CENTRE OF EXCELLENCE - INTEL® Intelligent Systems Lab

OBJECTIVE

INTEL® Intelligent Systems Lab has been setup to enhance students' employability skills in order to bridge the gap between industry and academia. FICE is also committed to support in assisting students for the academic projects by providing training and certification thereby generating employment. This program entails establishment of Intel® Intelligent Systems Lab within M.Kumarasamy College of Engineering premises.

The lab has been established as a unit of **"ECE Center of Excellence"** with 20 dedicated highly configured computers with LAN powered by high speed internet in a cozy and professional environment in M.Kumarasamy College of Engineering. **INTEL® Intelligent Systems Lab** is a unique platform to fine-tune software and core skills of our students and to create numerous certified professionals with competitive skills which are mandatory for industries.

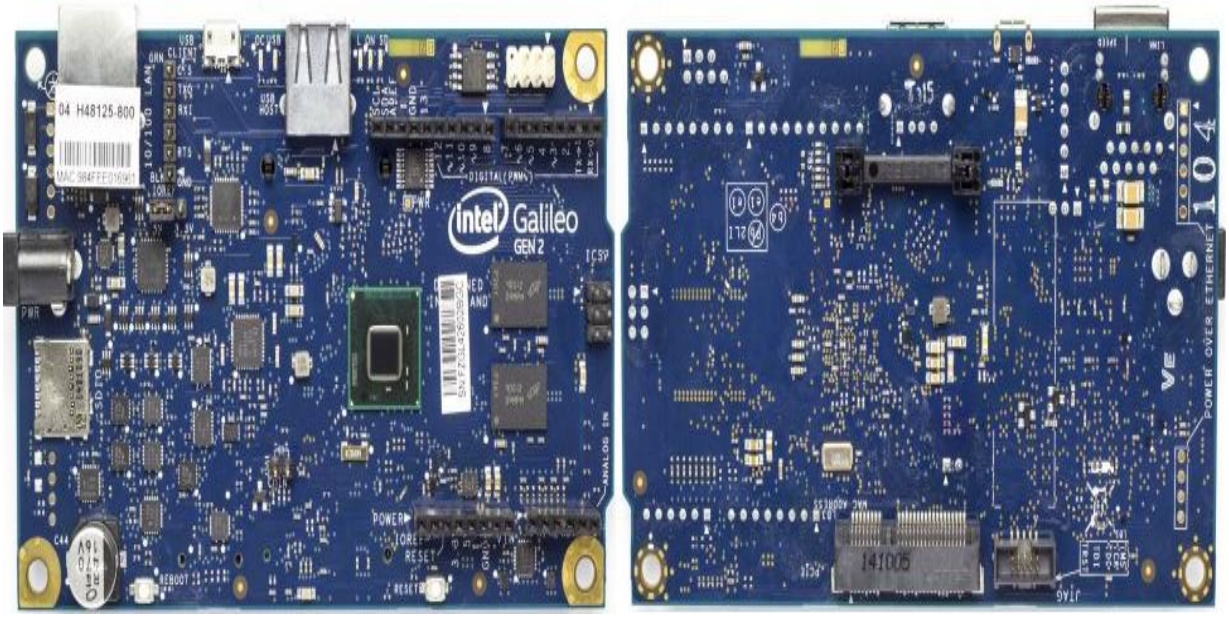
RESEARCH ACTIVITIES

- Autonomous Wheelchair for Disabled People
- Maturity of Leaf
- Automatic Passenger counting for verifying Number
- Automated Smart Ration Card System
- Garbage Monitoring System
- Efficient way of Measuring the soil nutrients and Quality of seeds
- An interactive wireless communication system for visually impaired people using city bus transport
- Baby's cradle Movement System
- Saviour for sewers
- Underground Mine Communication

FACILITIES AVAILABLE

INTEL GALILEO Gen – 2

- 6-pin 3.3V USB TTL UART header replaces 3.5 mm jack RS-232 console port for Linux debug. New 6-pin connector mates with standard FTDI* USB serial cable (TTL-232R-3V3) and popular USB-to-Serial breakout boards. 12 GPIOs now fully native for greater speed and improved drive strength.
- 12-bit pulse-width modulation (PWM) for more precise control of servos and smoother response.
- Console UART1 can be redirected to Arduino headers in sketches, eliminating the need for soft-serial in many cases.
- 12V power-over-Ethernet (PoE) capable (PoE module installation required).
- Power regulation system changed to accept power supplies from 7V to 15V.



GALILEO FRONT GALILEO BACK

Figure 1: Intel Galileo Gen – 2

TECHNICAL SPECIFICATIONS

Microcontroller	Intel® Quark™ SoC X1000, 32-bit
Operating Voltage	3.3/5V
Input Voltage (recommended)	12V
Input Voltage (limit)	7V to 15V
Digital I/O Pins	20
PWM Digital I/O Pins	6 (12bit)
Analog Input Pins	6
Flash Memory	8M
SRAM	256 MB
EEPROM	8 kb
Clock Speed	400 MHz
SD Card	Up to 32 GB

SOFTWARE AVALIABLE

Arduino IDE

COMPONENTS AVAILABLE

Component Name	Quantity
INTEL Galileo Gen – 2	10
GSM Module	2
Sensor Set (24 no’s)	2
Centrino Wifi Shield	5
MCU - 6050	1
Personnel Computers	20