



VENUS HD RADIO™ REFERENCE PLATFORM

APPLICATIONS

- FM HD Radio™ portable radios
- Clock Radios
- Music systems

OVERVIEW

Based on Frontier Silicon's Verona HD Radio™ module the Venus HD Radio reference platform is the only fully certified master-mode HD Radio solution endorsed by iBiquity Digital Corporation. Designed to enable high-performance FM HD Radio receivers at low-cost, targeting consumer portable, clock radios and music systems.

Acting as the host processor, the Verona HD Radio module removes the need for an additional applications processor as well as associated system development. This new module is electrically and mechanically compatible with our existing Verona DAB module to allow easy product migration from existing product designs.

The platform demonstrates a fully functional HD Radio receiver, including the capability for firmware updates. Backed by Frontier Silicon's comprehensive support, the platform shortens the implementation and development time of production ready designs.

CUSTOMER DELIVERABLES

The Venus HD Radio platform is provided with a full engineering design pack including detailed specification, schematics, gerbers, bill-of-materials, software and EMC and ESD compliance reports. Support is available to customise the platform for individual requirements. The platform is production-ready and needs only industrial design tooling to finish off a complete high-quality audio system.

PCB ARRANGEMENT

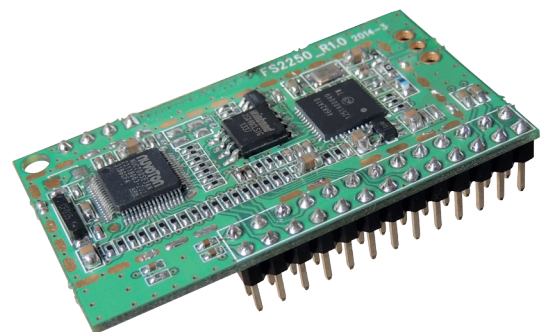
The fully-flexible reference design comprises three main PCBs and the Verona HD Radio module.

- Audio PCB: low-cost 2-layer board, 117 x 60 mm
- Keyboard PCB: 13 keys, 2 rotary encoders with push button, 2-layer board, 117 x 19 mm
- Main PCB: 2-layer board, 117 x 63 mm
- Verona HD Radio Module: 48 x 28 mm

OPERATING MODES

Venus HD Radio supports the following operating modes:

FM HD Radio	FM hybrid digital mode with multicasting HD2/ HD3 Reception of audio and RDS/ RBDS data from FM broadcasts. World FM band range from 76MHz to 108MHz, with international frequency tuning steps.
Aux-in	Playback of external source e.g. MP3 player/ laptop.



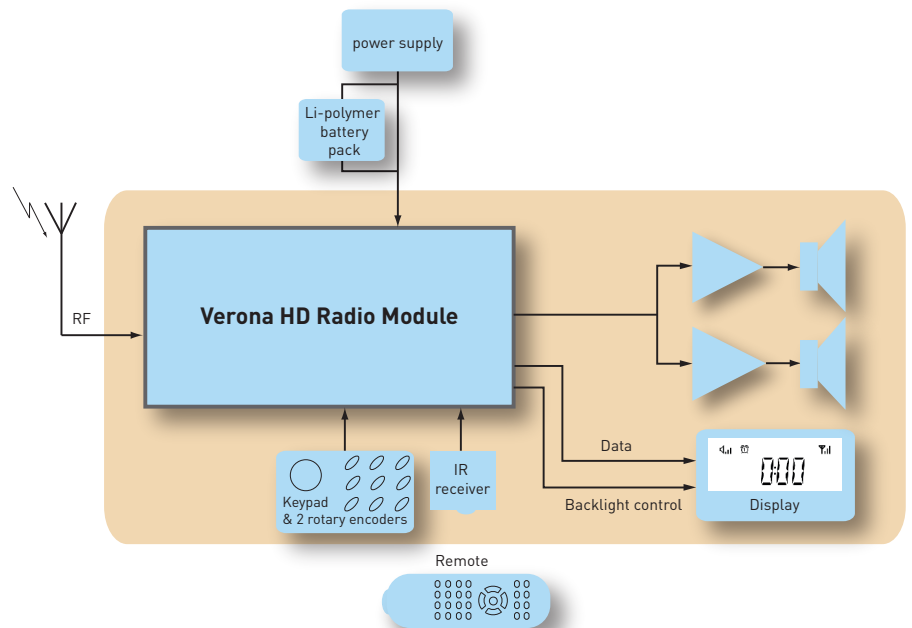
VERONA HD RADIO MODULE -
48 X 28 MM

VENUS HD RADIO™ PLATFORM WITH BLUETOOTH FS4255

FM HD Radio platform based on **Verona HD Radio** module

FEATURES

Power supply	9 V 2.5A DC from adaptor Current: TBD mA (typ) Built-in 1600mAh Li-polymer battery
Antennas	Single external antenna for FM HD Radio
User interface	Up to 13 push-button switches, 2 rotary encoders with push button, infrared remote
Displays	2 x 16-character display with clock and icons. Backlight control
Audio output	2 x 2 W amplifier, digital volume control with mute. Headphone jack (analogue audio only) Optional: External EQ
Language Support	English, Spanish, Portuguese, French
Temp Range	operation: 0 to +40°C storage: -20 to +55°C



HD RADIO MODULE IN A TYPICAL
EXAMPLE APPLICATION

ACOUSTICS

The Venus HD Radio platform incorporates high quality acoustic design, to demonstrate the excellent audio capabilities of the Frontier Silicon architecture.

SOFTWARE AND USER INTERFACE

The HD Radio SDK software is customisable to OEM's individual interface requirements.

STANDARDS AND CERTIFICATION

The Verona HD Radio module demonstrated in the Venus HD Radio platform has been designed to meet the HD Radio certification requirements of iBiquity Digital Corporation. For more information, contact Frontier Silicon.

See also:

Verona HD Radio Module FS2250 Product Brief FSM-0013-0968



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Specifications are subject to change without notice.

Venus HD FS4250 Product Brief FSM-0013-5406 Rev 1



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