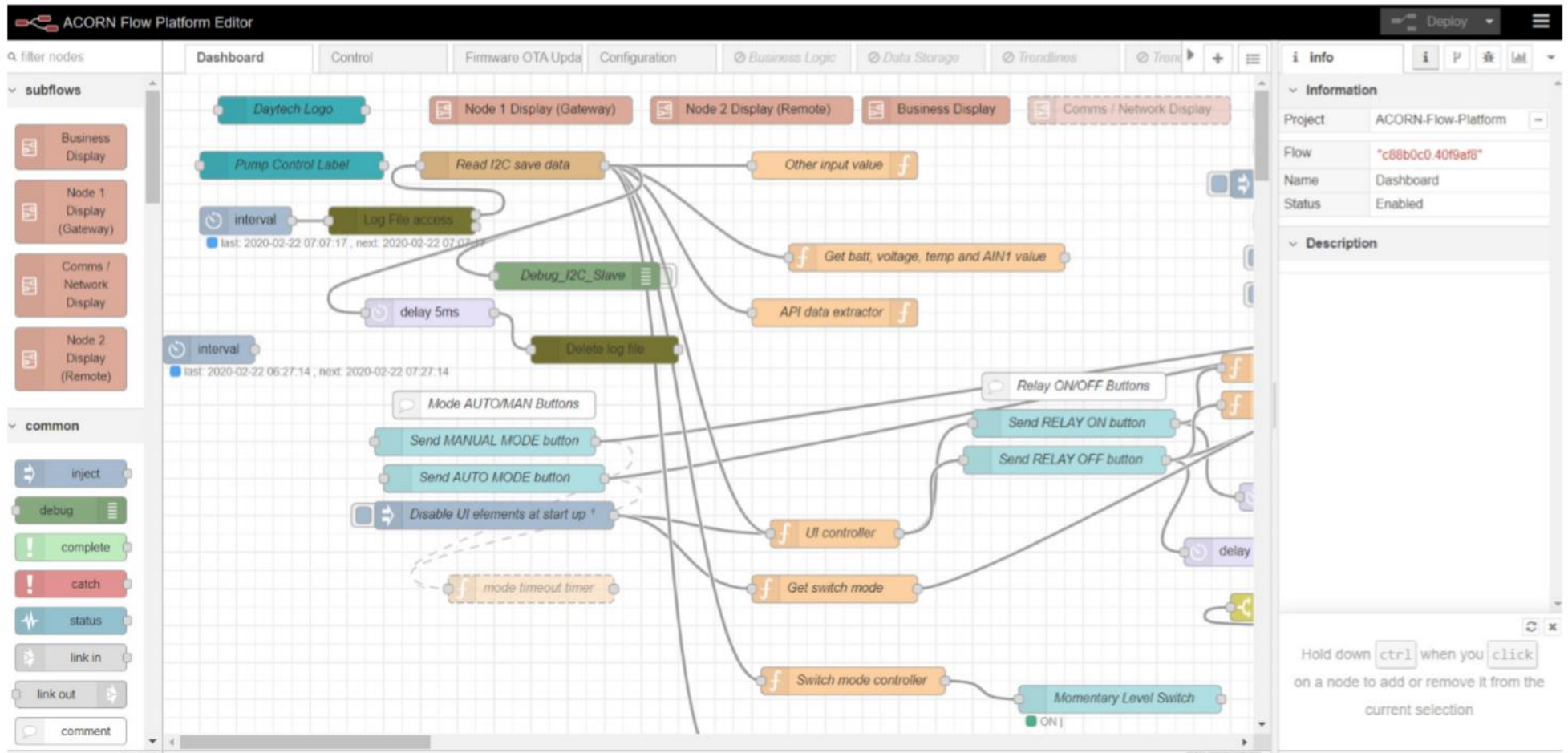
Not secure | 192.168.1.130:1880/#1/2?socketid=PGLb0kp0QT1XGdQGAAAB

