

MOHAN KB

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Objectives

To have a challenging career in an organization where I can implement all my skills and knowledge for the fulfillment of personal as well as organizational goals

Experience

Company : Cellcomm Solutions Ltd.

Experience : 3 Years

Designation : Firmware Engineer.

Company : Mindteck.

Experience : 1 Years

Designation : Senior Firmware Engineer.

Projects

PSD (Platform Screen Door)

- Firmware Application Development for Automatic Platform Screen Door Controlling operation.
- Project involves the Implementation of redundancy features for safety critical operations.
- PSD/DCU Device is made to operate at 3 control modes Auto Mode (CAN Signals), Manual Mode (IO Signal), Isolation mode.
- Obstacle detection during door open/close operation based on speed and current measurements of Motor.
- Heart Beat signal monitoring between master and redundant controllers for redundancy.
- Firmware is designed to upload Application image and Boot loader image to flash memory via serial interface (via.RS232, RS485).
- uc-Os3 is ported to for multipurpose Door task operations.
- Configuring and monitoring device configuration parameters via serial interface (via.RS232, RS485) via application tool.

Battery Operated Data logger

- Firmware Development for Battery operated Data logger device that stores and sends the data via different protocols like MQTT, HTTP[S], FTP.

- Firmware is designed to operate the device at very low power consumption[μ A] using the different power saving modes.
- Light weight protocol MQTT is used for faster data transmission using 4G Modem.
- TI-RTOS is ported for MSP430 based controller making the device to handle multiple tasks efficiently.
- Battery management for estimation of cell life cycle and power consumption is done periodically.

Water Flow and Real Time Weather Monitoring Systems

- Firmware development on IIOT based device that monitors the Water flow from different flow meters and sends the relevant data like rate of flow and total flow.
- Firmware is designed to collect the real time data's like Temperature, Humidity, Wind direction, Wind speed, Rain fall from different weather stations.
- The data obtained periodically is stored in external or internal storage memory of the device and transmitted via 2G/4G based GSM modem via different protocols like MODBUS, HTTP[S], FTP, SOCKET, EMAIL, MQTT.

Real Time Alarm Monitoring System

- Firmware development for monitoring the real time data and generate the alarm for any intrusions. Low/High Threshold value is configured for individual sensors connected to the device.
- Device will generate the alarm based on the threshold values configured. For every occurrence of alarm, data is sent to different servers configured or via SMS for Mobile number configured in the device.

PLC Monitoring System

- This project deals with collecting the data from the PLC devices based on their address and data types using the Modbus RS485 channel and send the data to the sever for the predefined interval configured in the device.

Serial Communication Software

- This project deals with developing the vb.net based application to communicate with IIOT based device serially via UART. The device is configured with different parameters using this application.

Skills

Programming Languages : Embedded C, HTML, Java (Basics).

Microcontroller : Arm Cortex-M4F, Arm Cortex-R5F, Msp430, Arduino.

Development Tools : CCS, NetBeans, IAR, Visual Studio

Protocols and Peripherals : UART, SPI, I2C, ADC, RTC, Timers, Interrupts.

OS : TI-RTOS, uC-OS3.

Education

Bachelors in Electronics and Communication.

KVG College Of Engineering 2014-2018

**I hereby declare that the above furnished details are true to the best of my
knowledge**