iCUBE-iCON Release Notes

- **Latest Release: iCUBE 0x0109, iCON 0x0209**
- **Release Date:** Aug 23, 2024

Revision History

Version	Date	Description	Authors
0x209	Aug 23, 2024	Reboot support from the server is added, PAC solar hack is removed	Vineeth
0xE208	Jul 10,2024	Special version for a customer on top of 207(iCON). dynamic FT entry is neglected	Vineeth
0x108, 0x208	Jul 10, 2024	Dynamic OTA feature support, Fix for SSID write failure via Filed Configuration utility Sending flag indicating EEPROM update via filed configuration status	Vineeth
0x207	Mar 21,2024	ICON – No load DC current threshold changed to 0.5 A	Vineeth
0x106, 0x206	Oct 06, 2023	Prevent solar charging timeout is changed to 10 seconds from 5 seconds. FT exit if temperature exceeds a threshold value	Vineeth
0x105, 0x205	Aug 31, 2023	Issue of not calling log api is fixed	Vineeth
0x0104, 0x0204	Aug 05, 2023	Improved device configuration, Fixed data loss with wrong EEPROM read, Fixed PAC ERROR reset issue	Vineeth
0x0103, 0x0203	June 03, 2023	Fix for ‘Device not configured’ issue, Restart the device if Wi-Fi fails to connect at the starting, blue led 10 second blink introduced for test connectivity, WiFi disconnects after sending data to server.	Vineeth
0x0102, 0x0202	May 17, 2023	Fix to reduce data latency and data loss issues, RED LED 5 second blink when mains failure detected, is removed, SSID name will have version string	Vineeth
0x0101, 0x0200	May 12,2023	Fix for issue of using Configuration tool and mobile app, Fix for connectivity test issue	Vineeth
0x0100, 0x0200	May 04 ,2023	Initial stable release	Vineeth

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V- iCON 0x0209

- **Enhancements/Fixes to Existing Features**
- **Reboot support from the server is added**

From the server device can be rebooted.

- **PAC Solar Hack is removed**

When migrating from 800 version firmware to 0x200 version, PAC Solar configuration is changed to unipolar from bipolar configuration. But since already devices were calibrated with 'bipolar' configuration, a hack was introduced in the code to solve the wrong solar readings due to the calibration constant value present. Now decided to re calibration/update calibration constant from the server, so that this hack is being removed. Special note to taken care is that once device is updated to 209 version, calibration constant (pac_sol_chg_i_const - 0xFD25) should be updated with the updated value and device should never downgrade to a version that has PAC Solar HACK.

V-iCON 0xE208

- **Enhancements/Fixes to Existing Features**
  - **Built on top of 207**
  - **Specially for a customer**
  - **Dynamic FT Entry is commented out**

V- iCUBE 0x0108, iCON 0x0208

- **Enhancements/Fixes to Existing Features**
  - **Dynamic OTA feature support added**

With this feature different devices can be updated with different OTA versions. Base version supporting this feature will be this released version.

  - **The issue of SSID write from server is fixed**

When SSID/Password is written from server via Filed Configuration utility, this was not getting updated in the device. This bug is fixed in this version.

  - **Verification of data written via field configuration utility**

When data is written from server via Filed configuration utility , the written data in the device is verified by reading back and if the data is written correctly or not updated correctly, the status is intimated to server via a flag in the updateWriteStatus API.

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V- iCON 0x0207

•Enhancements/Fixes to Existing Features

• No Load DC current threshold changed to 0.5 A

V- iCUBE 0x0106, iCON 0x0206

•Enhancements/Fixes to Existing Features

• Changed prevent solar charging timeout

Prevent solar charging timeout is changed to 10 seconds from 5 seconds

• FT exit if temperature reaches a threshold

When device is in Force Trip state, if temperature (Temperature1) reaches a threshold level, device exit from FT and will enter into FT after 30 minutes only.

V- iCUBE 0x0105, iCON 0x0205

•Enhancements/Fixes to Existing Features

• Issue of not calling log api is fixed

Some devices at sometimes was not sending logs to server but other api calls were ok. This has been fixed.

V- iCUBE 0x0104, iCON 0x0204

•Enhancements/Fixes to Existing Features

• Improved device configuration using mobile app

Sometimes when doing device configuration multiple times, it is seen that device is not able to serve the mobile app. Fix for this issue is added.

• Fixed data loss issue

When data is read from EEPROM, and reaches at the end region of data, device was reading some region outside the data boundary and that data will be of invalid and server rejects that value and no graph will be drawn. Hence data loss issue for a small block is seen. Fix for this is added.

• Device multiple reset due to PAC ERROR fixed

When if one pac sensor read was failed, it was setting as PAC ERROR and device exit from force trip. This is changed in such a way that PAC ERROR is set if pac sensor reading fails for 3 times continuously.

V- iCUBE 0x0103, iCON 0x0203

•Enhancements/Fixes to Existing Features

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- **Restart the device if fails to connect the Wi-Fi at startup**

  Soon after configuring the WiFi if device fails to connect to the WiFi, after 15 retries restart the device and this restart is limited to a maximum of 3 times

- **Fix for the 'Device not configured' issue.**

  Added CRC updation, when config data is updated from server which was causing the issue. Added retry to improve EEPROM read/writes.

- **Blue LED 10 second stable state**

  When running test connectivity, if response from server is received, but if it is not a valid response, it was missing to indicate this state. Added BLUE LED stable ON for 10 second to denote this state.

- **WiFi disconnects after sending data to server**

  Since Stable Wi-Fi connectivity introduced in the last release, is said to be introducing issues in WiFi connectivity for some customers, the change is reverted and WiFi connection is disabled after a server connectivity and connects back as and when required. Drawbacks of this scheme is

  1. It will cause slight data latency from device side as 10 second state machine will spend certain cycles for WiFi connectivity actions every time before sending data to cloud.
  2. For any router/AP which is limited the connectivity to certain number, when device tries to connect, if that number is reached, router may not allow the device to get connected and may report as data not available in the server.

V- iCUBE 0x0102, iCON 0x0202

•Enhancements/Fixes to Existing Features

- **Chance for data latency/data loss due to the code loopholes are fixed**
- **Frequent connection/disconnection of Wi-Fi is avoided**
- **RED LED in 5 second blink when mains failure is detected, removed.**
- **SSID Name exposed by the device will have firmware version string at the end**

V- iCUBE 0x0101, iCON 0x0201

•Enhancements/Fixes to Existing Features

- **Issue in using Configuration tool and mobile app is fixed**
- **'Connectivity test' issue is fixed**

• Known issues

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- **When tested mobile application using a mobile phone Xiaomi MiA1 android version 9 , socket connection to the device is not happening when mobile data is ON.**

V- iCUBE 0x0100, iCON 0x0200

- **Enhancements/Fixes to Existing Features**
  - **First stable release**

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