### ACORN Network Status

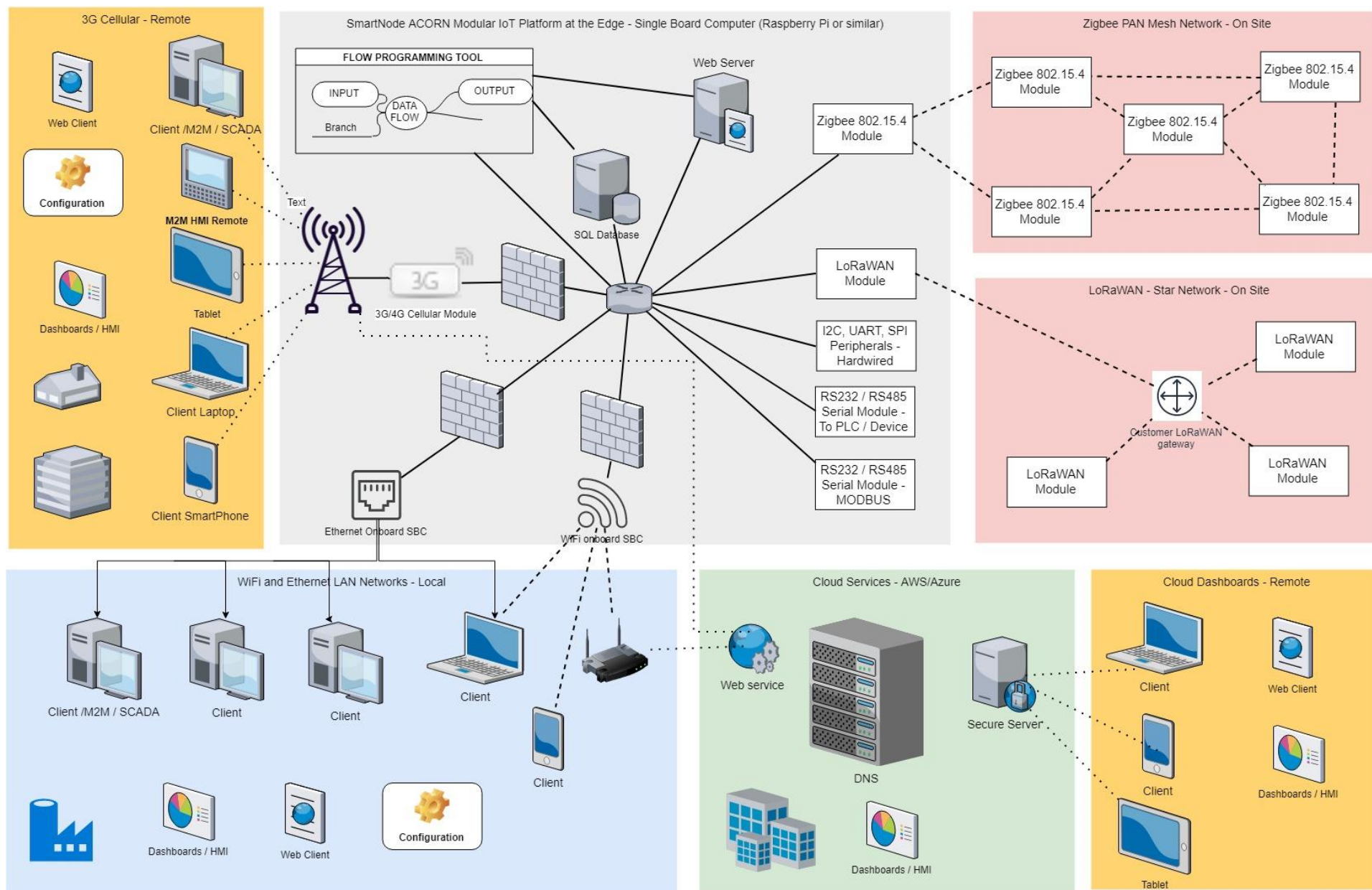
Network Configuration	Remote Node1 Status	Remote Node2 Status	Remote Node3 Status	Remote Node4 Status	Remote Node5 Status	Remote Node6 Status
Associated Node Number: 8	Status: <b>Connected</b>	Status: <b>Connected</b>	Status: <b>Connected</b>	Status: <b>Connected</b>	Status: <b>Connected</b>	Status: <b>Connected</b>
Search Node Number: 6	Mac Address: 0013A20041984336	Mac Address: 0013A20041984314	Mac Address: 0013A20041984320	Mac Address: 0013A2004198438E	Mac Address: 0013A2004198428a	Mac Address: 0013A20041984341
Discovery Timeout: 30s	RSSI: -40 dBm	RSSI: -40 dBm	RSSI: -40 dBm	RSSI: -40 dBm	RSSI: -40 dBm	RSSI: -40 dBm
Input Node Number(1 - 100):	Response Time: 1103ms	Response Time: 593ms	Response Time: 1027ms	Response Time: 918ms	Response Time: 1195ms	Response Time: 1135ms
<b>SAVE</b> <b>CANCEL</b>	DI 1 Status: <input checked="" type="checkbox"/>	DI 1 Status: <input checked="" type="checkbox"/>	DI 1 Status: <input checked="" type="checkbox"/>	DI 1 Status: <input checked="" type="checkbox"/>	DI 1 Status: <input checked="" type="checkbox"/>	DI 1 Status: <input checked="" type="checkbox"/>
Discovery Status: <b>Discovery done</b>	DI 2 Status: <input checked="" type="checkbox"/>	DI 2 Status: <input checked="" type="checkbox"/>	DI 2 Status: <input checked="" type="checkbox"/>	DI 2 Status: <input checked="" type="checkbox"/>	DI 2 Status: <input checked="" type="checkbox"/>	DI 2 Status: <input checked="" type="checkbox"/>
<b>START NETWORK DISCOVERY</b>	DO 1 Status: <input checked="" type="checkbox"/>	DO 1 Status: <input checked="" type="checkbox"/>	DO 1 Status: <input checked="" type="checkbox"/>	DO 1 Status: <input checked="" type="checkbox"/>	DO 1 Status: <input checked="" type="checkbox"/>	DO 1 Status: <input checked="" type="checkbox"/>
