Client Information

CubeXS Weatherly (Private) Limited designed and built a hardened,
Class"A", the first ever Tier IV compliant Data Center in Pakistan. They deliver managed services and solutions to their enterprise customers. All CubeXS facilities are engineered to 99.995% service availability to deliver highly reliable and scalable power, environmental control and physical security.

After 21 years old as an industry leader, CubeXS knew that transforming their business model was the only option in ever increasing connected world. The organization needed to quickly leverage its forward thinking reputation to adapt to a quickly evolving Smart banking or ATM's market by introducing an internet enabled product line, Cube connect.

Cube connect not only gives CubeXS the ability to deliver the product that meets the demand of growing customer preferences, but also keeps them at the forefront in a highly competitive market.

Requirements

Based on CubeXS research, Smart operation of Banks & ATM's has always been a major concern for their customers or bank owners. Therefore, to overcome these they came up with an idea to provide them a Cube connect which should be capable of handling multiple task such as

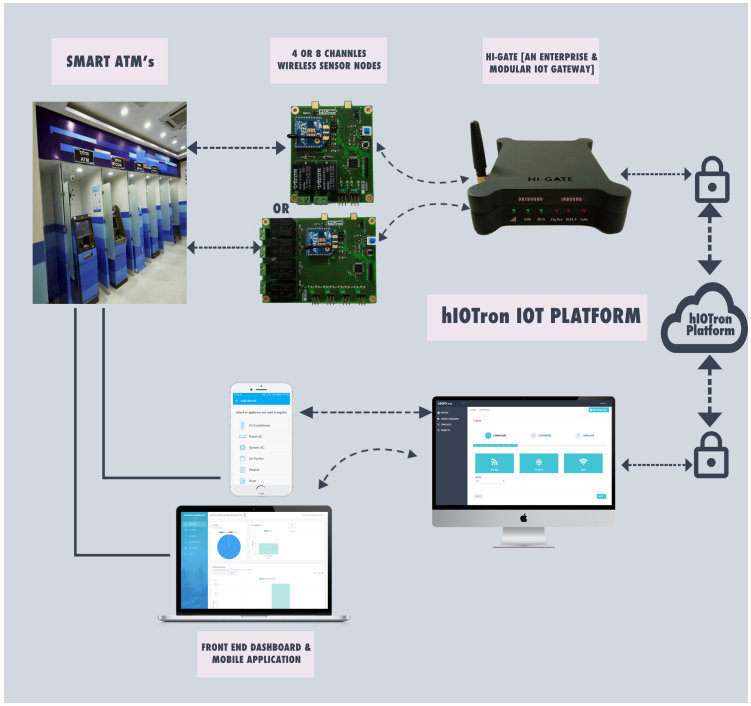
- Local/Remote monitoring such as light, motion, temperature, fire & door status.
- Alerts for any abnormal conditions via push notification, e-mail or SMS.
- Direct or condition based control to A.C., lights, hooter & other connected appliances Locally/Remotely.
- Custom rules setup for local or automated actions.
- Plug & Play or retrofit device installations.
- Easy device connectivity, management, configuration or reconfiguration.
- Intuitive mobile application or Dashboard.

Solution Proposal

Now based on these requirements, we suggested them 2 solution architecture options given below.

Option-1

Option-2



Solution Overview

After positive response for option-1 from client we divided the entire solution architecture into 3 major phases of development.

Prototyping

We know that we took more time than we usually do for prototyping for this project but almost 80% requirements or features of this project got covered at very 1st prototyping phase just because of modularity of the kit which helped us to connect required sensors & actuator so easily in 2 weeks. Therefore, with this client was in a position to understand his client's requirements, practically & confident enough to go with customization of this kit to develop final Cube connect.

