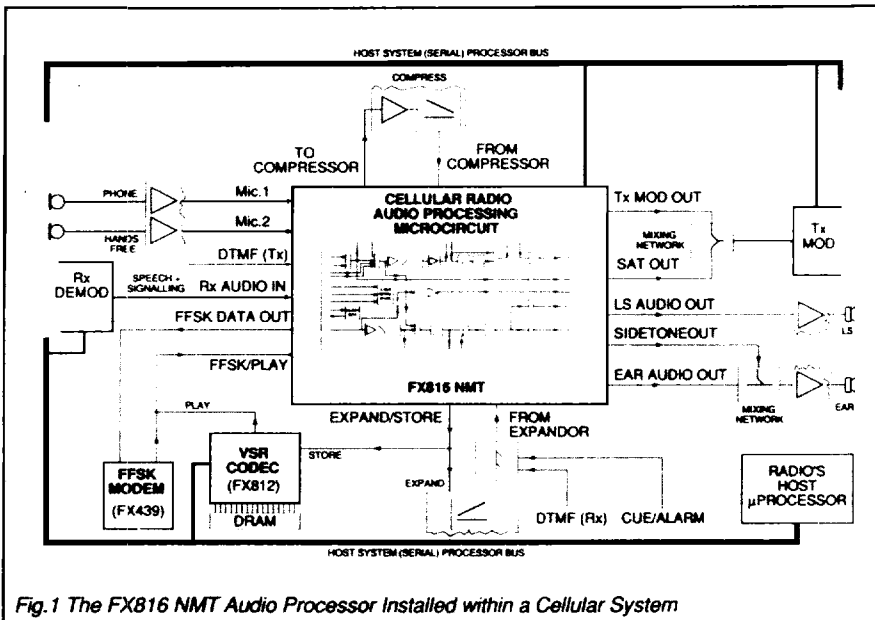


FX816 NMT System Audio Processor

Product Summary

Features/Applications

- Full-Duplex Audio Processing for NMT Cellular System
- On-Chip Speech and SAT Facilities – Tx/Rx/SAT Filtering & Gain – VOGAD – Pre-/De-Emphasis – Deviation Limiter –
- Serial μ Processor Interface
- Separate SAT Channel
- “Sidetone” Output Available
- HandsFree Compatibility
- Access to External Processes – Compression – Expansion – Signalling/Data Mixing – VSR Codec (Store/Play) –
- Powersave (Low-Current) Settings



FX816

Brief Description

The FX816 is a μ Processor controlled full-duplex audio processor on a single-chip with separate Tx and Rx paths to provide all the filter/gain/limiting functions necessary to pre-process audio, data and signalling in the Nordic Mobile Telephone (NMT) cellular communications system.

Selectable inputs available to the transmit path are: a choice of two microphones, DTMF/signalling or FFSK/data, with access, in this path, to external compression circuitry. Operationally the Tx path provides input gain/filtering, VOGAD, a deviation limiter and Tx Modulation Drive controls.

In the Rx path the SAT signal is separated from the incoming audio via a gain/filter block and made available at a separate pin for mixing externally with the Tx Modulation Drive.

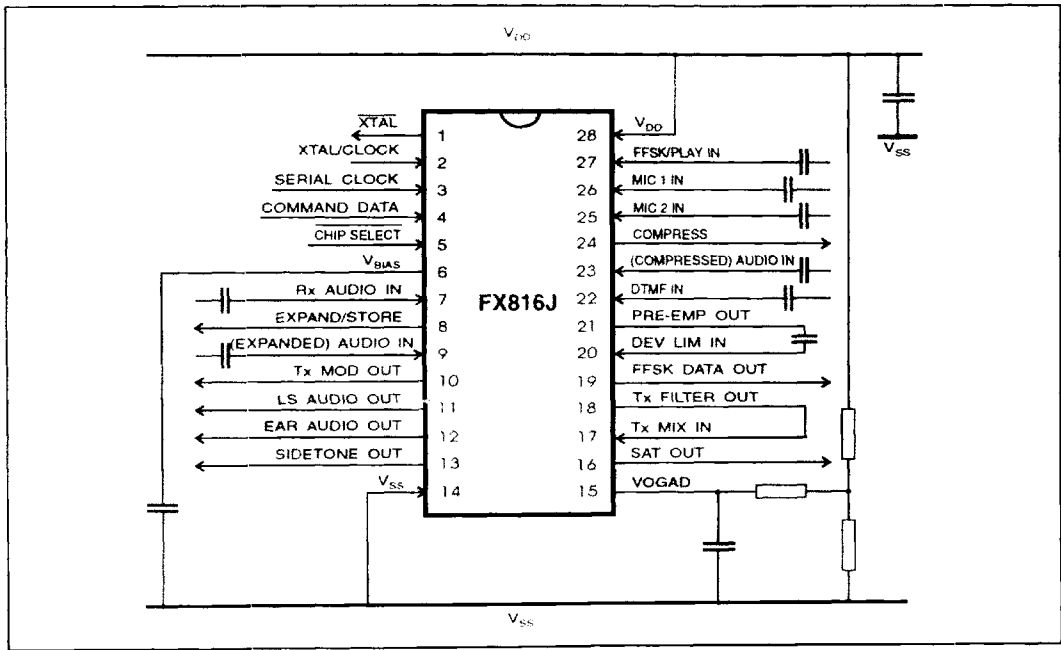
The Rx path consists of an input gain/filter block for voice and data, inputs from an external audio expansion system and an output gain control driving either a loudspeaker system or earpiece.

Unique to the FX816/826/836 cellular audio processors is the ability to route audio (Tx or Rx) to an external Voice Store and Retrieve (VSR) device such as the FX802 or FX812 thus providing the radio system with a voice answering and announcement facility using external DRAM.

The FX816, a low-power CMOS device, which reduces the amount of microcircuits and components required in a cellular audio system by providing more functions on a single chip, is available in 28-pin plastic small outline (S.O.I.C.) surface mount and cerdip DIL packages.

FX816 - Brief Specification

| | | |
|----------------------|--|--|
| Function | NMT System Audio Processor | |
| Supply Voltage Range | 4.5 to 5.5 volts | |
| Supply Current | (5.0V) 6.0 mA typical | |
| Powersave Current | (5.0V) 0.6mA typical | |
| Duplex | Full | |
| Control | Clocked Serial Data | |
| Facilities | Voiceband Filtering SAT Channel and Filtering DTMF and FFSK Compatibility VSR Codec, Store and Replay Compatibility Gain/Attenuation Level Setting | Pre and De-Emphasis Deviation Limiting VOGAD |
| Xtal/Clock Frequency | 4.032 MHz | |
| Package Styles | 28-pin plastic S.O.I.C. (FX816DW); 28-pin cerdip DIL (FX816J) | |
| Maximum PCB Area | 192.1 sq. mm (FX816DW); 640 sq. mm (FX816J) | |



Package Styles Available

FX816DW 28-pin plastic S.O.I.C. (D1)

FX816J 28-pin cerdip DIL (J5)

Full details of this product are available from CML or its distributors

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