Universidade Federal de Alaoas
Faculdade de Economia, Administração e Contabilidade

DFM for MCU-Based Embedded Systems for Computer Simulation.

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DFM

- Design for Manufacturing (DFM) is the art of designing products in such a way that they are easy to manufacture.

- The basic idea exists in almost all engineering disciplines, but depends on the manufacturing technology.

- In simple language it means relative ease to manufacture a product, part or assembly.

Idea for a new product/service

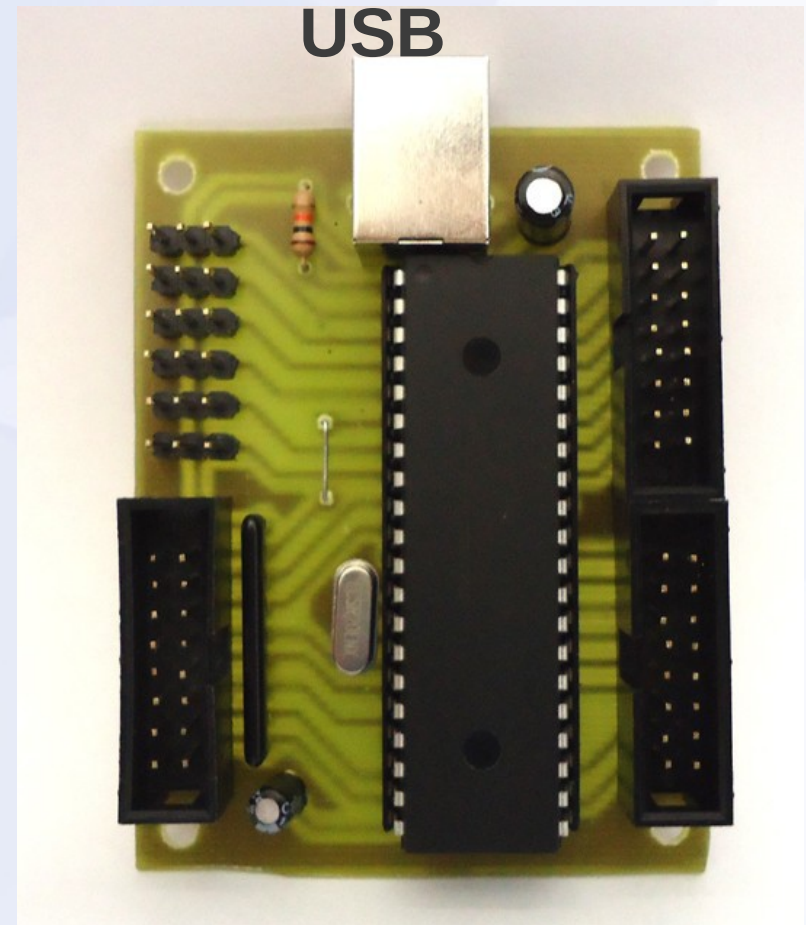- Driving simulator for training people for taking DMV test.

Initial Drawbacks

- How to connect real world car parts to a computer system?

Interface

Stargate Project

- An Open source hardware for Human-Computer Physical Interface.

- Intended for Interactive Applications.