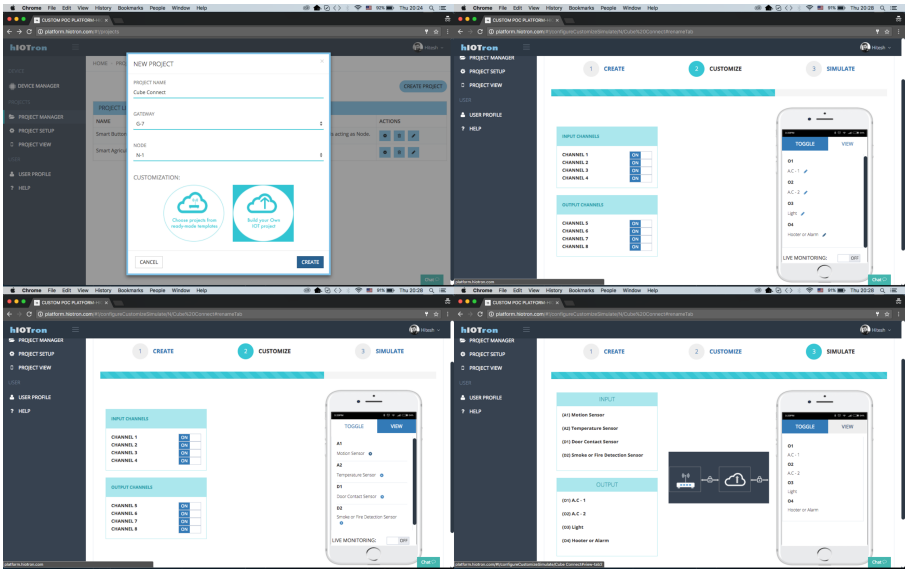
Being an IoT Project manager, I was searching for the best IoT solution provider for last couple of months for one of our upcoming IoT project requirement over internet but unfortunately I was getting everything in parts from almost every vendor which then requires me to engage or work as a system integrator. But, finally somehow I came across to Modular IoT development kit designed by hIOTron which helped me not only to fulfill the project requirement but also taught me the basics & fundamentals of internet of things in more practical & easy way. "I must say this kit is not just a development kit it's even more and masterfully designed and delivered for the benefit of a technical and non-technical audience."

Mr. Waleed Swati, IoT Project Manager, CubeXS Worthy (Federation House Clifton) Pakistan

