Entry Number:
Title: **The DPT 2012/90 and DPT 2012/95 EISA SCSI Controllers**
Entry Date: **6 April 1993**

Product Vendor: **Distributed Processing Technologies, Inc.**
Vendor Contact Information:

Hardware Platform: **Intel Processor Family**
Reported in Software Version: **NEXTSTEP Release 3.1**
Keywords: **DPT, 2012, SCSI**

Usage Commentary:

The DPT 2012 SCSI Controller provides NEXTSTEP users with a high performance SCSI interface with features ranging from a large cache and optimized drive head movements to RAID support in hardware.

Setup and Installation:

It is not necessary to change any jumpers on the DPT 2012. If you have a DPT 2012/95 with an integrated floppy controller be aware that the floppy is officially unsupported under NEXTSTEP Release 3.1. The controller may be disabled either in hardware via jumper Y20 (short) or in software with the EISA Configuration Utility.

If you were previously using Pre-release 1 reconfigure your DPT 2012 to the settings below before installing Release 3.1 for Intel Processors.

`Jumper Settings`

```
Y20 (Floppy Disabled):     on (optional, factory setting: off)
Y19 (Option ROM Size):     off (factory setting)
Y4(Factory Use Only):      off (factory setting)
Y23(Firmware ROM Size):    on (factory setting)
```

If the DPT 2012 will be at the end of the SCSI chain retain the terminating resistors on the card. Otherwise, follow the instructions provided with the DPT 2012 to remove these resistors.

Use the EISA Configuration Utility (ECU) to set the following values.

```
ECU Settings
HARDWARE CONFIGURATION
    Hardware Mapping
        I/O Ports: Secondary/Disabled
        Interrupt Number: 15 - Edge
    Floppy Drive: Disabled
    Option ROM: Enabled @ C8000h
    HBA SCSI ID: 7

WD1003 EMULATION MAPPINGS
    Drive 0
        SCSI ID: Disabled
        SCSI LUN: 0
    Drive 1
        SCSI ID: Disabled
        SCSI LUN: 0

CONTROLLER PARAMETERS
    SCSI Parameters
        Maximum Transfer Rate: 10MB/s
        External Cable Detection: Yes - 5MB/s
        Command Queuing: Enabled
        Command Timeout: Enabled - 5 sec
    Cache Parameters
        Cache: Enabled (Write-Back)
```

```
      Max. Percentage Dirty: 80%
      Max. Percentage Look-Ahead: 80%
      Look-Ahead: Enabled (8 blocks)
      Cache Threshold: 65535 blocks
      Cache Parameters: Use Values Stored on Device
```

(NeXT's Quality Assurance group tested using this EISA configuration file: !DPTA502.CFG Version: 005D)

Known Problems:

· The default IRQ setting of 14 will cause the following error.
```
EATA controller at IRQ 14
Registering sc0
```

The system will then hang. To recover, use the ECU to reconfigure the non-volatile memory on the DPT card to select the proper IRQ.   Unless you are sure that the right answer is something else, set it to IRQ 15, edge triggered.   If your ECU diskette doesn't already have the files necessary to set up a DPT card, when you run the ECU and try to configure the card you will be prompted to insert the proper diskette from DPT . Once the card has been set to IRQ 15, your system will probably just boot.   If it does not, at the "`boot:`" prompt, enter "`mach_kernel config=Default`" and the system will come up, allowing you to run Configure.app and set the DPT configuration to IRQ 15, edge-triggered.   If you really do want to run it at something other than IRQ 15, now that the system is up you can do so - first use Configure.app to change the configuration to the new IRQ value, then use ECU to reconfigure the card, and you should be able to reboot and come up using the new IRQ. Remember though that if you do this, you will not be able to boot config=Default again unless you re-run ECU and set the DPT card back to IRQ 15.