The BEE-Ute Board: A Compact Sensing Utility

Introduction:

The Biomedical and Electromagnetic Engineering (BEE) Group’s Compact Sensing Utility (Ute) Board is a small (~1in²), 32bit system-on-board device with a bevy of integrated sensors and data logging capabilities.

The board, along with it’s easy to develop daughter boards, allows the user to quickly and easily gather data removing the need to develop prototype hardware and places emphasis on the application rather than designing and testing PCBs. The BEE-Ute board is suited for almost any application (user) and can be used for anything from human movement to controlling very small Unmanned Aerial Vehicles.

Aim:

An easy to use, highly-integrated, rapidly deployable compact sensor that allows engineers and researchers to focus on the sensing and not the sensor.

Diversity of Applications:

- Head & Torso Tracking for Sleep Apnoea Patients
- Field Locomotion Analysis & Tracking
- I-Ball: Interactive Aids for the Visually Impaired
- Power Mgmt/Charging (BQ24072)
- IMU (MPU9150)
- Pressure Sensor (BMP085)
- 32-Bit Microcontroller (PIC32MX)
- USB 2.0 Interface
- USB to UART (FT230X)
- MicroSD (High Speed)