Software Configurable PSTN Communications Chipsets

AD20msp500 Series

FEATURES

Programmable DSP and Signal Port Chip for PSTN Applications
Programmable Signal Processor Permits Flexible Software Implementation
Code Compatible with ADSP-2100 Family of Signal Processors
High Performance AD28msp01 Front-End Supports Echo-Cancelling Modems
+5 V Only Required

APPLICATIONS

Voice and Data Communications Over the Public Switched Telephone Network
Embedded Fax/Data Modems
V.32bis Modulation Plus Fallbacks
Voice Channels and Caller ID
Software-Based Command and Control
PC-Based Signal Coprocessing

INTRODUCTION

The AD20msp500 Series of chipsets provides the key building blocks for a variety of low cost, state-of-the-art PSTN communications products. All the chipsets in the series include an Analog Devices' ADSP-2100 family signal processor and an AD28msp01 PSTN communications analog front-end.

Independent algorithm developers use AD20msp500 Series chipsets as the base platform to create PSTN solutions. The ADSP-2100 family provides a powerful low cost platform for a variety of signal processing applications for the PSTN. The AD28msp01 is a customized mixed-signal analog front-end specifically for echo-cancelling modem applications. It is a powerful subsystem on a chip that incorporates interpolation filters, thus freeing the DSP for other processing functions. The combination is a PSTN engine ideal for fax, modem, answering machine, and other applications requiring signal processing and voiceband I/O. Figure 1 shows a high-level block diagram of an AD20msp500 Series chipset with examples of functions it can perform.

The core PSTN engines developed by algorithm software developers form the basis of complete PSTN communication designs. Other chipsets in the AD20msp500 series combine other components or software to support these complete designs.

The AD20msp500 is comprised of an ADSP-2115KP-55 and an AD28msp01KP. Other chipsets in the series use different signal processors, different processor speed grades, different packages, additional ICs and bundle algorithm software. Model numbers AD20msp501–599 are used to describe these chipsets.

DEVELOPMENT TOOLS

Analog Devices offers a complete set of tools for DSP program development. Since the signal processors in the AD20msp500 series are based on Analog Devices ADSP-2100 family of digital signal processors, all the development tools for that family are available for PSTN application development. The user has the choice of programming in either C or assembly language. The tools available are an assembler, linker, simulator, C language compiler, and C source-level debugger. Several products are available to provide in-circuit emulation to support code development. See separate data sheets for detailed information on Analog Devices development tools.

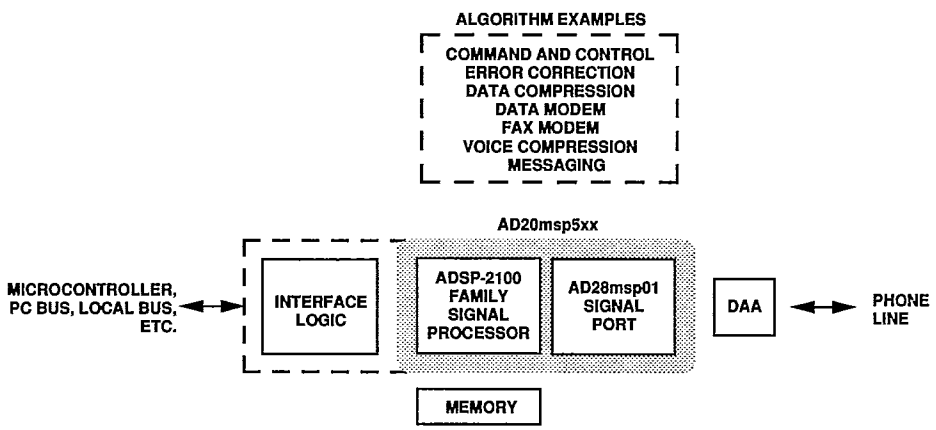

Figure 1. High-Level Block Diagram of an AD20msp500 Series Chipset

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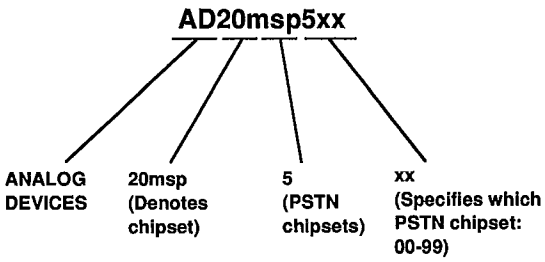
ORDERING INFORMATION

The AD20msp500 Series chipsets are ordered using the convention described below:



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