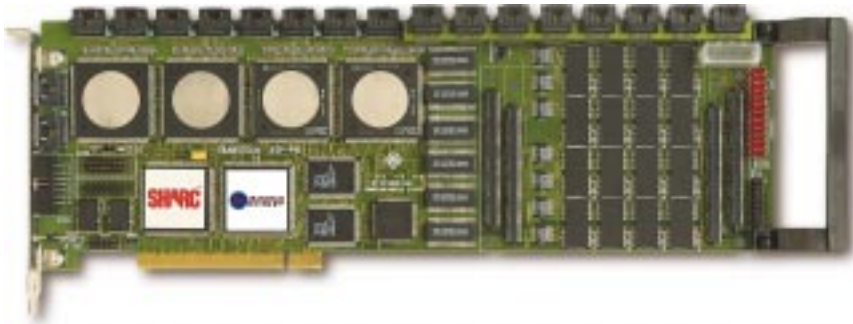


# ASP-P15

1 or 4 SHARCs with DRAM and SHARCPAC site



- 1 or 4 ADSP-2106x DSPs
- 130Mbyte/sec PCI I/F
- SHARCPAC Site
- 16x 40Mbyte/sec link ports
- Up to 768kbytes SRAM
- Up to 64Mbytes DRAM
- 3Mbytes FLASH
- Full length PCI format

## Overview

The ASP-P15 is a full length fast PCI card with 1 or 4 Analog Devices ADSP-2106x DSPs with up to 768Kbytes of SRAM and 64Mbytes DRAM and a SHARCPAC expansion site.

## SHARCPAC Site

The provision of a SHARCPAC site allows the ASP-P15 to incorporate additional SHARC processors (up to eight in addition to the four onboard), fibre-optic communications or high speed digital I/O.

## SRAM

Fitted as standard is 768kbytes of zero wait state 48-bit wide SRAM.

## DRAM

Complementing the SRAM, the ASP-P15 has up to 64Mbytes of fast page mode DRAM for bulk storage needs.

## FLASH

The ASP-P15 has 512kbytes of FLASH memory. The FLASH can be used to store parameters unique to an installation or data logging.

The FLASH memory can also be used to boot the ASP-P15 in embedded applications.

## Link Port Connectors

The ASP-P15 supports 16 external 40Mbyte/sec link port connections which allows a high degree of flexibility in configurations and parallel data throughput.

## PCI Interface

For the highest levels of PCI throughput, the ASP-P15 provides a

data streaming FIFO based PCI interface which can sustain data transfer rates very close to the theoretical limit of 132Mbytes/sec. This is complemented by a hardware data type conversion system to assist the exchange of data between the byte-oriented PCI and word oriented SHARC environments.

PCI mastering allows the ASP-P15's SHARCs to access other devices directly or by DMA, including host memory and neighboring PCI or ISA cards. As a PCI slave, the ASP-P15 provides direct access to the IOP registers and on-chip memory of all the SHARCs

## EZ-ICE Compatibility

ASP-P15 incorporates an EZ-ICE header to provide in-circuit emulation via JTAG. To use this facility, an EZ-ICE probe and PC add-in card is required. This provides the basis for a complete development and debug environment. Using EZ-ICE allows C-source level debugging within a GUI interface and complete control over loading, execution and inspection of program variables.

An alternative to the Analog Devices' EZ-ICE probe/ISA card combination is White Mountain DSP's Mountain-ICE - available directly from Transtech.

## Serial Ports (SPORTs)

The ASP-P15 provides two external SPORT connections - one connecting all DSPs and the SHARCPAC in TDM mode and one from the first SHARC available through the front panel.

## Software Support

Software support includes Transtech's ASP Toolset and a wide range of 3rd party products such as Virtuoso™. Host operating system support includes Windows 95, Windows NT and LINUX.

## ASP-Toolset

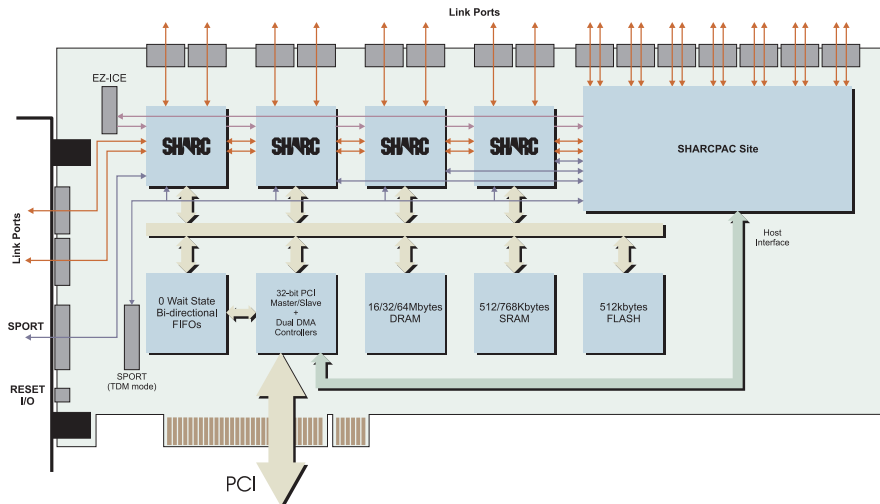
The Analog Device toolset for developing SHARC applications provides the foundation to the ASP-Toolset. This includes an assembler, C-compiler, linker, librarian, simulator and debugger for PC or Sun hosts.

By extending these tools, the ASP-Toolset adds essential network utilities and host I/O server support allowing processors access to off-board resources. This combination allows sophisticated SHARC code development at low cost.



[www.transtech-dsp.com](http://www.transtech-dsp.com)

## Block Diagram



## Technical Specification

### Processor

Type	ADSP-21062 or ADSP-21060
Number	1 or 4
Clock speed	40MHz

### Memory

DRAM (optional)	4Mx32, 8Mx32 or 16Mx32bit
SRAM	128kx32 or 128kx48
FLASH	512kx8bit

### Internal Link Ports

Architecture	Pipeline
Bandwidth	40Mbytes/sec

### External Links Ports

Number	16 (2 front panel + 8 onboard + 14 SHARCPAC onboard)
Bandwidth	40Mbytes/sec
Connector	AMP 1-104074-0

### PCI Interface

Compliance	PCI 2.1 master/slave
DMA	yes - 130Mbytes/sec

### Debug

EZ-ICE/Mountain-ICE port

### SPORT

2 port with 1 on front panel connector

### SHARCPAC

1 site

### Power Requirement

Typical 20.5W (4 processor, 64Mbytes)

### Physical Dimensions

Length full length PCI

### Software Support

ASP Toolset, Virtuoso, 21K DSP libraries, Mountain-ICE and EZ-ICE  
 Contact *Transtech* for further details of software support

## Contact Details

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