Digital Messaging

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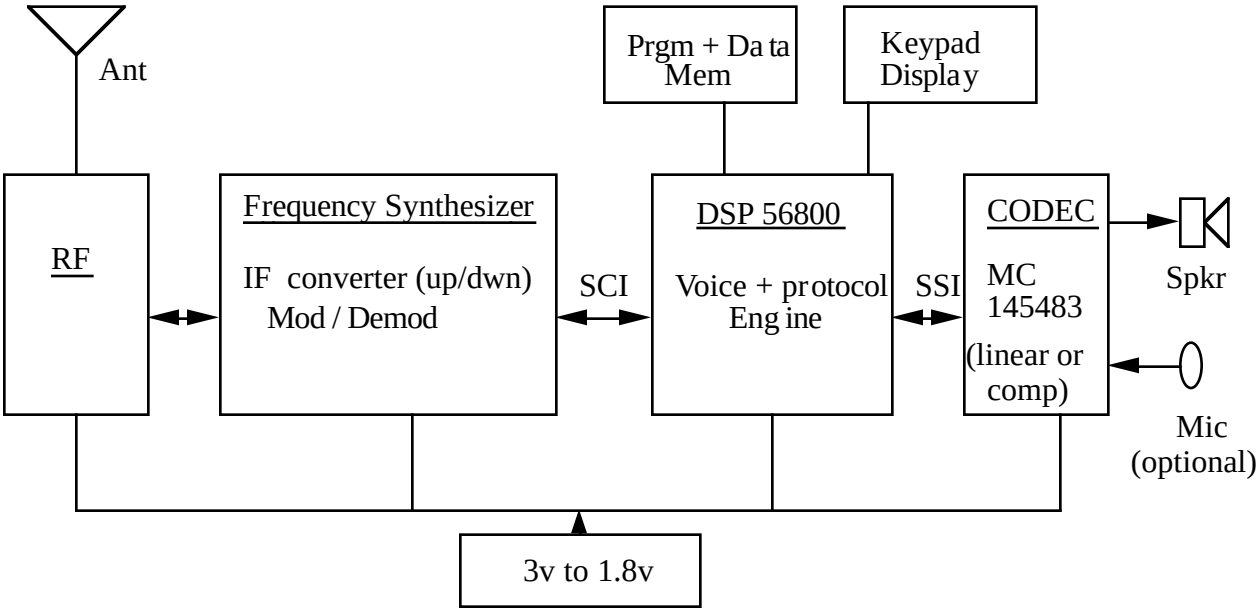

Application Description

Advanced messaging products, like two way paging or portable 2-way digital radio using the Personal Communication Services (PCS) format, are just two applications well served by the DSP56800 family. Such applications require a DSP for real time functions and a microcontroller for peripherals management. The DSP56800 family provides both advantages on the single device.

In the example above, the DSP performs a vital roll in voice coding and decoding (VOCODER), protocol management and forward error correction (FEC). With 20 MIPS of processing power, the DSP56800 can also share the modulation and demodulation functions if needed.

The DSP56800 family's efficient design reduces power consumption per message, and programmable power modes (including a sleep mode) provided additional savings.

Microcontroller programs can be written in C using a specially designed Tartan C compiler without sacrificing code density. Some DSP coding can also take advantage of the C compiler effiicieny. The use of 'C' based source code has known advantages over assembly based code in terms of faster code development, code portability and maintance.

Motorola DSP

DEVICE	TYPE	VOLTAGE	MIPS (max)	mA/MIPS (min)	PACKAGE	PINS	TECH.
DSP56L811	16-bit fx.pt	3.3V/2.7V	20	1@2.7V	TQFP	100	0.65 micron

MEMORY (words)				PERIPHERALS			
RAM		ROM		SER.	TIMER	HOST	DEBUG
Program	Data	Program	Data				
1K	2K	-	-	3	3	-	OnCE/JTAG

INTRO. DATE	PRICE (10,000 units)	APPLICATION AREAS
Q196	$10.48	Mobile, Wireline Wireless Comm.

Development tools

DSP56800 CLAS Tools
DSP56811 Evaluation Module
Tartan DSP56800 C/C++ Compiler