

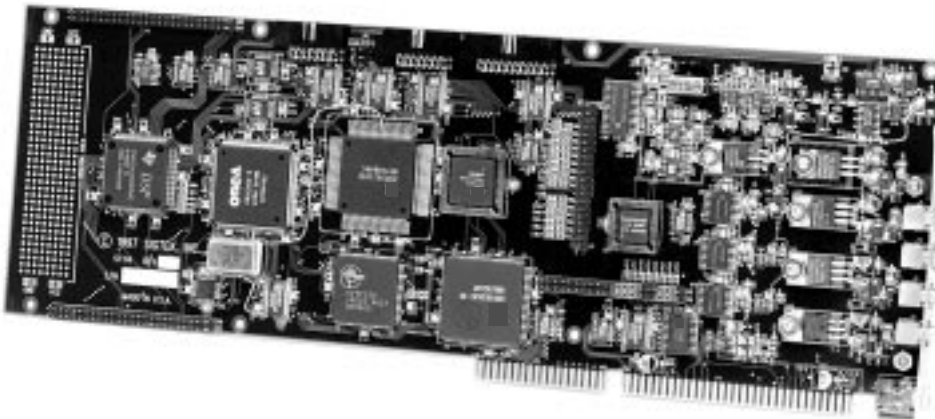


# ST-114 Product Sheet

The ST-114 is a flexible PC/AT ISA bus evaluation platform for the Intersil HSP50214 Programmable Downconverter. Within a matter of minutes after installation in a PC, the ST-114 is up and running. The board simultaneously generates and tunes signals anywhere from dc to 20 MHz. Signal types include FM, FSK, BPSK and QPSK. Tuning and demodulation are completely digital and allow nearly continuous bandwidth and data rate selection up to 1.2 MHz.

The board is controlled through a Windows interface which allows full access to all HSP50214 registers, and provides controls and displays for FM, FSK, BPSK and QPSK signal demodulation. To speed evaluation, the ST-114 includes a Intersil HI5703 10 Bit 40 Msample/sec A/D converter, Texas Instruments TMS320C50 DSP processor, Intersil HSP45106 Numerically Controlled Oscillator, dual Intersil CA3338A high speed D/A converters and a 16 bit audio D/A converter.

For rapid prototyping data and control signals can be accessed in a variety of ways. Analog signals are connected to the HI5703 A/D converter through a rear panel mounted SMA connector. Alternatively, parallel TTL level digital signals can be input through a ribbon cable connector on the board. Input samples are then processed by the HSP50214 and supplied to the TMS320C50 processor. The TMS320C50 implements carrier and data tracking loops and formats the data for output through the 18 bit audio D/A converter that is capable of driving standard multi-media speakers. The two CA3338A D/A converters provide wideband I/Q outputs.



The Intersil HSP45106 NCO and internal bit error rate tester generate either digital or analog FSK, BPSK or QPSK for loopback testing.

