

PLX-IOT

Configurable IoT Framework

Work with us to build your IoT solution

Plextek's IoT framework enables rapid development and deployment of customized IoT solutions, particularly those requiring extended operation on battery power.

Our IoT framework consists of edge nodes, gateways and a cloud server. It provides several advantages for those seeking to design and deploy an IoT solution. Our edge nodes require no infrastructure and can last on battery power for over a decade whilst providing regular updates from sensor readings. The edge node can host a wide variety of sensors as it supports a range of communication protocols including USB, I2C, SPI and UART.

Edge nodes can communicate wirelessly up to 3 miles in urban, and 10 miles in rural areas and do not rely on cellular or other network infrastructure. The edge nodes also support edge processing, including efficient implementation of neural networks and other advanced machine learning methods including support for tensorflow.

The gateway can support communication with several thousand edge nodes and provides the link between them and a cloud based server via an internet connection. Wi-Fi, Cellular, Ethernet and Satellite can all be supported.

Our cloud-based server provides for a convenient means to design a customized user interface meaning you can get to market quicker, with technical confidence.

Example Applications:

The IoT Framework can be used for a wide and diverse range of applications, including but not limited to:

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Condition monitoring of infrastructure and equipment
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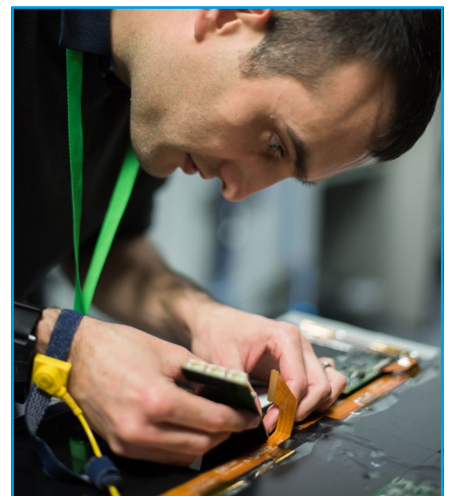
Predictive maintenance
- 

Activity detection
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Asset tracking
- 

Pollution monitoring
- 

Smart city infrastructure



About Plextek

We have a 30-year history of providing technology solutions to a variety of organisations.

Plextek understands today's key challenges for smarter technology development and can generate both the ideas and deliverable solutions to the assured level of security, performance, resilience and ergonomics that you need.

We are a product development & consulting company that works with clients to achieve results based on their specific requirements. Our engineering experience, supported by our library of IP for key technology elements, aids accelerated time to market and greater cost effectiveness.

The Framework



Edge Nodes
10 year Battery life. These devices communicate to a gateway using a licence-free wireless protocol, requiring no infrastructure.

This device can communicate with up to several thousand edge nodes, and provides connectivity to the cloud server.

A cloud based server where users can visualise data from the edge nodes and remotely reconfigure them.



Edge Node

Supports edge processing and machine learning

Supports USB, I2C, SPI and UART Protocols

Can host a wide variety of sensors including: motion, vibration, temperature, humidity, pressure, moisture and more

Tunable between 150 MHz – 960 MHz

Communication range up to 3 miles urban and 10 miles rural

Low SWaP: Only 120 x 80 x 35mm, 200g. Ten year battery life on a D-Cell battery

No infrastructure required



Gateway

- » Supports communication with several thousand edge nodes
- » Provides the link between the Nodes and a cloud based server
- » Can support Wi-Fi, Ethernet, Cellular or Satellite links to the cloud
- » Size: 140 x 80 x 40mm
Weight: 200g



Plextek

Exceptional Engineering Solutions

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