<b>SET NODE INFORMATION</b>	DO 2 Status: <input checked="" type="checkbox"/>	DO 2 Status: <input checked="" type="checkbox"/>	DO 2 Status: <input checked="" type="checkbox"/>	DO 2 Status: <input checked="" type="checkbox"/>	DO 2 Status: <input checked="" type="checkbox"/>	DO 2 Status: <input checked="" type="checkbox"/>
<b>SAVE CURRENT INFORMATION</b>	Input Voltage: 01360mV	Input Voltage: 01330mV	Input Voltage: 01590mV	Input Voltage: 01580mV	Input Voltage: 00420mV	Input Voltage: 02180mV
<b>FACTORY RESET</b>	Battery Voltage: 11980mV	Battery Voltage: 11240mV	Battery Voltage: 11320mV	Battery Voltage: 11350mV	Battery Voltage: 11820mV	Battery Voltage: 10400mV
Remote Node7 Status	AI 1 Input: 00000mV(uA)	AI 1 Input: 00000mV(uA)	AI 1 Input: 00000mV(uA)	AI 1 Input: 00000mV(uA)	AI 1 Input: 00000mV(uA)	AI 1 Input: 00000mV(uA)
Status: <b>Not Connected</b>	Temperature: 26PC	Temperature: 26PC	Temperature: 26PC	Temperature: 26PC	Temperature: 29PC	Temperature: 30PC
Mac Address:	PWM Input: <input type="checkbox"/>	PWM Input: <input type="checkbox"/>	PWM Input: <input type="checkbox"/>	PWM Input: <input type="checkbox"/>	PWM Input: <input type="checkbox"/>	PWM Input: <input type="checkbox"/>
RSSI: -0 dBm	<b>CLEAR PWM COUNTER</b>	<b>CLEAR PWM COUNTER</b>	<b>CLEAR PWM COUNTER</b>	<b>CLEAR PWM COUNTER</b>	<b>CLEAR PWM COUNTER</b>	<b>CLEAR PWM COUNTER</b>
Response Time: 0ms	Remote Node8 Status					
DI 1 Status: <input type="checkbox"/>	Status: <b>Not Connected</b>					
DI 2 Status: <input type="checkbox"/>	Mac Address:					
DO 1 Status: <input type="checkbox"/>	RSSI: -0 dBm					



## IoT-SmartNode-Gateway – Flow Programming Platform Editor – Examples



## DAYTECH - SMARTNODE ACORN AND CONTROLMESH - NETWORK TOPOLOGY



FOR MORE INFORMATION VISIT: [www.daytech.io](http://www.daytech.io)