ELEKTRİK VE ELEKTRONİK MÜHENDİSLİĞİ BÖLÜMÜ

BİTİRME PROJELERİ SERGİSİ

TEXAS INSTRUMENTS

COMPUTER CONTROL APPLICATIONS WITH TEXAS INSTRUMENTS CHRONOS WATCH

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INTRODUCTION

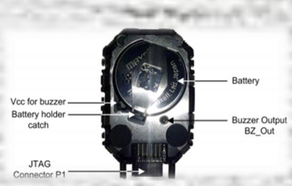
Aim of the this project is to improve a device software that allows for a user to remotely control three dimensional objects in computer screen by using accelerometer in eZ430-Chronos watch. By the way at any place in the world user can control the object while using this watch. Also, the mouse control and a simple game application has been made. eZ430-Chronos watch is a MSP-FET430PİF microcontroller based wireless development tool. Except the watch functions, it has an integrated wireless module which communicates with computer through wireless USB access point. Also, programming is implemented through USB wireless programming port. Thus, it is flexible tool for designing wearable devices.

In this project C programming, Python and Microsoft Visual Studio enviroments are used. In a following sections, after introducing the own software of Chronos watch, the used programming environment will be given and some brief description of the software development will be explained.

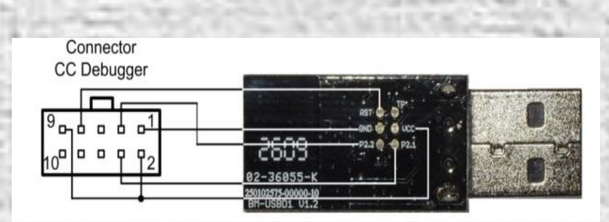
This software is written in c # in the Visual Studio environment. Reads data from an accelerometer sensor 10 ms time too. Interpreted data that can be read by identifying the mouse cursor over the direction in which the watch moving in that direction.
Time to take the ACC mode connection is opened if you are connected to the computer via USB RF Access Point and virtual serial port is formed by the "connect" button is clicked, you need to be a successful connection. If it is not plugged in, it is not possible to link the RF Acces Point. RF Access Point plugged in, but not if the connection is not opened at ACC mode Initializes the connection software, but time and sensor data is unreadable.

A successful connection is started, the mouse control feature is started according to the sensor than the mouse starts to move. For starters, a 10 ms time acceleration sensor data is read-only. From this time till about 200 ms speed removable.

Unboxing & Device Review

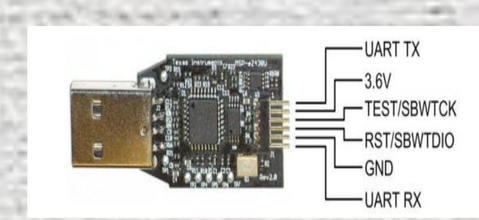


USB Controller

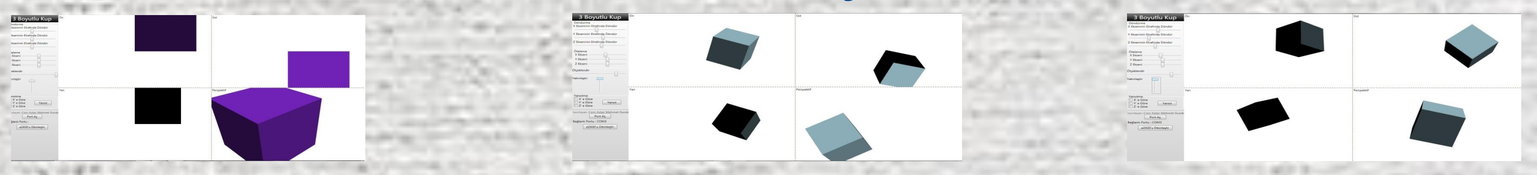


CC-Debugger	RF Access Point
Pin 1	GND
Pin 2	Vcc
Pin 3	P2.2 (DC)
Pin 4	P2.1 (DD)
Pin 7	RST
Pin 9	Vcc

USB Emulator



Three Dimensions Object Control



Chronos Watch Used as a Game Console

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