- Analog and Digital inputs

USB

The Very First Prototype

http://youtu.be/Q96-vtmfOiU

http://youtu.be/ueWMd7X0TvU

http://youtu.be/YOBJScpdMfY

Our Presentable Prototype

Many other homemade designs

Some professional builders

e-commerce

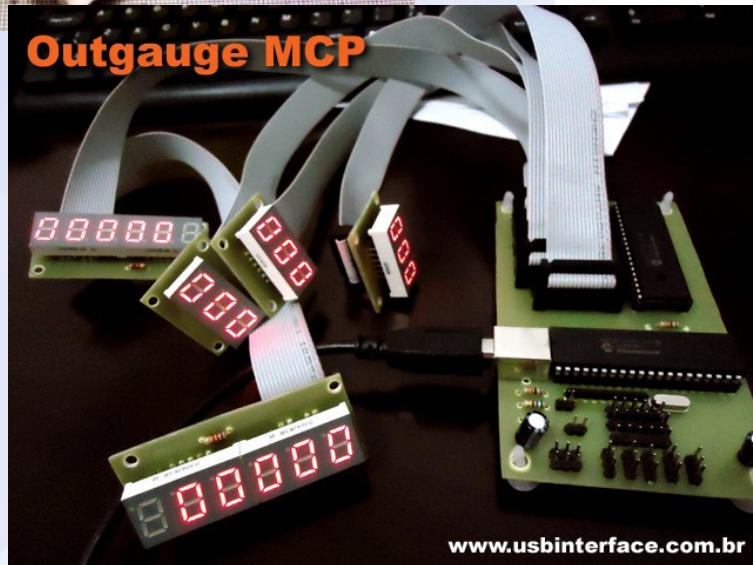# Visitors (customers and friends)

