PROPOSAL OF A DTMB SIGNAL MONITORING TOOL BASED ON RASPBERRY PI PLATFORM.

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Introduction

- Introduction and adoption of DTMB standard in 2013.
- Created a demonstration zone on Havana.
- Technical evaluation of all receivers introduced in Cuba.
- Deployment around the country.
- Need check DTMB signal parameters in different places.

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Objective

Create a monitoring tool of DTMB signal using the development platform Raspberry Pi.

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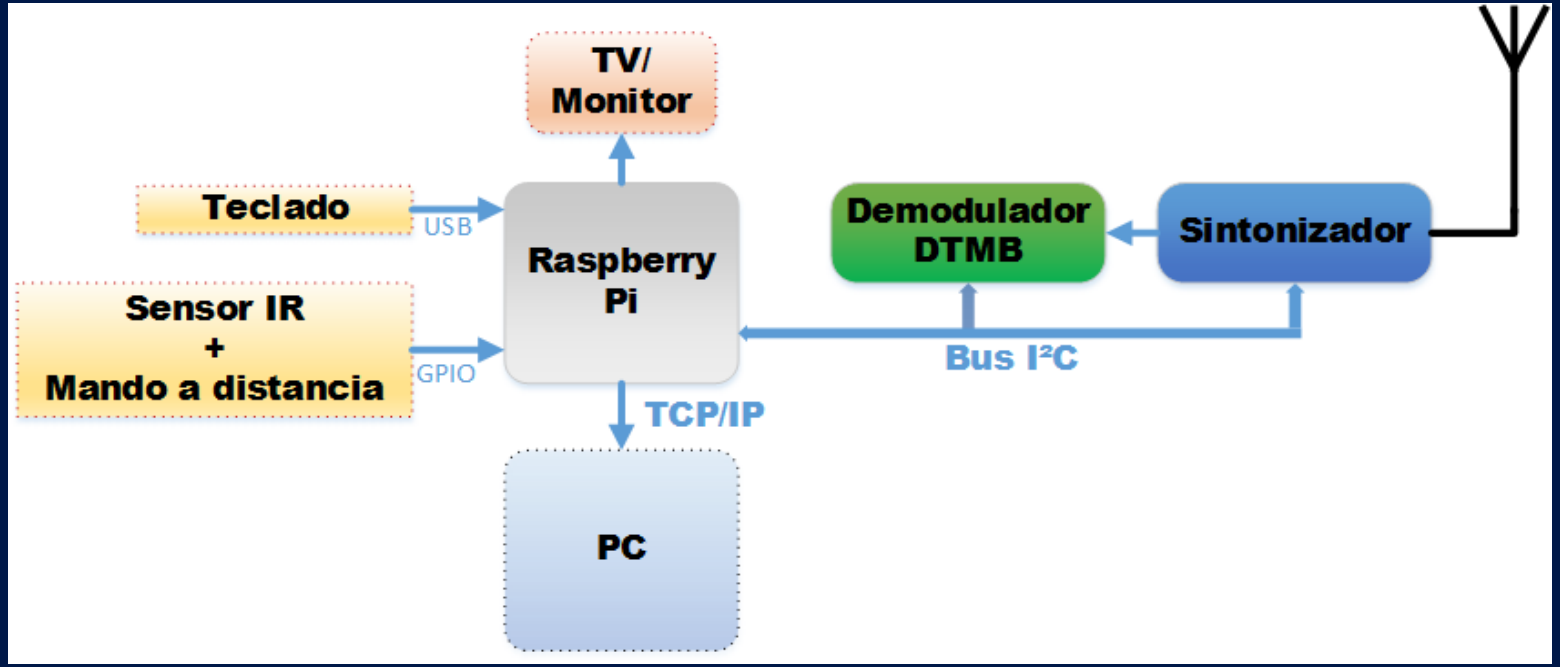
Structure of the Proposed Design



