

An Introduction to Cloud FCC (cfcc)

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LNETec

Learn and Engineer

IOT Based Solution for Petrol Pump Automation

Innovative concept based on IOT and Cloud infrastructure.

Can be deployed as FCC as a Service – FCCS



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1. Introduction

1. About LNETEC

We are a team with over 30 years of technical expertise, specializing in End-to-End Product Development, software design, electronics design and IOT solutions. With three decades of experience and a passion for all things technology, we **guarantee** the success and high quality in all our solutions.

Keeping in line with our company vision, we have successfully developed the **cfcc** - a cloud based fore court controller solution. We have also indigenously developed level and density probes based on magnetostrictive effect.

2. About Cloud FCC Solution (CFCC)

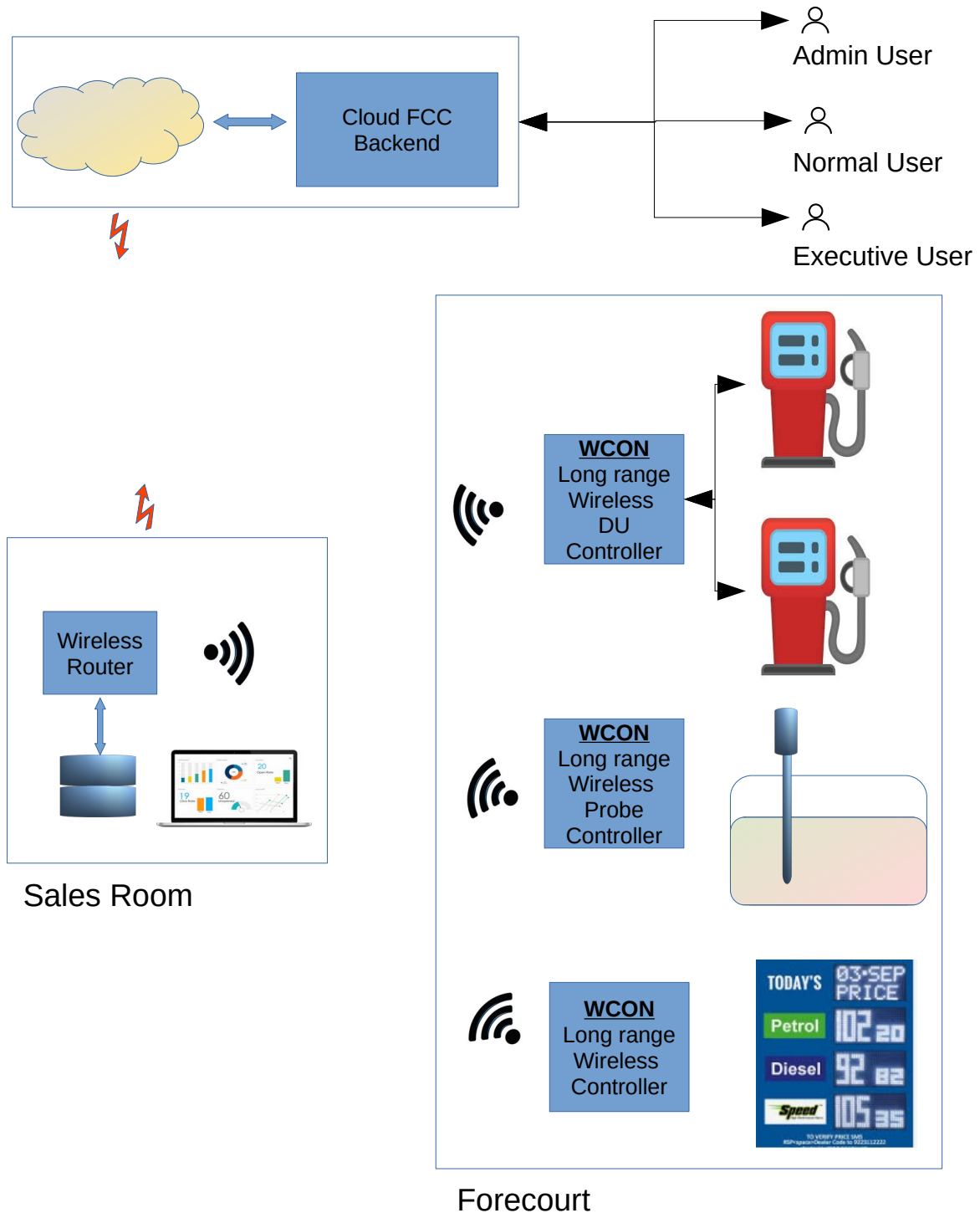
CFCC is a next generation Cloud Based Petrol Pump Automation Solution. IT is based on IOT architecture customized for FCC applications. As compared to traditional solutions, **cfcc** can reduce the CAPEX by more than half.

Main features of our next generation solution are as follows:

- ✓ **Cloud based solution**, access your data from anywhere.
- ✓ **State of art security** for cloud application.
- ✓ Data is stored in safe and secure fashion, cfcc also stored data locally at site.
- ✓ **More than one month data can be stored locally.**
- ✓ In case of **non-internet site**, local data storage period can be extended to **6 months**.
- ✓ Our novel architecture **eliminates need of UPS**, thus huge saving on battery and UPS cost.
- ✓ Uses **wireless mesh connectivity** based on **ZIGBEE** standard, hence easy to install and operate.
- ✓ Cfcc can also operate on standard **RS485 wired** connections. This may be desirable if wires for connectivity are already present.
- ✓ **Reduces cost** of hardware, deployment and maintenance.

We believe, our solution can bring a significant value to your organization. Please connect with us for more information and demo at your site.

2. CFCC Block Diagram



3. How CFCC works

CFCC consisted of various hardware and software components. Here we describe main parts of our solution.

1. WCON : IOT based controller module
2. CFCC Gateway: Securely transfer data to cloud.
3. Cloud Application: Cloud based web application.

1. WCON Module:

The main part of CFCC is the rugged yet low cost WCON module. WCON module is an advanced IOT based device, with inbuilt high speed controller, data storage capacity for more than one month and mesh wireless controller. This module works on 5V input and can operate upto 4 days in absence of power. Its inbuilt power feature eliminates the need of UPS at site.

WCON can stand alone control Dispensing unit, probe, display or any other device present at the fore court.

All data from WCON is send to cloud application via CFCC Gateway. WCON module also consists of root-of-trust module to ensure end to end data security.



Figure 1: WCON: Advanced IOT Controller

2. CFCC Gateway:

CFCC gateway is a Linux based device. It serves the purpose of transferring data from WCON modules to cloud application. It can talk various wireles and wired protocol. All data communication uses encryption to ensure data safety.

CFCC gateway also includes a webbased application which can provide full fledged access to data, reports and configuration in absense of Internet.



3. Cloud application

Cloud application consists of following modules

1. Web application module for user interface. Allows data access to authorised person only.
2. Data storage and archive modules saves data in encrypted format.
3. Configuration modules allows to configure and control any petrol pump remotely by authorised person.
4. Reports module to generate desired reports. Reports can be emailed to desired email users.
5. Alert module to allow sending of important event to concerned person. Example price change alert, density alert etc.
6. Authentication and authorization module to control who can access the application and the access level.

