

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

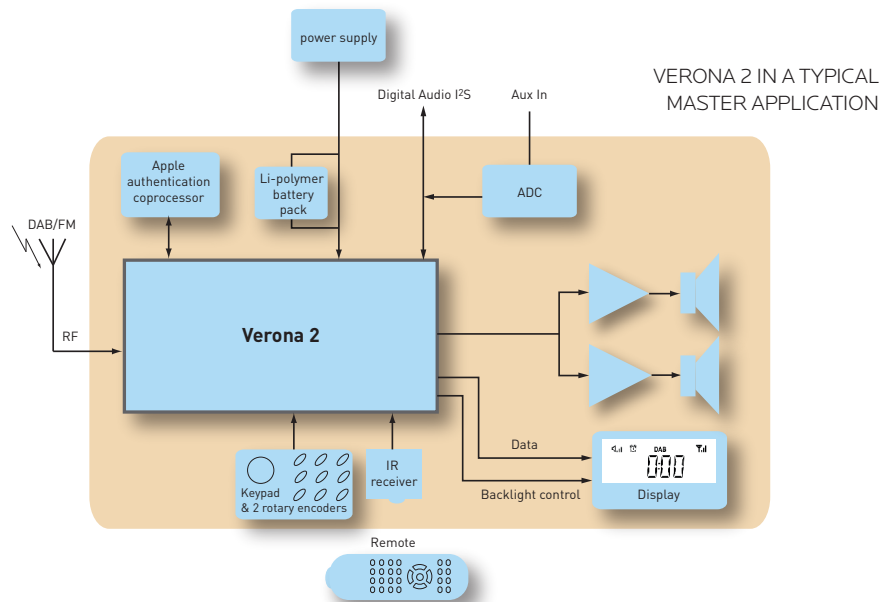
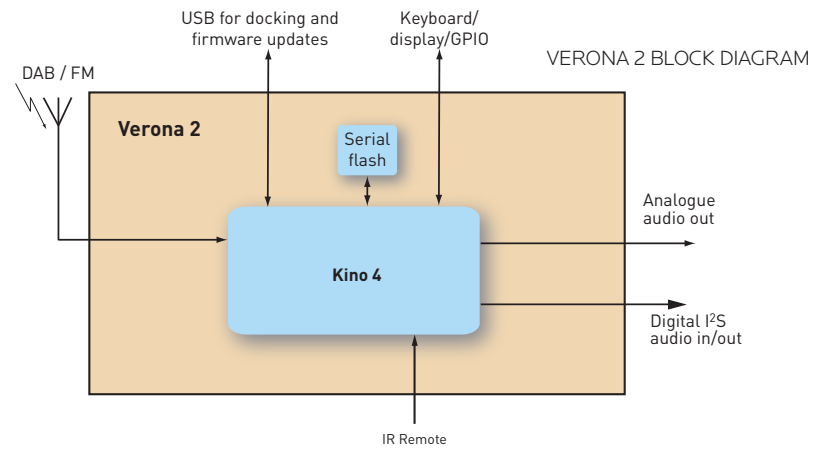
Software is configured to customer requirements and pre-installed in the module's flash memory.

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) |

