

# Building AIOT Solutions using Unified AI Device Framework

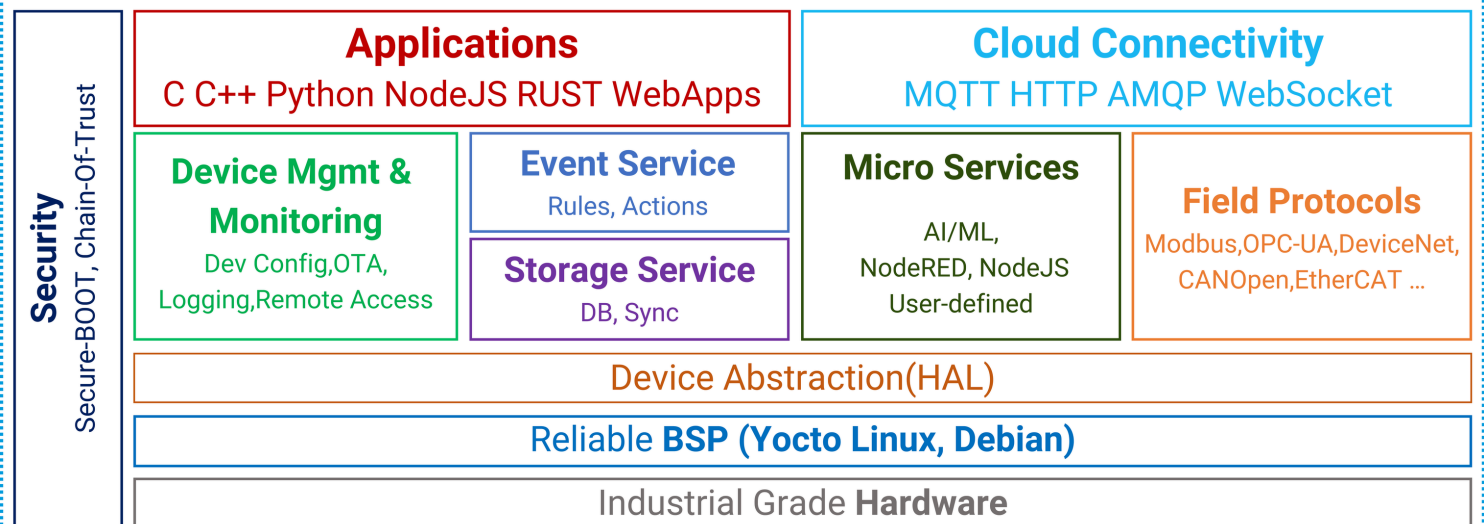
## Hands-On Workshop

This 2 days Hands-On Workshop covers four major steps to build AIOT solution ready to deploy, taking Industry-4.0 use-case having low power sensor nodes, Industrial Gateway, Cloud Integration (also On-Prem Server) & data analytics using AI.

## Key Topics

- Integrating field devices supporting standard protocols like (MODBUS, OPC-UA ..)
- Data store and forward, rules and actions
- Cloud Integration & On-Prem Server, Data Analytics & AI modules
- Device Management ( Configuration, Monitoring, FOTA)

## Unified AI Device Framework



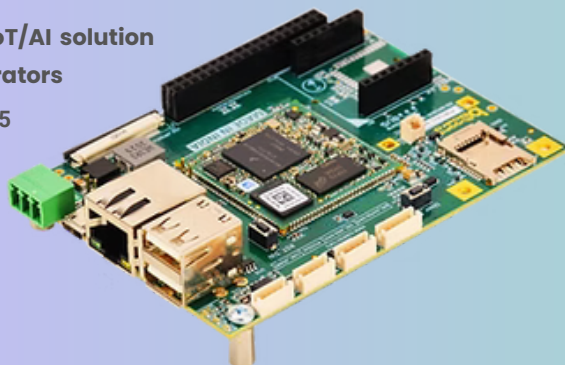
### Who should Attend:

Embedded developers, IoT/AI solution architects, System integrators

Event Date: 9 - 10 May 2025

Location: Coimbatore

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Built on the phyCORE-i.MX6UL System on Module, the RuggedBOARD is an open-source, industrial-grade SBC with support for both Yocto and Debian BSPs. It is pre-integrated with the Unified AI Device Framework, enabling rapid prototyping through low-code/no-code tools and open-source packages.

## Day 1: AIoT Foundation & Application Development

Time	Topic	Description
9:30-10:30	Context Setting and Host Setup	Overview of the 2 days workshop with background Quick Hand-on with basic workshop requirements Host PC Setup Hands-on
10:30-11:15	Hardware details and setup	Details of Hardware CPU, Interfaces, Devices Target device Setup Hands-on
11:15-11:30	Break	Tea Break
11:30-12:30	AIOT Solution ARCH & Design with use-case	System ARCH Design and solution overview Complete flow of the AIOT solution use-case
12:30-13:15	Application Building using Fledge Framework	Acquiring Sensor data using South Plugin Hands-On
13:15-14:00	Break	Lunch Break
14:00-15:00	Application Building using Fledge Framework	Device to Cloud Integration using North-Plugin Hands-On
15:00-15:45	Data Visualization and cloud widgets	Understanding data schema on cloud and Hand-on data vis
15:45-16:00	Break	Tea Break
16:00-16:45	Data Mgmt on device & AI Micro-Services	On Device DB for data mgmt & AI Micro-Services
16:45-17:30	Dev Mgmt Hands-on	Device Configuration and Mgmt Hands-On
17:30-18:00	Open Session	Quick recall & Open Discussions

## Day 2: Custom Development, Cloud, and FOTA

Time	Topic	Description
9:30-10:30	Deep-Dive FLEDGE framework	Understanding Fledge framework Arch, Components, Implementation
10:30-11:15	Custom South Plugin development	To integrate new sensor developing FLEDGE south-plugin
11:15-11:30	Break	Tea Break
11:30-12:30	Custom South Plugin development	Custom South-Plugin Deploying and testing it on the Target Device
12:30-13:15	Custom Cloud Server	On-Prem Cloud Server using Things-Board Open Source Cloud Platform
13:15-14:00	Break	Lunch Break
14:00-15:00	Custom Cloud Server Hands-On	Hands-On with ThingsBoard On-Prem Server
15:00-15:45	FOTA	Implementing FOTA using OpenSource Stack Hands-On RAUC
15:45-16:00	Break	Tea Break
16:00-16:45	FOTA Hands-On	Testing FOTA with Open Source Hawkbit server
16:15-17:30	Custom AI Micro-Services	Custom AI Micro-services for data analysis on device and cloud server
17:30-18:00	Open Session	Quick recall & Open Discussions