

## Embedded IoT with Edge Computing

Nowadays, due to the technological advancement have enabled embedded device to communicate with sensor and other assets in a simple, effective and cost-effective way. The present of embedded software platforms give the device can collect the data and transfer them via internet. But the usage of cloud computing has their own limitation which are latency, connection and cost. Below are the pushing factor for Embedded IoT with edge computing:

- Some applications require the continuous monitoring of hundreds or thousands of parameters, generating increasingly larger data flows to be sent to the cloud.
- Response time from data centre has been reduced but not sufficient for some application that require immediate feedback
- Connecting issue may arise in some IoT application when the device is equipped with sensor and intelligent device that constantly send data. Some of area also having a bad connection of internet.
- The increasing number of intelligent device and smart sensor make the device infrastructures becoming more expensive due to large amount of data need to be transferred to central data via internet.

Edge computing is the ability to deliver secure edge computing and storage capabilities along with field data analytics, filtering, aggregation, routing, and device management. Edge computing provides advanced management functionality where data is generated, reducing latency, connectivity issues and infrastructure costs. Cloud platform integration becomes an additional feature for more comprehensive, end-to-end infrastructure management.

The advantages of edge computing:

1. Lower latency, faster insights
2. Power, scalable compute
3. Privacy and Security
4. Improved performance
5. Reducing operation cost
6. Reliability

