



VENUS DOCK RADIO REFERENCE PLATFORM

## OVERVIEW

Venus Dock Radio is designed to be a Digital Tick and WorldDMB Profile 1 compliant evaluation design for price sensitive, entry level radio applications (DAB/DAB+/DMB-Radio and FM-RDS). Based on the Verona 2 module running DAB 6.x embedded software, Venus Dock Radio provides a flexible architecture, enabling OEMs to use the design as a starting point to speed development of custom products.

Venus Dock Radio provides a simple route to enable OEMs to produce iOS docking systems offering DAB radio, FM radio and wired docking. Together with the Frontier Control App, the Venus Dock Radio platform provides an advanced, flexible and integrated audio system offering the ability to display programme-relevant text and full colour images.

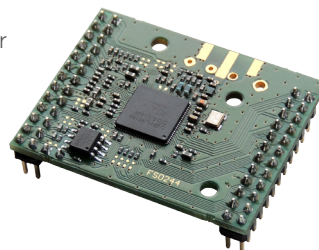
## CUSTOMER DELIVERABLES

Venus Dock Radio is provided with an engineering design pack including specifications, schematics, gerbers, bill-of-materials and software. Support is available to customise the platform for individual requirements.

## PCB ARRANGEMENT

The fully-flexible evaluation design comprises the Verona 2 module and *four* main PCBs.

- Verona 2 module, 43.4mm x 34 mm
- Mainboard PCB: power and audio, 117mm x 63mm
- Keyboard and LCD PCB with 13 keys, 2 rotary encoder and display daughterboard, 117mm x 19mm
- Audio PCB, 117mm x 60mm
- iOS dock connector PCB, 41 x 66 mm



VERONA 2 MODULE

## APPLICATIONS

- Entry level digital dock radio
- Portable (kitchen) dock radio
- Clock radio

## FEATURES

Audio Modes	DAB/DAB+/DMB-Radio (WorldDMB Profile 1 and Digital Tick compliant) FM with RDS
Power supply	9 V 2.5A DC from adaptor Current: TBD mA, Built-in 1600mAh Li-polymer battery
Antennas	Single external antenna for DAB/FM
User interface	13 push-button switches, 2 rotary encoders with push button, infrared remote
iOS / Android App	iOS / Android App control of radio. RadioVIS graphic display on connected smart device.
Displays	128 x 32 Full Graphic LCD capable of emulating 2 and 1-line displays. Display backlight control
Audio output	2 x 2 W amplifier, digital EQ with presets, volume control with mute. Headphone jack (analogue audio only)
Connectivity	iPod/iPhone wired docking connection Authentication coprocessor for Made for iPhone applications. USB 2.0 Full-speed for firmware upgrade
Clock/ Alarm	Clock (with auto update) Multiple alarms with snooze / sleep

# VENUS DOCK RADIO FS4445

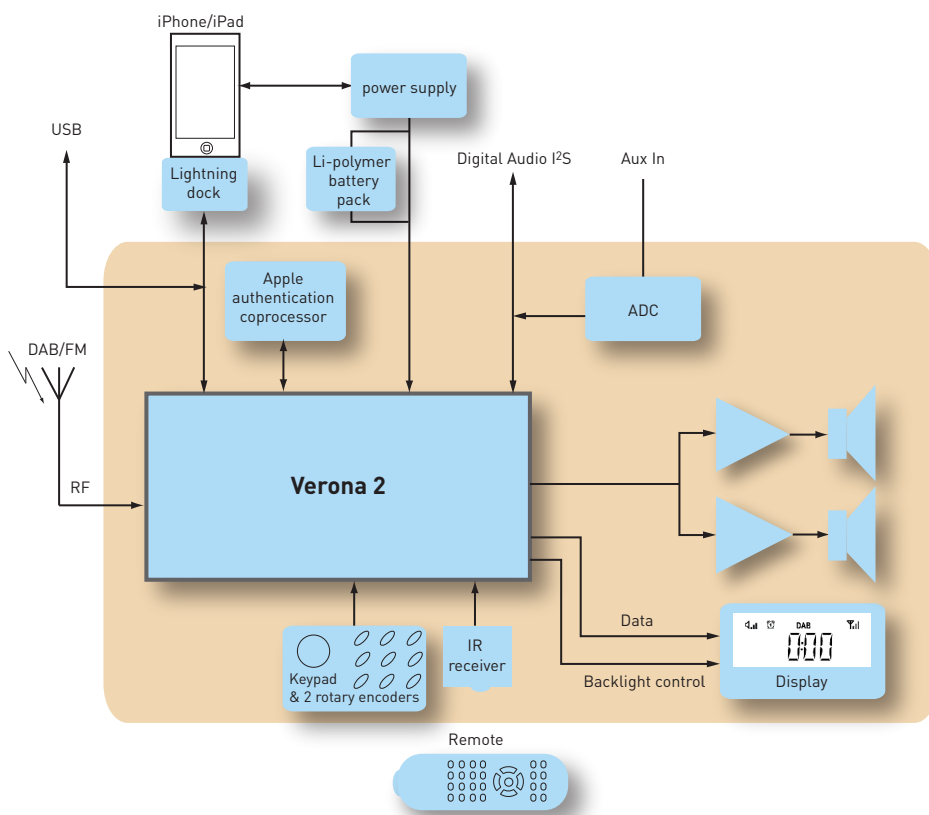
Platform for low-cost DAB/DAB+/DMB-Radio/FM Digital Tick compliant digital dock radio

## DESCRIPTION

The main components of the Venus Dock Radio are shown in the diagram opposite. These are the Verona 2 module, keypad, display, amplifier control and power supply.

## SOFTWARE AND USER INTERFACE

Frontier Silicon has made considerable investment in creating the most versatile, intuitive and flexible software available. Venus Dock Radio uses the DAB 6.x software which is customisable to OEM's individual requirements. Venus Dock Radio supports a standard 2 x 16 character display.



VENUS DOCK RADIO BLOCK DIAGRAM

## STANDARDS AND CERTIFICATION

Verona 2 and Venus Dock Radio have been designed to meet digital tick compliance and WorldDMB's Profile 1 specification for basic digital radio throughout Europe and beyond, and also operate seamlessly with the rest of the digital audio world. Suitable end-products based on this platform should be able to obtain certification for various industry standards; for more information, contact Frontier Silicon.

## SPECIFICATION

DAB/DAB+/DMB-Radio	Sensitivity	-98 dBm (typical)
	Tuning range	174 - 240 MHz
FM	Sensitivity (@40 dB SNR)	-106 dBm (typical)
	Tuning range	87.5 to 108 MHz
THD	Mono	< 2%
Channel separation (FM)		> 35 dB
Audio power output (RMS)		2 x 2 W

