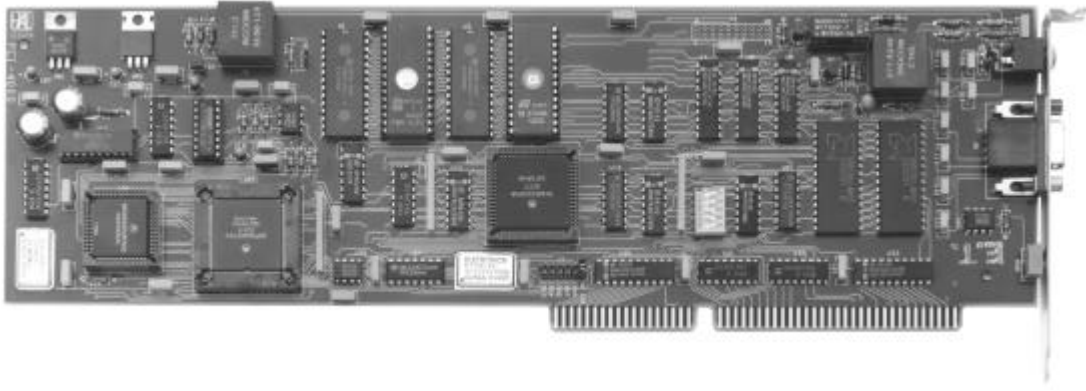


PCI-4000/2K

HF Radio DSP Modem



The PCI-4000/2K is an HF data modem that provides CLOVER-2000, a 2000 bits/sec., voice bandwidth, adaptive waveform specifically designed for HF radio data communications. The PCI-4000/2K is a plug-in card DSP modem that may be installed in the "ISA-bus" slot of an IBM-Compatible personal computer (PC-AT or higher). CLOVER-2000 measures real-time HF signal conditions and sets the most efficient modulation mode for these conditions. 8-bit data is sent without extra manipulation or modification. ARQ mode is simultaneously bi-directional (duplex) and does not require an "OVER" command. FSK waveforms CCIR-476/625 TOR, P-Mode*, Baudot and ASCII are included. Modem software is uploaded from the PC, simplifying addition of software upgrades.

SPECIFICATIONS

CLOVER-2000:

Data Format: 8-bit, transparent, 8-tones
Bandwidth: 2000 Hz: (500-2500 @ -50 dB)
Symbol Rate: 62.5 per second
Error Correction Coding: Reed-Solomon: 60, 75, or 90% Code Rate
ARQ Mode Modulation: BPSM, QPSM, 8PSM, 8P2A, 16P4A
ARQ Protocol: 2-level multiblock auto adaptive mode control, full-duplex
ARQ Frame Time: 5.44 seconds
Adaptive ARQ Control: Measure S/N & Phase on all data; set TX to optimum modulation
ARQ Throughput: 28 to 250 bytes/sec
224 to 2000 bits/sec
FEC Mode Modulation: 2DPSM, BPSM, QPSM, 8PSM, 8P2A, 16P4A
FEC Throughput: 14 to 167 bytes/sec
112 to 1336 bits/sec

FSK WAVEFORM:

FSK Tones: 500-3000 Hz, programmable
TTY Codes: Baudot and ASCII
TTY Rates: 45, 50, 67, 75, 100, 110 Bd
TOR Code: CCIR-476 & CCIR-625
TOR Modes: ARQ, FEC
TOR Rate: 100 Baud
P-Mode* Modes: Auto-ARQ & FEC
P-Mode* Rates: 100 / 200 Baud

HARDWARE:

Size: 13.25" x 4.25"
DSP Processor: DSP56001
Control Processor: 68EC000
Analog I/O: TLC-320ACO1
14-bit Codec
Memory: RAM loaded via PC bus
I/O Interface: ISA, PC-AT bus
Power Input: From PC
Indicators: On-screen via HAL software.
Frequency Tolerance: Tune in 10 Hz steps; +/- 50 Hz stability
Radio Connections: RX Audio, TX Audio, PTT, FSK, SEL-CAL
Radio Connector: DE9S

SOFTWARE:

HAL Software: Included with PCI-4000/2K
Software Updates: DSP & 68000 code uploaded via PC bus.
Updates via TECHLINE (217) 367-5547
Option: CLOVER-II
500 Hz BW Mode

WARRANTY:

One Year

Specifications subject to change without notice. A copy of the warranty may be obtained free of charge upon request.

*The word "P-Mode" is the HAL designation for a communications protocol that may also be known as "Factor", a registered trademark of the Spezielle Communications Systeme GmbH (SCS) firm in Hanau, Germany. HAL affirms that, to the best of its knowledge, "P-Mode" is compatible and interoperable with the protocol SCS calls "Factor" and with the link establishment and weak signal modes of the protocol SCS calls "Factor-II".



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