

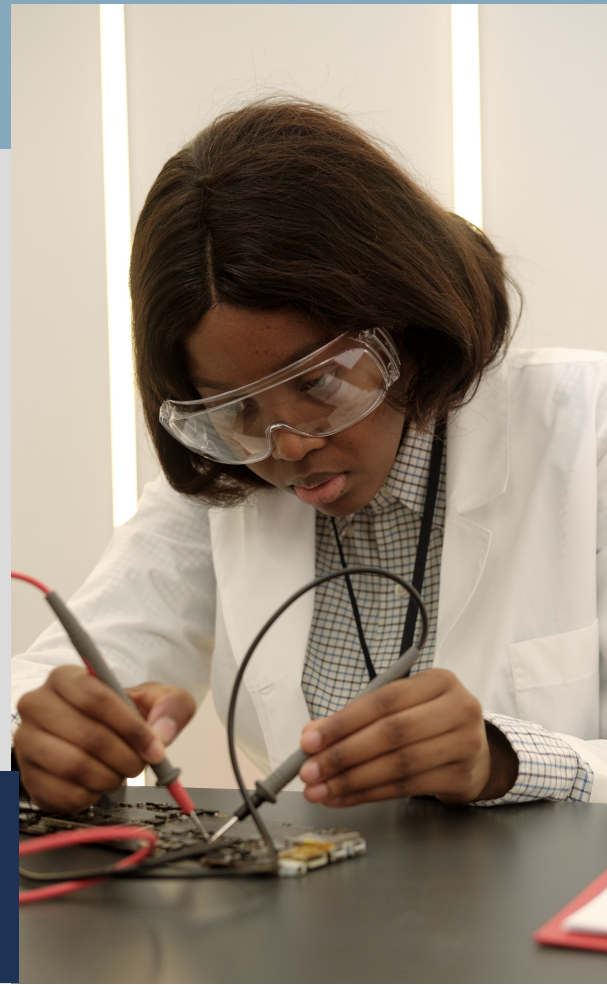


FACULTY ACCESS CONTROL SYSTEM
PHASE 01

USER MANUAL

Attendance Device

JUL 2023



Device Description

- This is the attendance marking device for Faculty Access Control system of the Faculty of IT, University of Moratuwa.
- This device works as a client for update attendance databases created for reports and insights generation.
- This device is designed for students to mark their attendance for lectures and lab sessions. Students can use their Student ID to mark the attendance.
- When student produce a card to the device, it automatically catch the RFID reading of that card to uniquely identify the student and make the necessary changes to the database.

Getting Started

- Device does not have a function to turn itself off.
- Device may sleep. In case of that press the Yellow colored side button to turn on the device.
- Log into the Web application and generate a session ID.
- Produce that session ID to the device to get started with the attendance marking process.
- After a successful session assignment, device displays "Session Assigned".
- Now the device is all ready for attendance taking.

Device features.

- Power on self test (POST)

feature enables the device to perform a self test on the components. If any failure detected, a continuous error message will occur restricting further execution of program. In this case please inform respective person to fix the issue.

- RFID capability

Device uses RFID NFC technology to perform the card reading process. Please note that, for an ideal card read operation, users need to place the card within 2cm from the marked surface.

Device features cont.

- WIFI connectivity

The device uses the WIFI to upload the attendance reports to database. Using the provided Credentials, device will automatically connect and update attendance records. In case of WIFI connectivity failure, device will try to connect several times within 30 seconds of time. If not succeeded within there, device will automatically move to the offline mode.

- Longer battery Life

According to the scientific data about device, it is calculated be operational for 66 hours after a full charge. Please note that, Device should kept charged for uninterrupted operation and avoid data loss.

Troubleshooting Errors

- POST Test Errors

Every POST(Power on self test) test error is descriptive and provide the exact location of error's occurrence.

To fix them a hardware fix is needed. In such case please

- WIFI connection Errors

These errors happen mostly due to the WIFI network problems. Keep in mind that, for the better WIFI experience, device need to be within the range of 10m from WIFI Access point.

- Device Freeze Errors

These errors are very rare and in case of occurrence, device need to manually reset using a reset button. For that , users can press RESET button inside the device,

Action Codes

- Record Upload and save - 13A5B2C8

This passcode is used to send the attendance data to the server and to save locally on SD card.

- Attendance Data Reset - 2B51A3C5

This passcode is used to reset a certain session's attendance data. This can be used for a retake of attendance. This doesn't clear the session ID.

- Attendance Full reset - 23A21BA3

This passcode is used to reset a certain session including its session ID. This can be useful when session ID entered is wrong and needs to be cleared.

- Device Sleep - 15A2C19B

This passcode is used to sleep the device. When this is entered, there is no way to stop device sleep mechanism.

Action Codes contd.

- Retry failed Uploads - 48A2B13C

When no internet access is available, device will save session data locally on device.

In such cases, this passcode can be used to send saved session data to database over an active internet connection.

Operation Conditions

- Operating temperature : 10 C - 40 C
- Input Voltage : 4.7V - 5.0V
- An environment free of electromagnetic interference.

CONTACT US.

Lakmina Pramodya Gamage

Hardware Lead

+9768000029

pramodyalakmina@gmail.com

Sankha Bimsara Ambeypitiya

Web application Lead

+9710424155

sankha.b21@gmail.com



FIRST YEAR HARDWARE
PROJECT
BATCH 21 GROUP NO 20/34