OVERVIEW

DAB SDK version 6.2 embedded digital radio software expands on the capabilities of version 6.1 and introduces a number of performance and user interface enhancements. DAB6.2 supports the latest Frontier Silicon DAB modules; Verona 2 and Siena. The user interface now offers a selection of themes allowing digital or analogue clock display, a choice of wallpaper backgrounds and audio feedback for the local interface buttons. A night mode and store demo mode are also available. Performance enhancements build on our class leading attributes with active noise avoidance, standby mode scanning and DAB power saving to further improve the speed, efficiency and clarity of our digital radio performance.

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 and Siena modules are based on Frontier Silicon’s latest generation Kino4 and Kino4 lite digital radio chips, enabling a range of power saving and performance features to be exploited by DAB SDK v6.2 to produce the next generation of efficient and cost effective digital radios.

LISTENING MODES

• DAB/DAB+ 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

APPLICATIONS

• DAB/DAB+, 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

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
• Power saving in Active DAB mode
• Software-based audio equalisation
• Configurable display support including colour, wallpaper and display themes
• Analogue or Digital Clock display with date, auto-update and dual independent alarms
• Audio feedback for local interface buttons
• New Night mode and store demo mode
• DAB scanning in standby
• Peripheral noise avoidance dynamically adjusts peripheral interfaces to minimize interference (Patent pending)
• 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 v6.2
Embedded software for connected DAB/DAB+ audio systems

MODULES AND PLATFORMS
DAB SDK runs on the advanced Frontier Silicon Verona 2 and Siena modules, 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.

<table>
<thead>
<tr>
<th>MODULE</th>
<th>PLATFORMS</th>
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<tbody>
<tr>
<td>Verona 2/Siena</td>
<td>Venus Radio</td>
</tr>
<tr>
<td>Verona 2</td>
<td>Venus Colour</td>
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<tr>
<td>Verona 2/Siena</td>
<td>Slave</td>
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DISPLAY AND MENUS
DAB SDK supports three display types:
- 14-segment Starburst (with icons)
- 2 x 16-character (with or without icons)
- 320 x240 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 and display format
- 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 and Siena modules, and the Venus platform have been designed to support as wide a range of standards as possible. 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.