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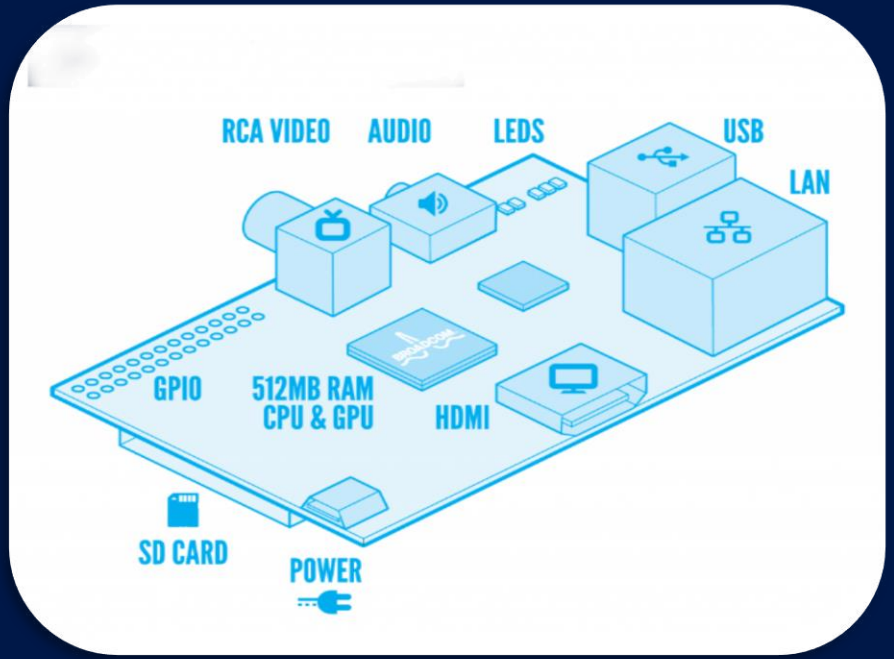
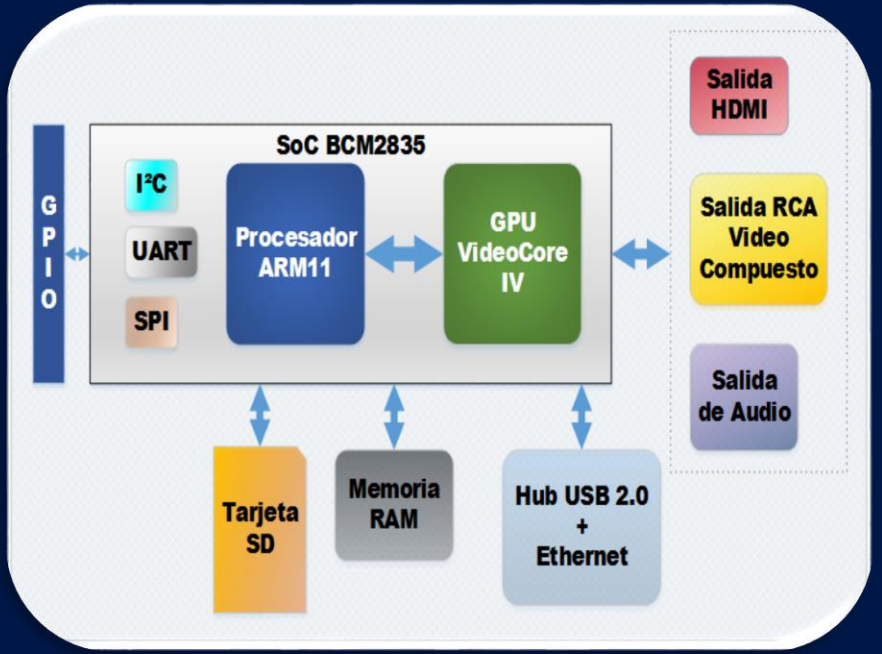
Raspberry Pi





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Raspberry Pi

Features	Details
SoC (System on Chip)	BCM2835 (Broadcom) CPU: ARM11 ARM1176JZF-S GPU: Broadcom VideoCore IV
System clock frequency	700 MHz
RAM	512 MB
Storage	SD memory Card
Network Interface	Fast Ethernet (10/100 Mbps)
Video	HDMI (1080p), CVBS (NTSC/PAL), DSI.
Audio	3.5mm jack
Camera Interface	CSI-2 Connector
USB	2 USB 2.0 Ports
I/O Interfaces	17 pin General purpose for I^2C, UART and SPI.

