DATA SHEET

Part No.	MN66720DCUC
Package Code No.	LQFP100-P-1414

MN66720DCUC

DAB Baseband Processor Featuring Low Power Consumption

■ Overview

The MN66720DCUC is a single chip LSI device that implements all analogue and digital processing functions necessary to completely decode any DAB signal conforming to the ETS300401 standard. This device features comprehensive power management functions, making it ideal for a wide range of portable receivers as well and mains powered domestic appliances and in-car receivers.

■ Features

- Single-chip CMOS device implementing all decoder functions from analogue IF input through to audio and data service extraction and decoding
- On-chip MP2 audio decoder capable of decoding two audio services simultaneously from the same multiplex, plus an on-chip programmable digital audio mixer. This is ideal for sophisticated overlay of announcement services over audio services, and for simultaneous recording of one service while listening to another
- Modes of operation include standby, power-saving or full multiplex decoding with an industry-leading power consumption of around 150 mW (70 % less than Panasonic's 1st generation DAB technology)
- On-chip embedded DRAM for de-interleaving
- Support for all DAB Modes I, II, III and IV
- Complete decoding of the full DAB multiplex up to 1.8432 Mbps for Main Service Channels
- On-chip ADC for direct input of the analog IF signal at 2.048 MHz
- On-chip decoding of PAD data streams of up to 64 kbps via the host CPU interface
- On-chip support for sub-channel reconfiguration with no interruption to audio services. Service reconfiguration is fully implemented with minor external CPU support, also ensuring no audio service interruptions
- On-chip packet filter, capable of extracting one raw data stream or two service+packet address streams directly
- On-chip AFC, enabling designers to produce low-cost designs without an external VCXO
- On-chip external data interface, enabling designers to extract any data from the DAB multiplex directly without having to use the RDI protocol
- Low host CPU overhead through a high level of on-chip intelligence and connection via a simple synchronous serial interface, allowing direct interfacing to a wide range of host MPUs including low cost 8-bit and 16-bit devices
- On-chip interfaces for RDI, SP/DIF and direct data output
- Automatic Symbol Selection System (ASSS) enables the highest level of power management for DAB receivers, including facilities for managing HF tuner power consumption
- Operating Frequency of 24.576 MHz
- Supply voltage of 3.3 V (I/O and Analog), 2.5 V (on-chip DRAM) and 2.5 V or 1.8 V (internal logic)
- 100-pin LQFP package

■ Applications

Portable battery-powered receivers; in-car automotive receivers; HiFi or other domestic receivers

■ Block Diagram
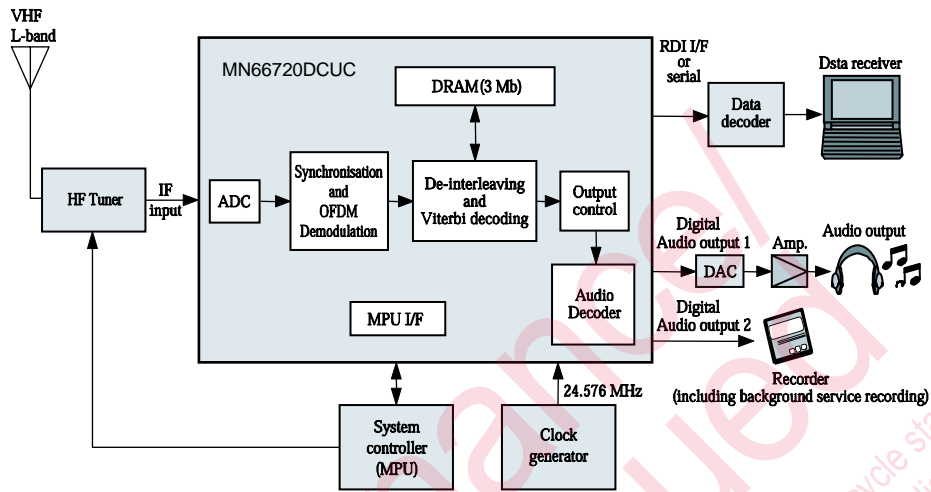
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