

# Jupiter 4 FS4024

WiFi radio reference platform (internet radio/DAB/FM-RDS)



## APPLICATIONS

- Portable radio
- HiFi tuner/adaptor
- Clock radio

## OVERVIEW

The Jupiter 4 FS4024 reference platform is a fully-qualified reference design for WiFi radio applications requiring a low-cost feature-rich solution. Based on Frontier Silicon's Venice 6 WiFi/DAB/FM module, Jupiter 4 provides a highly flexible architecture enabling customers to use the design either as-is, modified, or as a starting point to speed development of custom OEM products.

Jupiter 4 provides a fast-track route for packaging the latest audio technology using the smallest possible bill-of-materials and with the shortest time-to-market. Frontier Silicon can supply (at no cost) the information necessary for customers to build the platform for themselves, or support in the customisation of the platform to meet individual requirements.

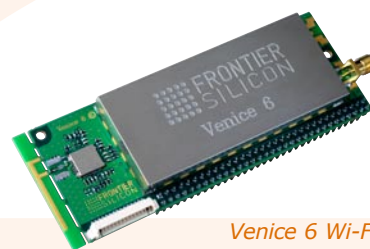
The platform is production-ready and needs only industrial design tooling to finish off a complete high-quality audio system.

## CUSTOMER DELIVERABLES

- Detailed specification
- Schematics
- Gerbers
- Bill-of-materials
- Customised software and user interface
- EMC and ESD compliance report

## VENICE 6

Jupiter 4 is powered by the highly-integrated Venice 6 FS2026 WiFi/DAB/FM module. The software provided with the module is fully customisable.



*Venice 6 Wi-Fi radio module*

## OPERATING MODES

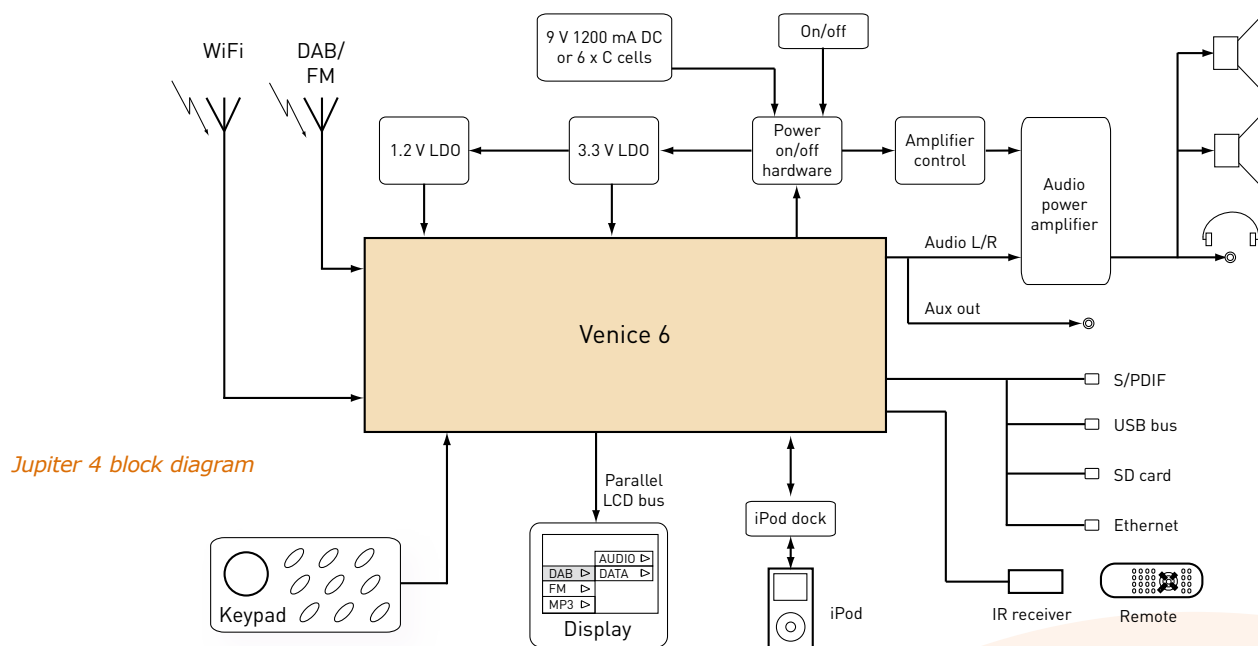
The WiFi radio design supports four different operating modes, which can be offered within a single product. These modes are:

Internet radio	Playback of audio streamed from an internet server or podcast. The product offers access to over 8000 internet radio stations.
Music player	Playback of audio files from a personal computer or media server-type device.
DAB radio	Reception and decoding of DAB audio and data stations from a DAB ensemble.
FM radio	Playback of audio and RDS data from a FM frequency



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Jupiter 4 block diagram

## FEATURES

Modes	Internet radio Music player DAB Band 3 reception (optional L-Band) FM with RDS
Additional functions	Alarms (multiple) Clock (auto update) Sleep/snooze Customisable number of presets Software upgrade
Power supply	9 V 1200 mA DC 6 x C cells (portable radio)
Antenna	Internal or external WiFi antenna Single combined antenna for DAB/FM
User interface	Up to 20 push-button switches Two rotary encoders Infrared remote control
Display	2-line x 16-character dot matrix display (optional icons) Dimmable backlight (manual or auto)
Audio output	Stereo audio 2 x 1 W amplifier (others may be used) Digital volume control with optional mute S/PDIF output (optional)

Connectivity	Wireless 802.11 b/g Ethernet USB 2.0 (software upgrade) Headphone jack Aux out
Network security	WEP (Wired Equivalent Privacy) TKIP (Temporal Key Integrity Protocol) WPA (WiFi Protected Access) WPA2
IP applications	DHCP (Dynamic Host Configuration Protocol) DNS (Domain Name System)
Streaming protocols	HTTP (Hyper Text Transfer Protocol) RTP (Real-time Transport Protocol) CIFS (Common Internet File System) RDT (Real-time Data Transport)
Audio decoders	MP3 (MPEG1 and 2 and all layers) WMA v9 (Windows Media Audio) RealAudio v6

Please contact Frontier Silicon for further detailed information.

Frontier Silicon can also offer industrial designs for the different product categories, developed in partnership with Therefore (leading industrial design house based in London, UK).



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