**System Description Document**

**Table of Contents**

**No table of contents entries found.**

# Modes

## Initializing

1. Calculate CRC of primary and secondary partitions
2. IF: Primary is valid, mount primary

## POST

## Setup

## Normal Operation

## Emergency

## Software Updating

### Main image

1. Extract archive contents
2. SW config file copied to temporary location
3. CRC checksum is calculated for partition image file
4. CRC checksum is calculated for update.hex and runtime.hex
5. IF: All CRC checks pass, write SW config file to configuration folder
6. IF: CRC check of image passes: write image to Primary partition ELSE: Fail SW upload
7. IF: CRC check of hex files pass: upload update.hex to MCU. ELSE: Fail SW upload
8. Send runtime.hex CRC until ACK is received
9. update.hex waits for CRC value from SBC then overwrites EEPROM bits (same length always)
10. Sends completion message to SBC and waits
11. runtime.hex is uploaded to MCU
12. SBC requests CRC info and waits
13. IF: CRC doesn’t match SW config file: Indicate failure. No resolution actions
14. Reboot MPC