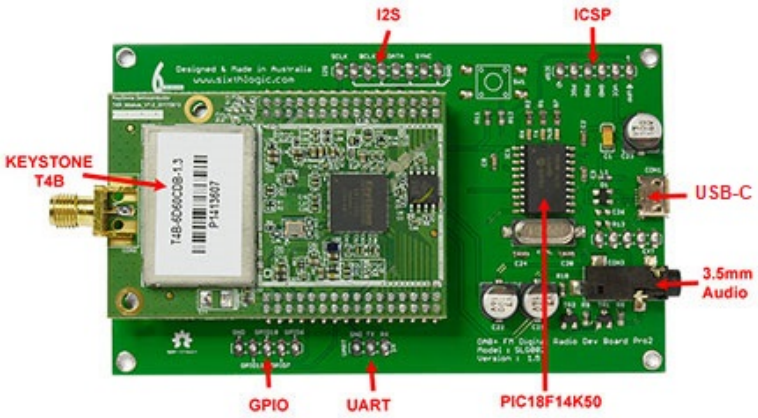
MonkeyBoard DAB DAB+ FM Digital Radio Development Board Pro2.5 with SlideShow
[http://www.cartft.com/catalog/il/1618]



999.00 EUR
incl. 19% VAT, plus shipping

- **DAB+ FM ! SLG002 !**
- **100x60 mm size !**
- **Programming API !**
- **FM with RDS !**

Support: Manual [EN] | DAB Channel Examples | Programming API | Eagle PCB Schematics | Firmware Source Code | Centrafuse Installation | VB.net Demo & Source

Designed and Made in Australia, the DAB+ FM Digital Radio Development Board Pro2.5 provides a platform for developing and evaluating DAB+, SlideShow and FM receiver. The board contains a Keystone T4B DAB/FM module and a Microchip PIC18F14K50 microcontroller. The T4B module is Keystone's latest DAB+/FM receiver module with the following features:

- ETSI EN 300 401 compliant receiver
- DAB/DAB+ sensitivity to -99dBm (typical)
- FM sensitivity to -106dBm (typical)
- DAB Color Slide show support (Data service option)
- Decodes audio services up to 384kbps without external RAM
- FM with RDS/RBDS decoder (*** RDS reception only available for station name, station text and genre and is subjected to certain condition of power level and frequency deviation)
- Combined antenna input for FM / Band3
- UART Serial control interface
- Integrated stereo audio DAC
- Digital audio output – I2S
- Real time clock accurate 50ppm
- Configurable general purpose I/O
- Ultra low-power

The Microchip PIC18F14K50 provides a USB to Serial interface for the T4B module to communicate with the host PC. Despite the sample code provided in this Development Board for communicating with the board is based on serial communication, user can analyse the serial communication and implements a driverless HID protocol by rewriting the firmware on the PIC18F14K50.

New SlideShow Feature

The KeyStone T4B module supports SlideShow. Slideshow adds visual content (slides) to radio broadcasts on DAB or DAB+. It enhanced the digital radio with visuals using images in JPEG or PNG format.

What can you do with it?

- Build a PC controlled DAB+ FM Digital Radio
- Build a CAR PC DAB+ FM Digital Radio
- Build a standalone DAB+ FM Digital Radio (requires external microcontroller)

HARDWARE DESCRIPTIONS

- Power Supply Circuit

The board is typically powered by 5VDC from USB. The PIC18F14K50 is drawing power directly from the USB-C port. From the USB's 5VDC, the power is further distributed into 3.3VDC LDO to the KeyStone T4B module. The power of LDO is always on.

- Microchip PIC18F14K50

This microcontroller is used to provide a Virtual Serial Port to the KeyStone module. It is flashed with a customised CDC RS-232 Emulation Demo firmware. Other than performing the standard serial emulation, it also control the power, reset and audio shunt of the KeyStone module.

- Reset Circuit

Reset of the module is performed by RESET pin emulated by DTR of the virtual serial port.

- ICSP

The ICSP programming port is the standard Microchip's In-Circuit Serial Programming port and is compatible with Microchip's PICkit.

-EXT

EXT port has two 5V logic signals, ¯SHDN and ¯SHNT. They are used to control external audio circuitry's power and mute.

- Push Button (SW1)

This button, when pressed during a power-up, will trigger the PIC18F14K50's USB HID bootloader in programming mode.

Pre-installed Software

- Microchip's USB bootloader (programming the board using a normal USB cable)
- Microchip's CDC RS-232 emulation firmware

Packing List

- 1 unit of DAB+ FM Digital Radio Development Board
- 1 unit of retractable antenna

More Informations (also links to Plugins f. FreeIce, Centrafuse, etc..)