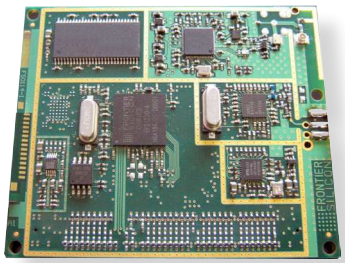
VENICE 8 FS2028

Colour touch radio module for connected audio systems



VENICE 8 - 65 X 80 MM

EXAMPLE END PRODUCT

APPLICATIONS

- **Colour touch Internet radio**
- **Kitchen radio**
- **Clock radio**
- **Hybrid radio**
- **iPod/DAB docking systems**

OVERVIEW

The Venice 8 FS2028 module provides a colour touch radio solution for Internet radio, home network streaming, premium streaming content services, DAB/DAB+ and FM-RDS products. It provides the simplest route to market for premium high-quality audio streaming from live Internet radio stations or network-based music collections.

Based around Frontier Silicon's powerful Chorus 3 processor, Venice 8 streams radio stations and music files in a variety of formats and protocols including AAC+, MP3, Real and WMA, enabling a new generation of stand-alone networked colour touchscreen based audio products.

Venice 8 supports the RadioDNS standard, allowing integration of IP-based content with radio broadcasts. Frontier Silicon's first RadioDNS feature is RadioVIS, which displays visual slides that are associated with broadcast services.

Several hardware and software configurations are available, with different combinations of integrated RF receivers for Wi-Fi networks, DAB Band III, FM reception and Ethernet.

USER INTERFACE

The fully featured colour graphical user interface with touch input provides a modern interface to a new generation of connected audio sources at your fingertips.

The interface opens up quick and convenient access to a wide variety of audio sources including broadcast radio, Internet broadcasts and music servers.

The UI supports a wide variety of navigation options to search or browse the huge selection of stations and podcasts, by:

- Favourites
- Location
- Genre
- New stations
- Most popular
- HD radio[1]

SCREENS FROM THE VENICE 8 USER INTERFACE, INCLUDING RADIOVIS SLIDES*

FEATURES

- RadioDNS/RadioVIS integration of broadcast and IP-based content, for a rich radio experience
- Full colour graphical UI with touch driven interface
- WorldDMB Profile 1 compliant and Profile 2 capable
- DAB (MPEG1) and DAB+ decoding
- Home network music streaming over UPnP (DLNA 1.5 compliant)
- Music player with trick play
- TFT touch colour panel display
- Hi-Speed USB host interface for music playback
- WPS (WiFi Protected Setup)
- Memory:
  - Integrated RAM on Chorus 3 baseband IC for DAB/DAB+/FM
  - On-board 64 Mbits Flash and 32 or 64 MBytes SDRAM
- On-board stereo 16-bit DAC
- Automatically software upgradable in the field through Ethernet/Wi-Fi connection or USB 2.0
- I^2S bus for optional external DAC or CODEC
- S/PDIF interface
- UART interface for iPod/iPhone docking
- Infrared remote control
- RoHS compliant
- Temperature range:
  - operation: 0 to +70°C
  - storage: -40 to +85°C

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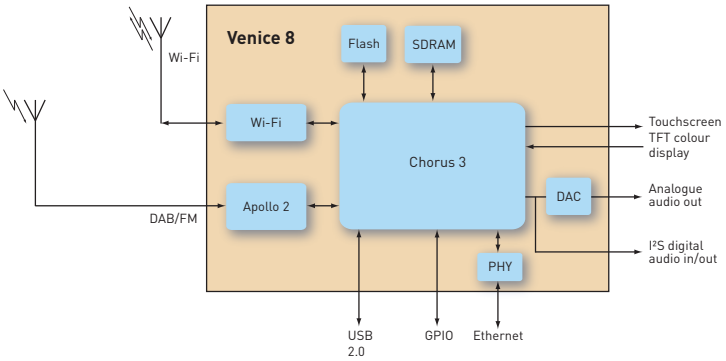
DESCRIPTION

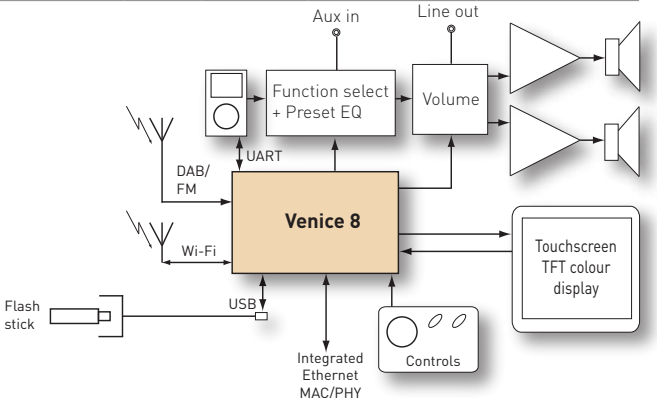
The main components of the Venice 8 module are shown in the diagram opposite. These are the DAB/FM RF front-end (Apollo 2), Chorus 3 baseband processor, Flash, SDRAM, TFT display interface, Wi-Fi, Ethernet MAC/PHY and audio DAC. Hardware interfaces include SPI and SCB serial ports. Analogue (line-level) and digital (S/PDIF and I²S) outputs are available.



INTERNAL BLOCK DIAGRAM

BUILD OPTIONS

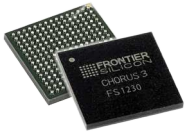
PRODUCT CODE		WI-FI	DAB	FM	ETHERNET
FS2028-	W	•			
	WB	•	•	•	
	WF	•		•	
	WE	•			•
	WEB	•	•	•	•
	WEF	•		•	•



TYPICAL VENICE 8 APPLICATION

CHORUS 3 BASEBAND PROCESSOR

The **Chorus 3** FS1230 baseband processor is the latest generation of integrated system-on-chip, providing an optimised solution for Internet radio, WorldDMB Profile 1, Profile 2, DAB, DAB+ and FM-RDS broadcast receiver products. It incorporates a number of mixed-signal system components as well as an applications processor and advanced peripherals (including an Ethernet MAC), providing significant space, cost and power savings.



CHORUS 3 ADVANCED BASEBAND CHIP

Music services

- Live Internet radio broadcasts from over 13,000 radio stations
- Over 200,000 Internet radio pod casts and “listen-again” services
- Last.fm: personal radio music streaming
- Pandora[2]: personal radio music streaming
- Music player with Trick play and play queue management
- UPnP music streaming (DLNA 1.5 compliant)
- USB host music player
- Album artwork and Internet radio station logo display

last.fm PANDORA internet radio

[1] Most HD radio stations available to stream

[2] Currently available in US

* Example screenshots not necessarily representative of final product

STANDARDS AND CERTIFICATION

Venice 8, Jupiter 8 reference platform and software have been designed to operate seamlessly with the rest of the digital audio world. As well as working with the standards shown, suitable end-products based on this platform should be able to obtain certification for various other industry standards; such as CE/ FCC approval, iPod and iPhone certification, Wi-Fi and DLNA. For more information, contact Frontier Silicon.

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