

VERONA 2 MODULE
43.4 MM X 34 MM

OVERVIEW

Verona 2 is Frontier Silicon's latest DAB/DAB+/FM custom digital radio module, designed to enable Digital Tick compliant products, using the new, highly integrated Kino 4 digital radio System on a Chip (SoC).

Designed to provide a high-performance, low-cost solution to a wide range of digital radio products, Verona 2 can be configured in master-mode for stand-alone portable, clock or smart device radios and slave-mode for audio systems with a host MCU.

In addition to enabling reduced system cost, Verona 2 introduces a host of state-of-the-art technologies to optimise power consumption, RF and audio performance.

Verona 2 is a single-sided assembly built onto a 2-layer printed circuit board (1.6mm thick). Maximum component height is 2mm

The module provides all interfaces necessary for a fully functional digital radio speaker system with digital/analogue radio, needing only power supply, display, keypad, audio amplifier and speakers to complete a product.

CONNECTIVITY

- USB 2.0 Full Speed device/host (12 Mbit/s)
- UART/SCB (I²C compatible) control interface
- Analogue audio output
- Digital audio output – I²S or S/PDIF
- SSI (SPI compatible) and SCB (I²C compatible) interfaces
- Keypad and rotary encoder support
- Infrared remote control
- Configurable general purpose I/O (GPIO)
- Multi-purpose ADCs and PDM/PWM out
- Option for F-Type antenna connector

APPLICATIONS

- DAB/DAB+/FM digital radios
- Clock radios
- Digital Audio systems

KEY FEATURES

- Customisable feature-set via the latest DAB SDK
- Innovative system for minimising self-interference
- On-chip audio DAC
- Sensitivity optimised antenna configurations
- Band II/III and option for L-Band
- DAB/DAB+ sensitivity to -100 dBm (typical)
- FM sensitivity to -108 dBm (typical)
- Works with third party Bluetooth™ module
- Power consumption typical 100mW/ Stand-by 1mW
- Option for fully digital audio signal path with internal EQ
- OLED TFT display with DAB slideshow. Memory:
 - Integrated for DAB/DAB+/FM
 - Built-in flash - size dependent on application
- Battery charge control on platform
- Temperature range:
 - Operation: 0 to +70°C
 - Storage: -40 to +85°C

VERONA 2 FS2445

DAB/DAB+/FM digital radio module for Digital Tick compliant audio devices

DESCRIPTION

Verona 2 provides a complete flexible, low-power digital radio system, in a compact module, incorporating digital/analogue radio capability as required.

The diagrams opposite show the main components of the Verona 2 module and a typical application of a Verona 2 module.

SOFTWARE

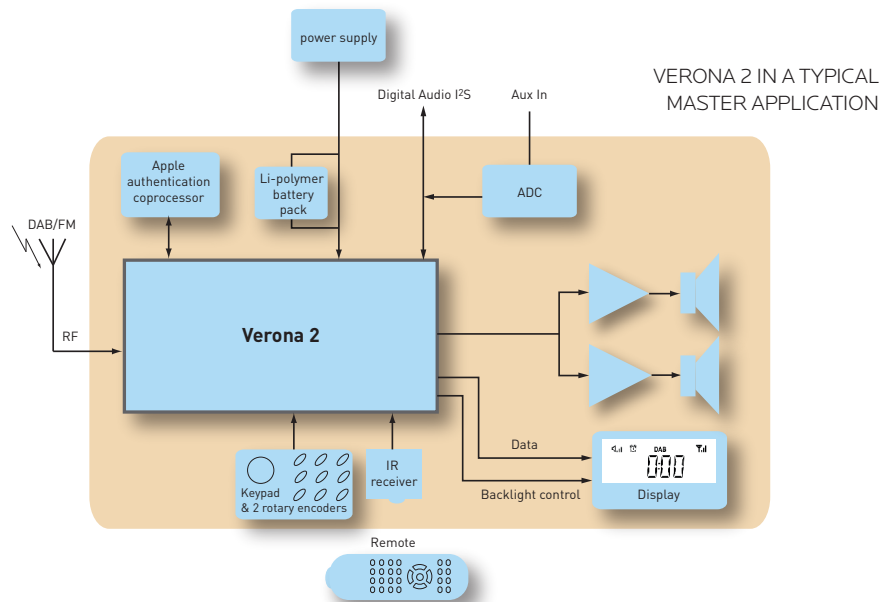
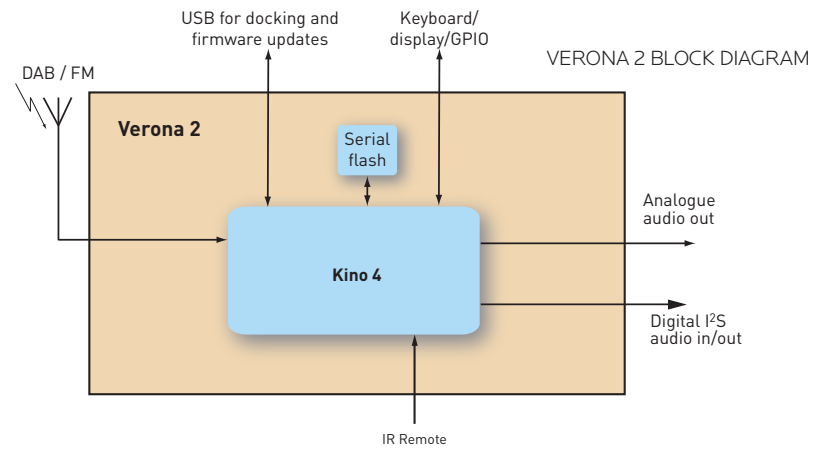
Software is configured to customer requirements and pre-installed in the module's flash memory.

Full suite of customisable application software which includes:

- Support for a variety of User Interfaces, including 1-line or 2-line displays.
- Clock with multiple alarms/timers
- Presets
- Battery charge control
- Support for up to 16 keys
- Optional USB field upgrade available

STANDARDS

Verona 2 is precertified for digital tick compliance, significantly reducing the testing requirements for end products based on this module.



SPECIFICATION

Supply voltage options		3.3V, 1.8V and 1.1V external supply 3.3V and 1.1V external supply 3.3V only external supply (default)
Power consumption <i>(dependent on implemented supply voltage option)</i>		1 mW (Standby) 80-260 mW (DAB/DAB+) 115-251 mW (FM-RDS)
DAB/DAB+	Sensitivity	-100 dBm (typ)
FM	Sensitivity (@ 40 dB SNR)	-108 dBm (typ)

