



VENUS COLOUR PLATFORM

## APPLICATIONS

- DAB/DAB+/DMB-R, FM-RDS radio
- *Bluetooth* streaming and control
- Colour display radio
- Master software in standalone radio or audio system
- Slave software functioning as a component in audio systems

## OVERVIEW

DAB SDK version 6.1 embedded digital radio software expands on the capabilities of version 6.0 and includes support for colour displays, enabling the presentation of DAB slideshow images and information broadcast by DAB radio stations.

DAB SDK provides a complete DAB/FM demodulate and decode sub-system from RF to digital, or analogue, audio output. In master mode DAB SDK supports a variety of interfaces, including: local keypad with rotary encoder, IR remote control and multiple display options. Alternatively in slave mode DAB SDK can be controlled by a host processor via an asynchronous control channel.

Connection options include *Bluetooth*™ connectivity (implementing AVRCP and A2DP profiles) enabling audio streaming. Audio streaming from any *Bluetooth* A2DP compatible device allows users to play their stored music collection or on-line music service through the audio device.

The Verona 2 module is based on Frontier Silicon's latest generation Kino 4 digital radio chip, enabling a range of power saving and performance features to be exploited by DAB SDK v6.1 to produce the next generation of efficient and cost effective digital radios.



KINO 4

## LISTENING MODES

- **DAB/DAB+/DMB-Radio** digital radio with a wide choice of channels broadcast free-to-air
- **FM with RDS** (Radio Data System)
- **Smart Device**, audio streaming with *Bluetooth* wireless connection
- **Auxiliary input** for external music sources such as MP3 players

## OTHER KEY FEATURES

- *Bluetooth* support (including AVRCP and A2DP profiles)
- **Dynamic Label Plus (DL Plus)** support
- **DAB slideshow** full colour images on 320 x 240 pixel display
- **Software-based audio equalisation**
- **Configurable display support including colour.**
- **Clock** with date display, auto-update and dual independent alarms
- **Sleep/snooze**
- **DAB and FM presets**
- **Native MMI operation**
- **Frontier Silicon API (FSAPI)** slave mode operation
- **Multiple languages** including English, French, German and Italian

# DAB SDK v6.1

Embedded software for connected DAB/DAB+/DMB-R audio systems

## MODULES AND PLATFORMS

DAB SDK runs on the advanced Frontier Silicon Verona 2 module, which can be supplied either alone, or as part of a complete reference and evaluation platform. OEMs can use the reference platforms as-is, modified, or as the basis of their own custom products.

| MODULE   | PLATFORMS    |
|----------|--------------|
| Verona 2 | Venus Colour |



## DISPLAY AND MENUS

DAB SDK supports three display types:

- 14-segment Starburst (with icons)
- 2 x 16-character (with or without icons)
- 320 x 240 full colour display supporting DAB slideshow.

For all displays, the menu structure is straightforward, consistent between modes and fully flexible. It can be customised to remove modes that are not supported by the manufacturer's hardware.

## SOFTWARE DEVELOPMENT KIT

The DAB SDK Software Development Kit can be used by OEMs to configure many aspects of DAB SDK's functionality, including:

- Device and input support
- DAB service list presentation
- DAB frequency bands
- Clock time format
- Smart Device settings
- Volume curve
- UI strings

## CUSTOMISATION AND UPDATES

Frontier Silicon works closely with customers to brand and customise all software for particular markets and end products.

The software includes a USB update function.

## DOCUMENTATION

Included with DAB SDK are the following documents:

- DAB SDK FSAPI User Guide
- FSAPI Protocol Reference Guide
- End-User Manual for the reference platforms. These are designed to be easily customisable for manufacturers' own audio systems. It is supplied as a Microsoft Word document with screenshot image files.

## STANDARDS AND CERTIFICATION

DAB SDK, the Verona 2 module and the Venus platform have been designed to operate seamlessly with the rest of the digital audio world. As well as being compliant with the standards shown, suitable end-products based on this platform should be able to obtain certification for appropriate regulatory industry standards, for more information, contact Frontier Silicon.