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User Interface

The Raspberry Pi is able to work with different Operating Systems based on Linux distribution, as:

- Arch Linux ARM
- OpenELEC
- Pidora
- Raspbmc
- RISC OS (no Linux distribution)
- Raspbian (recommended)

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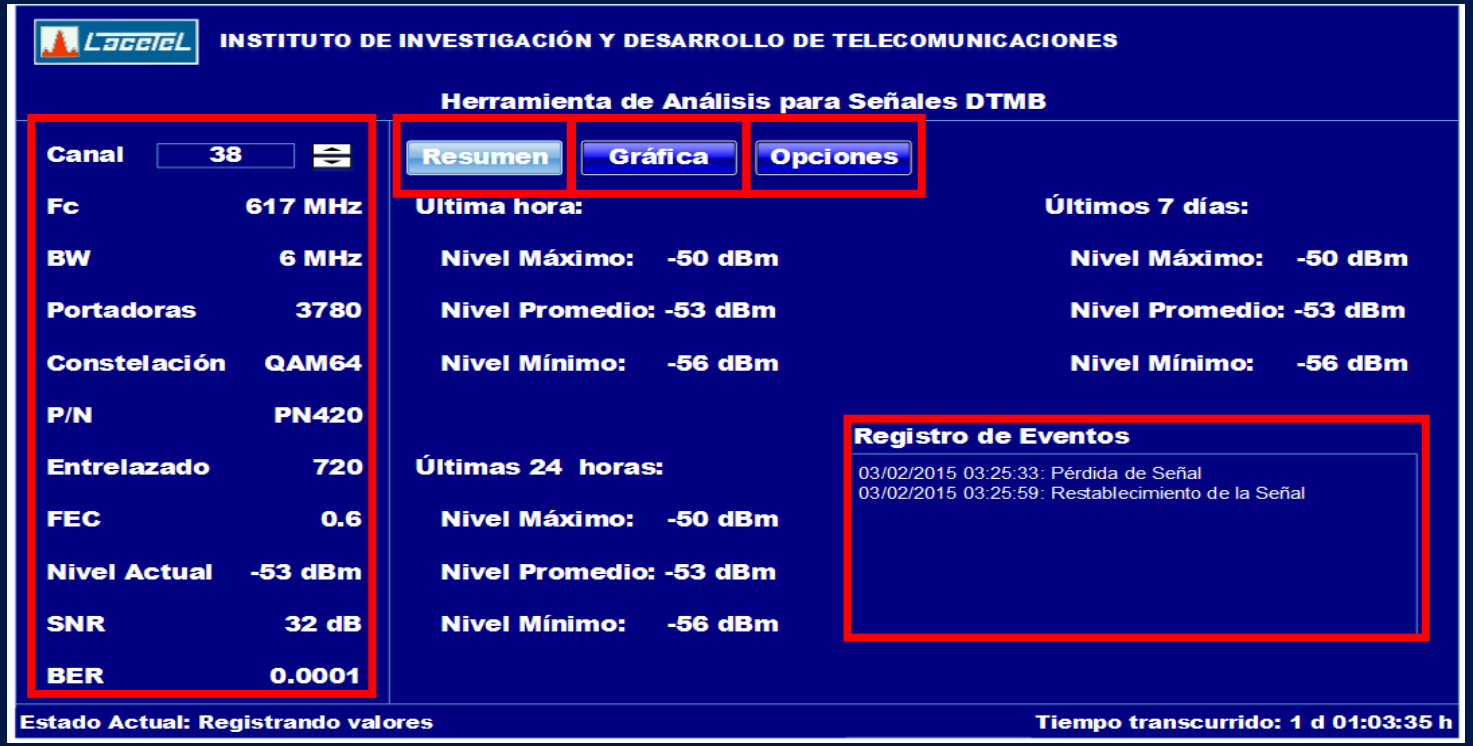
User Interface :: Overview



