

# Disk Support for Unix 8.2

*Valid Logic Systems, Inc.*

Barry Wyse  
O.S. Group  
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## 1. OVERVIEW

The new release of the operating system ( 8.2 ) supports *Priam*, *5.25 inch* and *Eagle* disks. The purpose of this document is to describe how these disks are partitioned, what partitions can be swapped on and on which partitions filesystems ( like root and u0 ) can be mounted.

### 1.1. Disks Supported in 8.2

The following disks are supported in 8.2

**Priam P3450 - 35Mb**  
**Priam P7050 - 70Mb**

**Fujitsu F2243as - 85Mb**  
**Fujitsu F2246e - 170Mb**  
**Hitachi H511 - 85Mb**  
**Hitachi H512 - 170Mb**

**Fujitsu EAGLE F2351 474Mb**

### 1.2. Basic Principles

Each disk is divided into 16 overlapping **partitions** or sections. A disk partition is just a contiguous number of blocks on the disk that is treated as a single entity. Typically, a filesystem is mounted on a partition of a disk, or a partition of a disk is used as the system swap area. Disk partitions are labeled from 0 to 15. The following partitions have special meaning:

- Partition 0:* This partition refers to the whole disk - including the space for mapping bad tracks
- Partition 1:* This partition refers to the whole of the usable disk ( i.e. this is just partition 0 minus the space reserved for bad tracks ).
- Partition 5:* This partition is reserved for the boot code on disk 0  
i.e. the executable program loaded by CRM which boots vmunix
- Partition 6:* This is the root partition on disk 0

It is important to understand that the 16 partitions are **overlapping** and that the use of certain partitions precludes the use of other partitions, e.g. it does not make sense to talk about

partition 6 on a disk when a filesystem is mounted on partition 1, since partition 1 is **ALL** of the usable part of the disk. Also, since certain partitions overlap care should be taken when mounting filesystems and assigning swap.

For example, consider the Priam p7050 disk:

partition 8 starts at block 19780 and extends for 24495 blocks  
partition 10 starts at block 28060 and extends for 87975 blocks  
partition 11 starts at block 44275 and extends for 71760 blocks

Clearly, partition 11 starts where partition 8 ends, so it makes sense that these two partitions can be used at the same time. In fact when it is required that the root and u0 filesystems and a swap area of approximately 12 Mb be on the same Priam p7050 the root filesystem is mounted on partition 6, the u0 filesystem is mounted on partition 11 and partition 8 is assigned as the swap area.

However, if partition 8 was used as the swap area and the u0 filesystem was mounted on partition 10 then it is clear that the blocks from block 28060 ( the start of partition 10 ) to block 44275 ( the end of partition 8 ) form part of both partitions. Therefore these blocks could be written to as part of swap and as part of the u0 filesystem. The probable result of this is that the u0 filesystem will be corrupted resulting in a system crash and possible loss of files from u0.

So, for each disk type, certain combinations of partitions make sense and others are not supported. This document describes the valid configurations for each of the disks supported in 8.2.

## 2. Partition Naming Conventions

All disks supported in 8.2 use one of two possible makes of disk controller, a *rimfire* controller or a *interphase* controller. The Priam p3450 and Priam p7050 both use the rimfire controller. All other supported disks ( Eagle, Hitachi h511 and h512, Fujitsu f2243as and f2246e ) use a interphase controller.

In this document disk partitions will be named as follows:

$cd(x,y)$

where *c* is the initial letter of the controller used by the disk ( i.e. *r* for rimfire and *i* for interphase ), *x* is the disk number and *y* is the partition on that disk.

For example,  $rd(0,6)$  refers to partition 6 on rimfire disk 0 ( which is the root partition if the Priam is the boot disk ). Similarly,  $id(1,1)$  refers to partition 1 on interphase disk 1 which is the entire second interphase disk ( Eagle, h511, h512, f2243as or f2246e ).

### Note:

Partition *y* on rimfire disk 1 ( i.e. partition *y* on the *second* Priam disk ) is referred to by  $rd(2,y)$ , *not*  $rd(1,y)$  as would be expected.