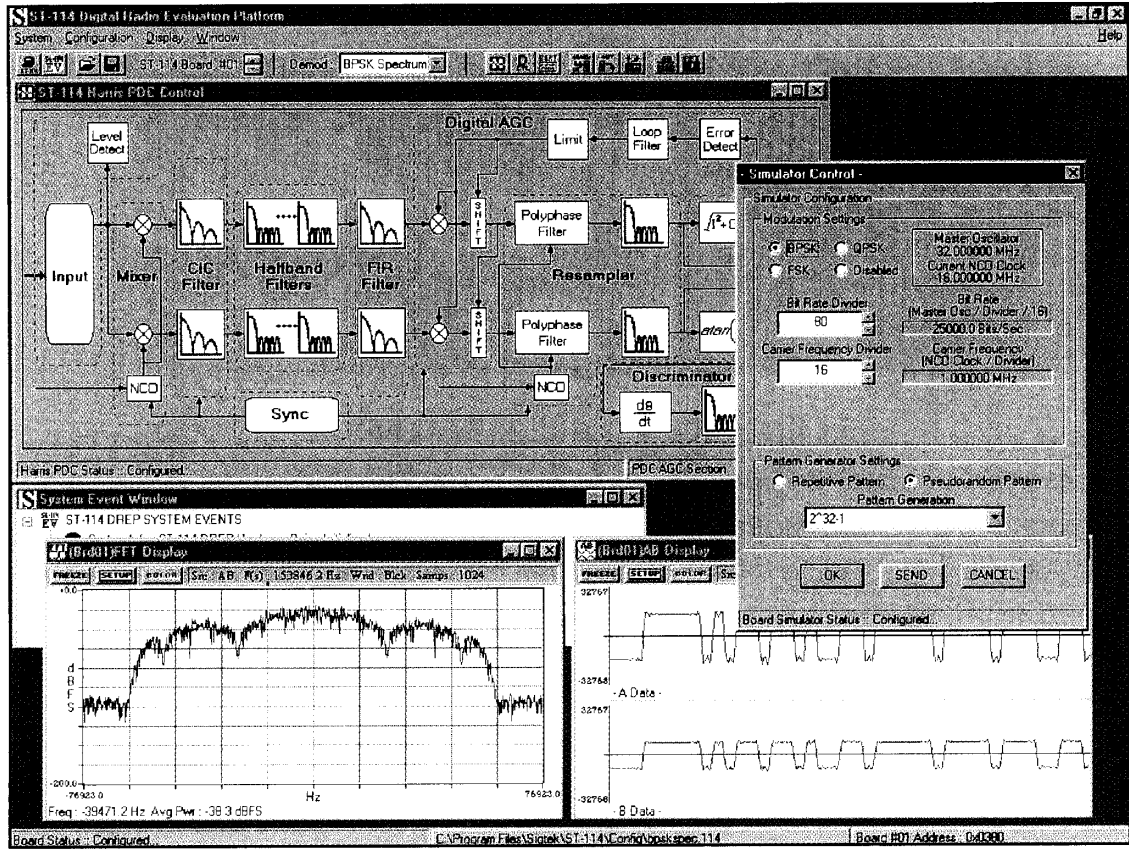
## **Key Features**

- Input: Analog: -10 to -50 dBm, Digital: TTL data + clock
- Output: Audio, I/Q, Clock + Data, Parallel TTL
- DSP: TMS320C50 with JTAG connector
- Signal Generator: FSK, BPSK, QPSK
- Size: PC/AT with ISA bus

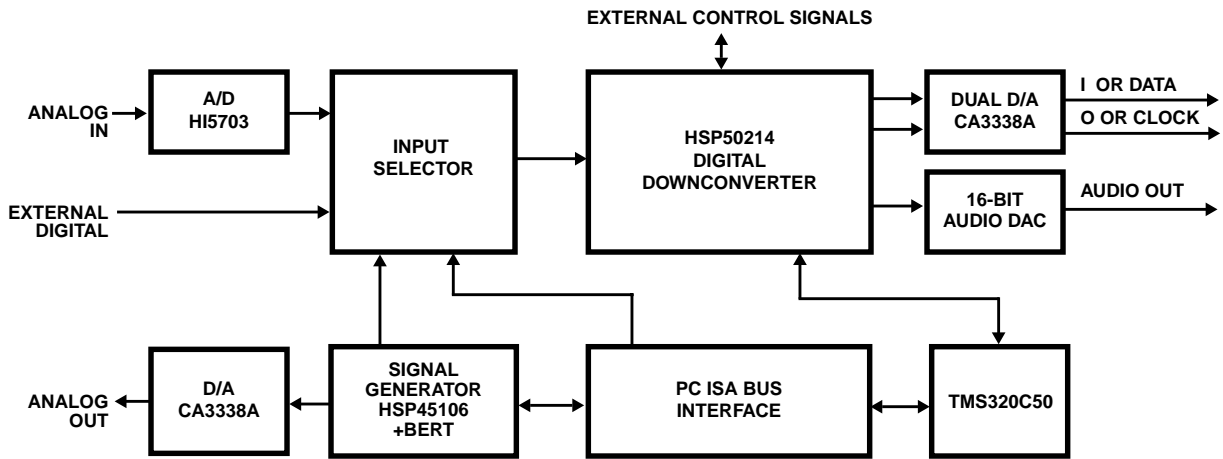
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# ST-114 Downconverter Evaluation Board

ST-114 Intersil HSP50214 Downconverter Evaluation Board



Windows™ Display



ST-114 Block Diagram



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