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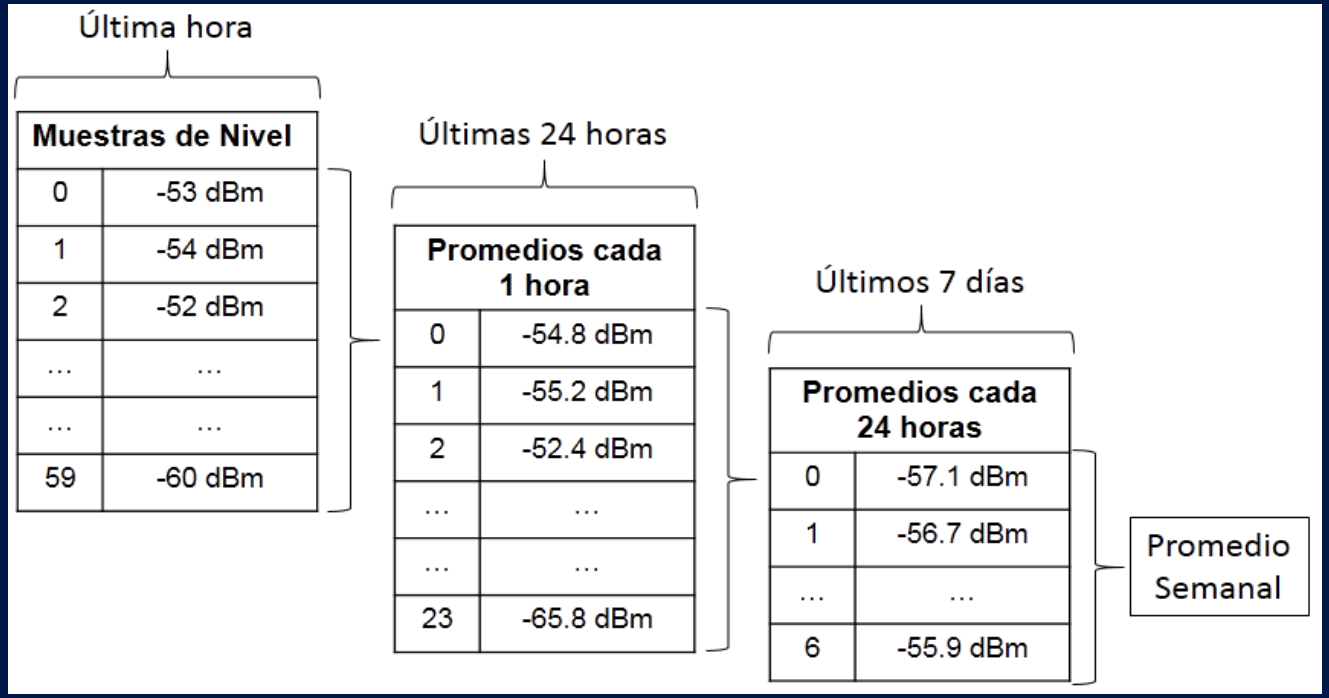
User Interface :: Design



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User Interface :: Chart View

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Additional Features

This system is using a computer, in this case is possible to add new features. One of them is, export the measurements, historical graphs, event logs, etc. in a USB memory.

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Conclusions

- The platform Raspberry Pi can be used as a DTMB signal analysis tool.

- Was presented an user interface design with basic information of the signal received during various time intervals.

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