### 3. Priam Disks ( 35 Mb )

Currently, 3 disk configurations are supported on a Priam p3450. Any partition listed below ( excluding rd(0,6) on the boot disk ) can be assigned as the system swap area.

#### 1 Partition

rd(x,1) - 30 Mb

rd(x,1) can be used if one large filesystem is needed ( approx 30 Mb ) or if the entire disk is to be used as swap. Configuring a Priam p3450 disk for only 1 large partition prohibits the use of that disk as the boot disk.

#### 3 Partitions - small swap ( 4 Mb )

rd(x,6) - 10 Mb

rd(x,9) - 4 Mb

rd(x,10) - 16 Mb

In this configuration the root filesystem must be mounted on partition 6 ( i.e. rd(0,6) ) IF THE DISK IS THE BOOT DISK. Partition rd(x,9) is usually assigned as the system swap area in this configuration, leaving rd(x,10) available for a filesystem.

#### 3 Partitions - large swap ( 10 Mb )

rd(x,6) - 10 Mb

rd(x,8) - 10 Mb

rd(x,11) - 10 Mb

In this configuration the root filesystem must be mounted on partition 6 ( i.e. rd(0,6) ) IF THE DISK IS THE BOOT DISK. Partition rd(x,8) is usually assigned as the system swap area in this configuration, leaving rd(x,11) available for a filesystem.

#### 4. Priam Disks ( 70 Mb )

Currently, 4 disk configurations are supported on a Priam p7050. Any partition listed below ( excluding rd(0,6) on the boot disk ) can be assigned as the system swap area.

##### 1 Partition

rd(x,1) - 56 Mb

rd(x,1) can be used if one large filesystem is needed ( approx 56 Mb ) or if the entire disk is to be used as swap. Configuring a Priam p7050 disk for only 1 large partition prohibits the use of that disk as the boot disk.

##### 3 Partitions - 4 or 42 Mb swap

rd(x,6) - 10 Mb

rd(x,9) - 4 Mb

rd(x,10) - 42 Mb

In this configuration the root filesystem must be mounted on partition 6 ( i.e. rd(0,6) ) IF THE DISK IS THE BOOT DISK. Partition rd(x,9) can be assigned as the system swap area in this configuration, leaving rd(x,10) available for a filesystem. Alternatively, partition rd(x,10) can be assigned as the system swap area in this configuration, leaving rd(x,9) available for a filesystem.

##### 3 Partitions - 12 Mb swap

rd(x,6) - 10 Mb

rd(x,8) - 12 Mb

rd(x,11) - 34 Mb

In this configuration the root filesystem must be mounted on partition 6 ( i.e. rd(0,6) ) IF THE DISK IS THE BOOT DISK. Partition rd(x,8) is usually assigned as the system swap area in this configuration, leaving rd(x,11) available for a filesystem.

##### 3 Partitions - 20 Mb swap

rd(x,6) - 10 Mb

rd(x,13) - 26 Mb

rd(x,14) - 20 Mb

In this configuration the root filesystem must be mounted on partition 6 ( i.e. rd(0,6) ) IF THE DISK IS THE BOOT DISK. Partition rd(x,14) is usually assigned as the system swap area in this configuration, leaving rd(x,13) available for a filesystem.

### 5. 5.25 inch Disks ( 85 Mb )

The partitioning schemes for both 85 Mb 5.25 inch disks ( Fujitsu f2243as and Hitachi h511 ) are very similar. Currently, 4 disk configurations are supported on a Fujitsu f2243as disk and 3 disk configurations are supported on a Hitachi h511 disk. The first 3 listed below are supported on both types of disks, the fourth configuration is supported on the Fujitsu 2243as only.

Any partition listed below ( excluding id(0,6) on the boot disk ) can be assigned as the system swap area. However, it is a good idea to use partition 2 ( id(x,2) ) for swap ( 20 Mb ) on an 85 Mb disk. All other partitions are available for mounting filesystems.

#### 1 Partition

id(x,1) - 65 Mb

id(x,1) can be used if one large filesystem is needed ( approx 65 Mb ) or if the entire disk is to be used as swap. Configuring an 85 Mb disk for only 1 large partition prohibits the use of that disk as the boot disk.

