

**A report
on
Industrial visit**



efftronics[®]
To provide insight for enhancing wealth

**Efftronics Systems Pvt Ltd
Mangalagiri**

Date of visit: 15.09.2023

by



**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
KONERU LAKSHMAIAH EDUCATION FOUNDATION**

(Deemed to be University estd, u/s, 3 of the UGC Act, 956)

(NAAC Accredited "A++" Grated University)

Green Fields, Guntur District, AP, India – 522 502

INDUSTRIAL VISIT EFFTRONICS PVT LTD, MANGALGIRI

DATE : 15. 09. 2023
SECTION : II YEAR
EVENT : Industrial Visit/ Field Visit

Faculty Coordinators:

- 1) Dr. S. Arunmetha, Associate Professor, ECE
- 2) Dr. A Aravindhana, Associate Professor, ECE
- 3) Dr. Vivekananthan Venkateswaran, Associate Professor, ECE
- 4) Dr. Arjuna mudali, Associate Professor, ECE

EVENT DESCRIPTION:

An industrial visit has been organized by the Department of Electronics and Communication Engineering for II-year I semester students on 15.09.2023 between 14:00 to 17:00hrs. The visit's main objective was to provide technical exposure to acquiring practical knowledge in Electronic System Design, the Internet of Things, and Smart systems. This visit was very insightful and enlightening. Efftronics System Pvt. Ltd. provides smart and innovative solutions for smart cities, buildings, signalling & IOT services by automation and digitization for vibrant lives. We got to see how PCB manufacturing takes place in real life. It also happens that efftronics company provides embedded systems to Indian railways, and traffic signals to Vijayawada, we got to see the real-life system and learnt their working.

SESSION ACTIVITIES DURING EFFTRONICS VISIT:

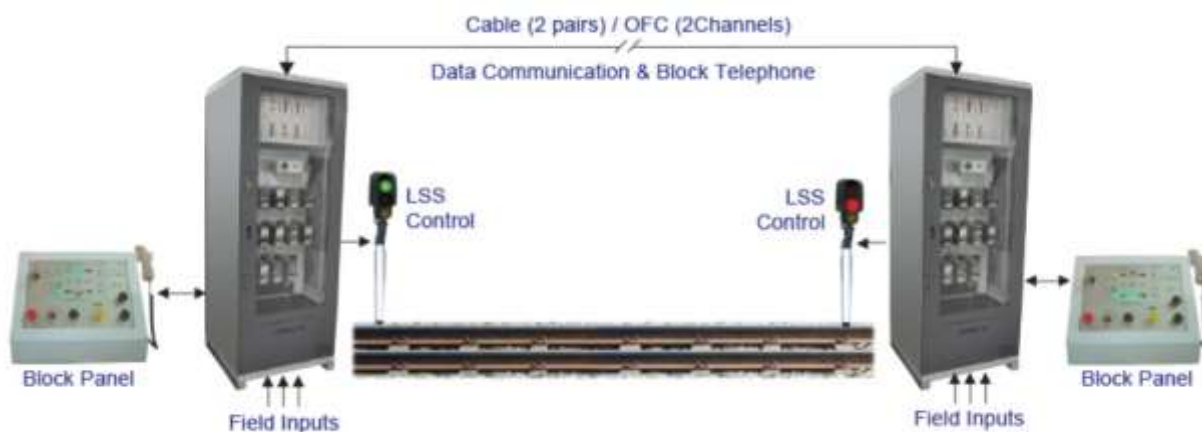
Students visited Efftronics and learned about

- Data Loggers
- Different types of sensors and Actuator equipment
- Different types of multi-color display systems
- Battery monitoring unit & Signalling Systems
- IoT Security Systems
- PCB Design, Manufacturing, and Assembling

They have explained to us what data logger, and digital block is and how they are currently being used in our Indian railways. A data logger will be available in a railway station, and it records all the information about the trains and tracks. It aims to detect errors by signal controllers, loco pilots & tracking the signalling system. Hence, helping railways avoid accidents & reducing train service detentions.



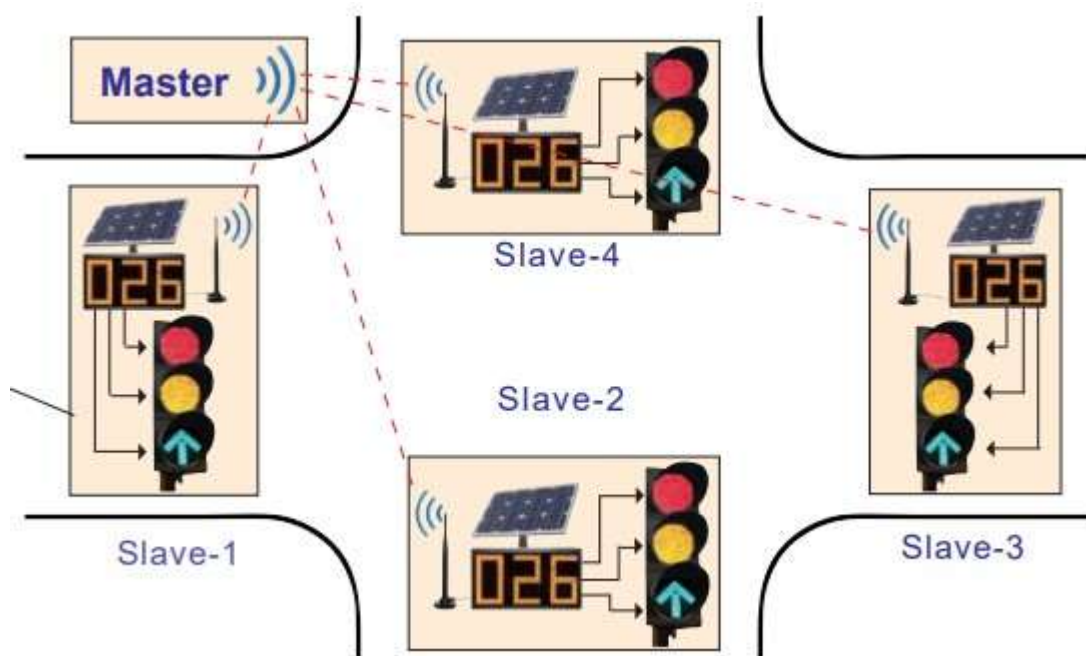
Data logger



Digital block

The digital block is used to find the location of the train and to detect if its movement is safe or not. It is used for exchanging permissions in a fail-safe way for sending/receiving trains between two stations. It has been developed as per RDSO/SPN/175/2005 both for single &

double-line working. We were also shown traffic lights working. We were explained how there were 2 types of traffic signals present in Vijayawada. The first type of traffic signal works based on the timer given to them beforehand the clears the traffic in a clockwise direction. The other one has cameras installed on all four sides and it adjusts the timer based on the traffic. Both use master-slave system. They both have a single master and 4 slaves. These slaves couldn't communicate with each other. They provide signals to mater which then will be sent to another slave after processing.



Traffic signals

We were also shown the manufacturing of PCBs. they have explained to us that they will get the PCB boards printed outside from another vendor. Which then will go through careful examination. the defective boards will be eliminated, and good boards be added components with the help of machinery and then by humans. They will once again go through careful examination. The non-defective boards will be tested in 5 different temperatures from -6 to 120 degrees to make sure they can survive any kind of conditions. If they were able to survive all the conditions, they would be covered with a protective later. Which can be only under UV light. They will go through one final test before shipping them off.

Photo Gallery of Visit





Faculty In charge

Professor In charge

Head of the Department