Prototyping Steps

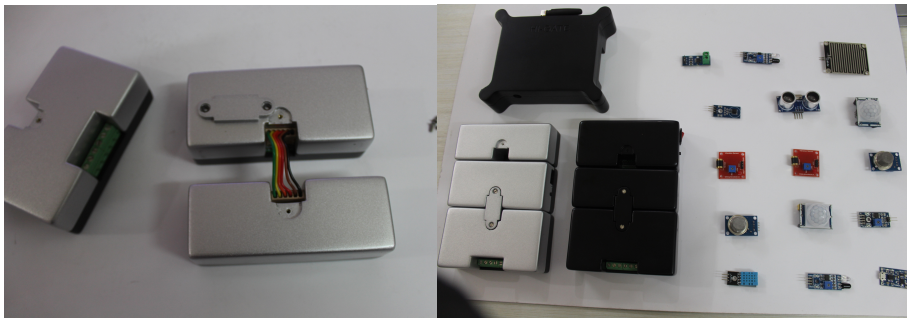
1

Mobile App/ Dashboard or Software Development



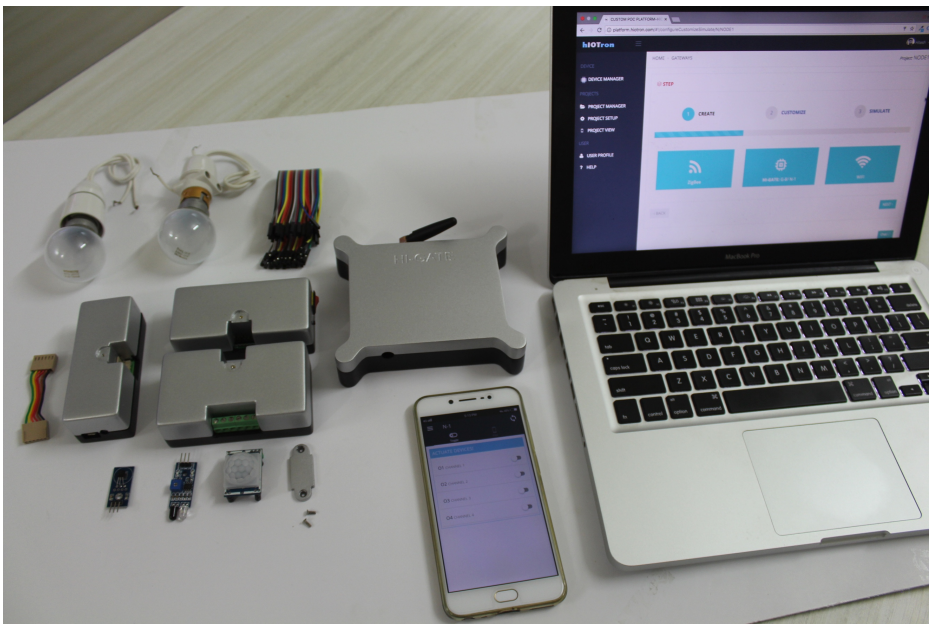
2

Sensor & Actuator interfacing or Hardware Development



3

Hardware & Software Integration



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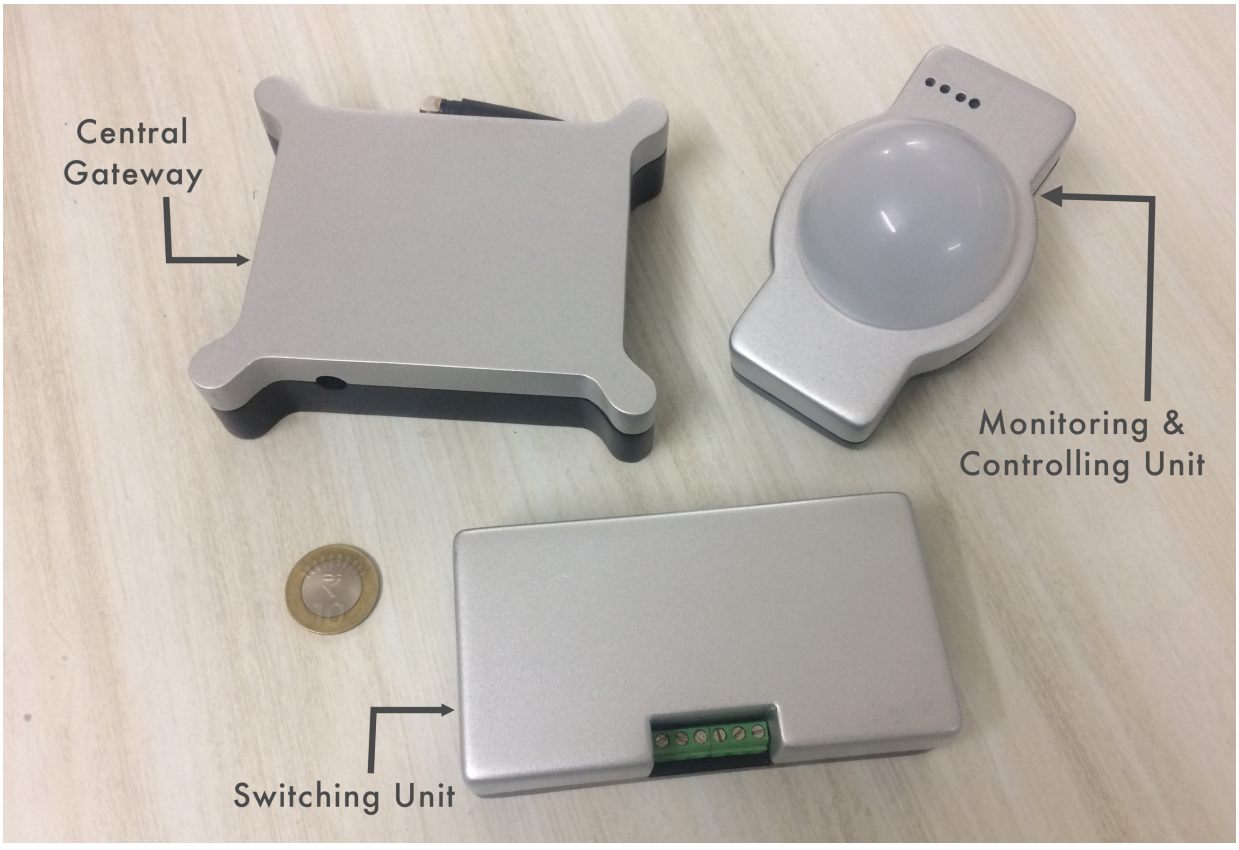
Customization

Prototyping made this kit very easy to customize because of more & more features covered in 1st phase and clients also spent less time, money & efforts to get final results or product with commercial model instead rebuilding everything from scratch.

Therefore, in this phase complete the requirement based on phase-1 results brought down to a single board with compact & fine circuit design along with application specific embedded hardware codes integrated with hIOTron IoT platform using clean managed & open MQTT/REST APIs at every level of integration for future independency.

This phase gave clear cut idea of hardware BOM & other product associated cost to a client to reevaluate the final ROI of the project for a long term vision.

Thereafter, initial 5 customized units of Cube connects went for beta testing to various sites for almost a month, to test & understand logical features, user experience, network connectivity, run/down time and others before taking it into the final production.



Production

Currently (October 2017), client has started production with batch of 250 Cube connects for various sites or banks in Pakistan.