#### 2 Partitions

id(x,4) - 40 Mb

id(x,7) - 25 Mb

Configuring an 85 Mb disk for 2 large partitions prohibits the use of that disk as the boot disk ( since there is no partition 6 ).

#### 3 Partitions

id(x,2) - 20 Mb

id(x,6) - 20 Mb

id(x,7) - 25 Mb

In this configuration the root filesystem must be mounted on partition 6 ( i.e. id(0,6) ) IF THE DISK IS THE BOOT DISK.

#### 3 Partitions - Large swap ( Fujitsu f2243as only )

id(x,3) - 40 Mb

id(x,6) - 20 Mb

id(x,14) - 5 Mb

In this configuration the root filesystem must be mounted on partition 6 ( i.e. id(0,6) ) IF THE DISK IS THE BOOT DISK. Note that this configuration is supported on the Fujitsu f2243as 85 Mb disk only. This configuration is used when a swap space of 40 Mb ( id(0,3) ) is required on the Fujitsu f2243as Mb boot disk.

## 6. 5.25 inch Disks ( 170 Mb )

The partitioning schemes for both 170 Mb 5.25 inch disks ( Fujitsu f2246e and Hitachi h512 ) are the same. Currently, 3 disk configurations are supported on 170 Mb disks.

Any partition listed below ( excluding id(0,6) on the boot disk ) can be assigned as the system swap area. However, it is a good idea to use partition 2 ( id(x,2) ) for swap ( 40 Mb ) on an 170 Mb disk. All other partitions are available for mounting filesystems.

### 1 Partition

id(x,1) - 120 Mb

id(x,1) can be used if one large filesystem is needed ( approx 120 Mb ) or if the entire disk is to be used as swap. Configuring a 120 Mb disk for only 1 large partition prohibits the use of that disk as the boot disk.

### 2 Partitions

id(x,4) - 60 Mb

id(x,7) - 60 Mb

Configuring an 170 Mb disk for 2 large partitions prohibits the use of that disk as the boot disk ( since there is no partition 6 ).

### 3 Partitions

id(x,2) - 40 Mb

id(x,6) - 20 Mb

id(x,7) - 60 Mb

For the above configuration the root filesystem must be mounted on partition 6 ( i.e. id(0,6) ) IF THE DISK IS THE BOOT DISK.

## 7. Eagle Disks

Currently, 12 disk configurations are supported on an eagle disk Any partition listed below ( excluding id(0,6) on the boot disk ) can be assigned as the system swap area. However, it is a good idea to use partition 2 ( id(x,2) ) for small swap ( 40 Mb ) or partition 3 ( id(x,3) ) for large swap ( 140 Mb ) on an Eagle disk. All other partitions are available for mounting filesystems.

### 1 Partition

id(x,1) - 350 Mb

id(x,1) can be used if one large filesystem is needed ( approx 350 Mb ) or if the entire disk is to be used as swap. Configuring an Eagle disk for only 1 large partition prohibits the use of that disk as the boot disk.

### 2 Partitions

id(x,4) - 60 Mb  
id(x,15) - 290 Mb

This configuration prohibits the use of the eagle as the boot disk.

### 3 Partitions - small swap ( 40 Mb )

id(x,2) - 40 Mb  
id(x,6) - 20 Mb  
id(x,15) - 290 Mb

For this configuration the root filesystem must be mounted on partition 6 ( i.e. id(0,6) ) IF THE DISK IS THE BOOT DISK.

### 3 Partitions - large swap ( 140 Mb )

id(x,3) - 140 Mb  
id(x,6) - 20 Mb  
id(x,14) - 190 Mb

For this configuration the root filesystem must be mounted on partition 6 ( i.e. id(0,6) ) IF THE DISK IS THE BOOT DISK.

### 3 Partitions - NOT BOOT DISK

id(x,4) - 60 Mb  
id(x,7) - 100 Mb  
id(x,14) - 190 Mb

This configuration prohibits the use of the eagle as the boot disk.