Sales per year (#boards)
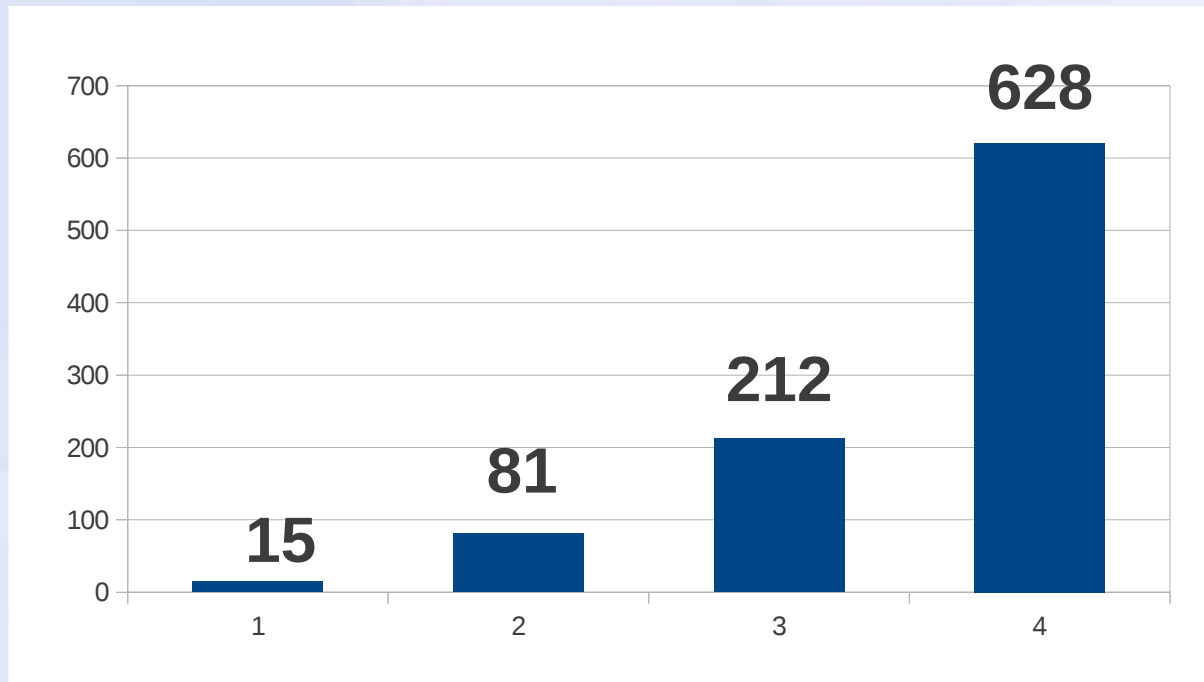
Portfolio

Advanced Projects

Training Simulator:
Cessna Skylane RG II Turbo
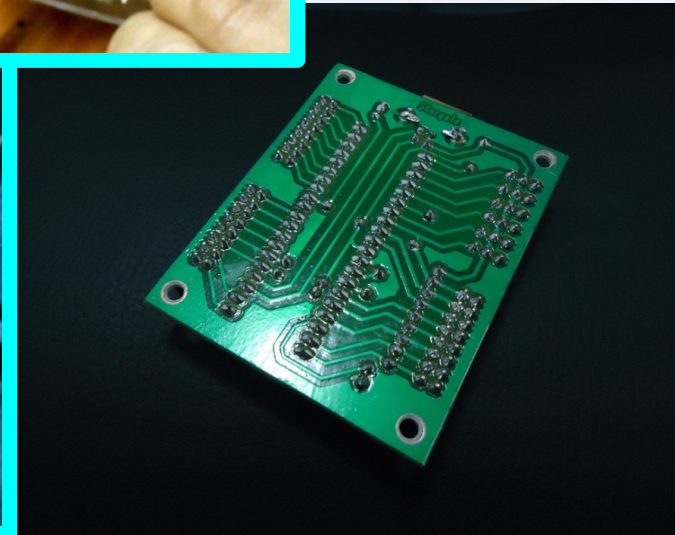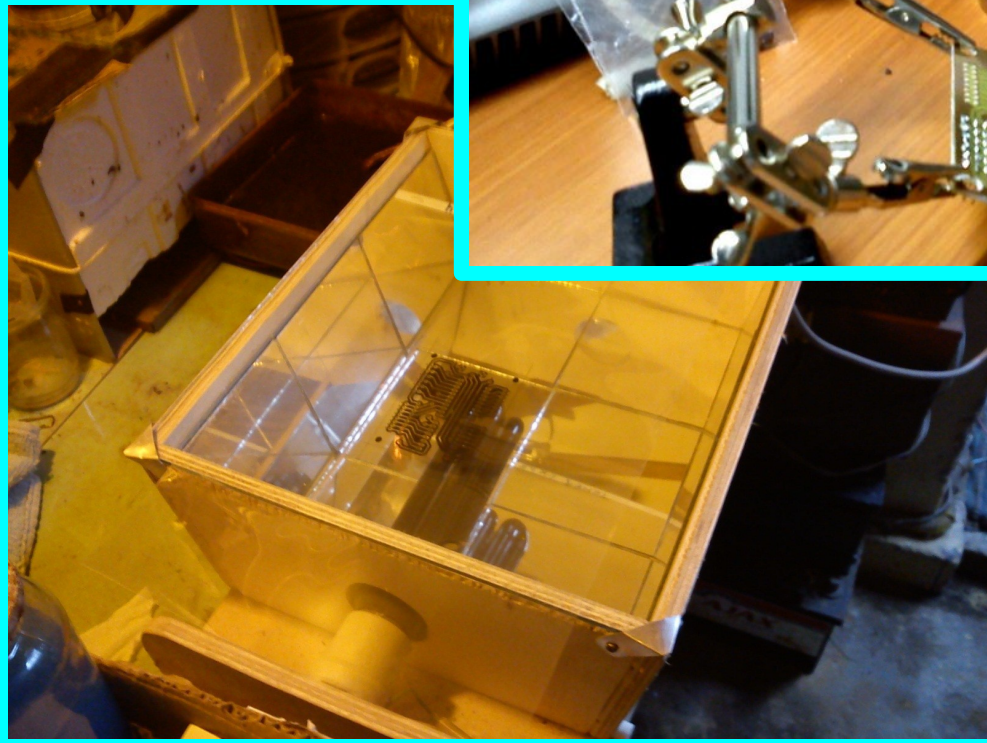BRAVIO Brasil Avionics

Motorsport simulations
Pedals with load cell sensor
CST Cannon Technologies

Truck Simulator for training
SIMBRA Simuladores do Brasil

PCB Manufacturing

Design for Manufacturing

- Platform-based design.

- Product functionality based on the customer preferences

- Ever shrink turn around:

  - Stargate-864 (1 year)

  - Outgauge-MCP (6 months)

  - Outgauge-F1 (1 month)

  - Stargate-12 (1 week)

  - Reduced cost for development.

  - Same materials for different applications.

Supply Chain

New and Future Projects

- Stargate-NG Projects
- Raspberry Pi Project
- Freescale Vybrid-based Platform

Thank you

This project was partially supported by: