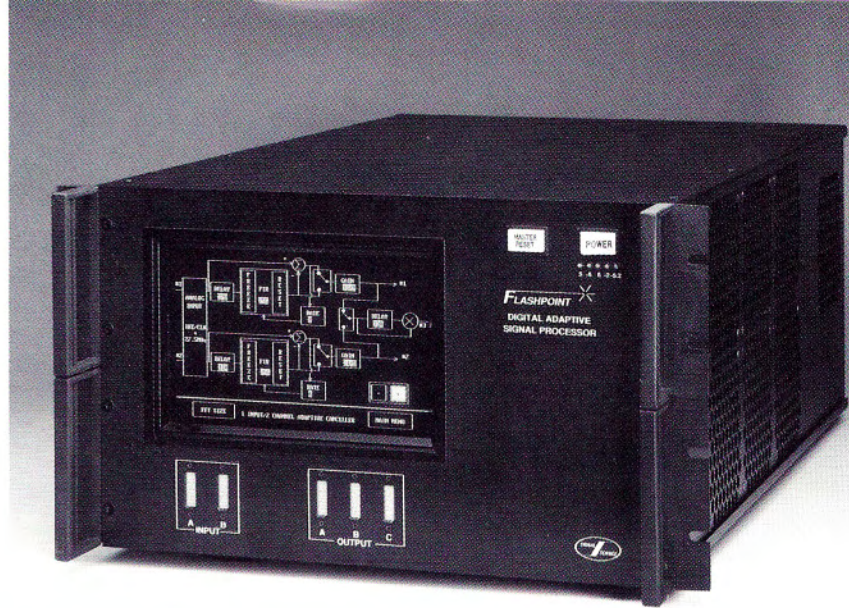




# FLASHPOINT

*Digital Adaptive  
Signal Processor*



## FEATURES

*The FLASHPOINT processor is a complete system for high speed digital signal processing. All processing is done in real time, with continuous analog or digital signal input and output. It is totally self-contained, and comes configured to perform adaptive processing for interference cancellation, adaptive equalization, and spectral analysis. It can be operated as either a single or dual channel processor, and is controlled through a multifunction graphical touch screen interface.*

- ◆ Processes analog signal bandwidths to 12 MHz (to 30 MHz sample rate)
- ◆ Standard algorithms include single and dual channel LMS adaptive filtering, dispersion directed adaptive equalization, and spectrum analysis.
- ◆ Filter sizes to 32,768 taps (better than 1 kHz resolution at full bandwidth)
- ◆ Built-in hardware delay-and-multiply circuit for automatic signal detection
- ◆ Real time operation for signals at baseband or IF
- ◆ Graphical touch screen control
- ◆ Based on Sharp LH9124/9320 DSP chip set
- ◆ Over 10 billion block floating point operations per second and 48 MBytes of memory
- ◆ Modular architecture allows custom software or hardware implementations

## APPLICATIONS

- ◆ Enhancement of signal detection systems by reducing interference
- ◆ Cancellation of strong interference using an independent reference of the interference
- ◆ Enhancement of wideband spread spectrum signals by cancelling narrowband co-channel interference
- ◆ Blind PCM signal equalization
- ◆ Automatic multipath distortion correction
- ◆ Enhancement of narrowband signals in a noisy environment

# SPECIFICATIONS

## Analog I/O

Bandwidth (max.)	12 MHz
Level (nominal)	0 dBm
A/D Resolution	10 bits
D/A Resolution	12 bits
Output scaling	0 to 96 dB

## Digital I/O

Format	Parallel, TTL or ECL
Resolution	12 bits

## Architecture

The system is designed around small DSP modules, each of which is comprised of a DSP chip set plus memory. The modules are interconnected on a motherboard for cascaded processing. An additional board provides A/D conversion, digital interface, and signal distribution.

## Processing Performance

Over 10 billion block floating point operations per second.

Memory	>48 MBytes
Max FFT size	64K
Max FIR taps	32,768

## Standard Algorithms

### Adaptive filtering

Standard LMS:

1 channel, 1 input
2 channel, 1 input
1 channel, 2 input

Split tap LMS:

1 channel, 1 input
2 channel, 1 input

Dispersion directed algorithm:

1 channel
2 channel

### Spectrum analysis

Real time:

1 or 2 channels

## Custom Modifications

The modular architecture allows custom software or hardware implementations. Custom applications could include:

- Adaptive or fixed filters
- Transmultiplexer
- Polarization combiner

## Control

Front panel control	Graphical touch screen
Aux. control	RS-232

## Front Panel

- Power switch
- Master Reset button
- Signal level meters
- Touch screen control panel

## Rear Panel

- Channel A and B analog in
- Channel A, B, and C analog out
- Channel A and B digital in
- Channel A, B, and C digital out

## Physical

- Standard 19" rack mount
- 10.5" height
- 28" deep

## Power

117 VAC 20A



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