### 4 Partitions - small swap ( 40 Mb )

id(x,2) - 40 Mb  
id(x,6) - 20 Mb  
id(x,7) - 100 Mb  
id(x,14) - 190 Mb

For this configuration the root filesystem must be mounted on partition 6 ( i.e. id(0,6) ) IF THE DISK IS THE BOOT DISK.

### 4 Partitions - large swap ( 140 Mb )

id(x,3) -	140 Mb
id(x,6) -	20 Mb
id(x,11) -	100 Mb
id(x,12) -	90 Mb

For this configuration the root filesystem must be mounted on partition 6 ( i.e. id(0,6) ) IF THE DISK IS THE BOOT DISK.

**4 Partitions - NOT BOOT DISK**

id(x,4) -	60 Mb
id(x,7) -	100 Mb
id(x,11) -	100 Mb
id(x,12) -	90 Mb

This configuration prohibits the use of the eagle as the boot disk.

**5 Partitions - small swap ( 40 Mb )**

id(x,2) -	40 Mb
id(x,6) -	20 Mb
id(x,7) -	100 Mb
id(x,11) -	100 Mb
id(x,12) -	90 Mb

For this configuration the root filesystem must be mounted on partition 6 ( i.e. id(0,6) ) IF THE DISK IS THE BOOT DISK.

**5 Partitions - large swap ( 140 Mb )**

id(x,3) -	140 Mb
id(x,6) -	20 Mb
id(x,8) -	60 Mb
id(x,9) -	60 Mb
id(x,10) -	70 Mb

For this configuration the root filesystem must be mounted on partition 6 ( i.e. id(0,6) ) IF THE DISK IS THE BOOT DISK.

**5 Partitions - NOT BOOT DISK**

id(x,4) -	60 Mb
id(x,7) -	100 Mb
id(x,8) -	60 Mb
id(x,9) -	60 Mb
id(x,10) -	70 Mb

This configuration prohibits the use of the eagle as the boot disk.

**6 Partitions**

id(x,2) -	40 Mb
id(x,6) -	20 Mb
id(x,7) -	100 Mb
id(x,8) -	60 Mb
id(x,9) -	60 Mb
id(x,10) -	70 Mb

For this configuration the root filesystem must be mounted on partition 6



( i.e. id(0,6) ) IF THE DISK IS THE BOOT DISK.

## 8. Mounting filesystems on partitions and assigning swap

As mentioned above all disks supported in 8.2 use either a *rimfire* or a *interphase* controller. Each partition of each disk in a particular disk configuration has an entry in the `/dev` directory. Disk partitions on disks using a *rimfire* controller ( i.e. Priam disks ) are referred to by names beginning with *rim*, while disks partitions on disks using a *interphase* controller ( i.e. Eagle, h511, h521, f2243as, f2246e ) are referred to by names beginning with *is*. Disk number and partition number are used to uniquely name a partition.

For example, `/dev/rim06` refers to partition 6 on rimfire ( Priam ) disk number 0 - which may be the partition the root filesystem is mounted on if rimfire disk 0 is the boot disk. Similarly, `/dev/is11` is partition 1 of the second interphase disk ( which may be an Eagle, h511, h512, f2243as or f2246e ).

Mounting a filesystem means allowing the filesystem on a partition of a disk to be referenced through a particular directory. Therefore, when we talk about mounting the `u0` filesystem we mean taking the filesystem on a particular partition of a disk and letting all files in that filesystem be accessible through the directory called `u0`.

For example,

```
mount /dev/is01 /u0
```

allows access to all files in the first partition of the first Interphase disk ( Eagle, h511, h512, f2243as, f2246e ) through the `/u0` directory.

When a system is booted to single user mode the only filesystem mounted is the filesystem on partition 6 of the boot disk. This filesystem is mounted by default on the directory `/`.

When a system is brought from single user to multi user the file `/etc/fstab` is examined and all the filesystems listed in this file are mounted on their corresponding directories.

To make a particular partition of a disk the system swap area the special file `/dev/swap` is linked to the appropriate entry in the `/dev` directory.

For example,

```
ln /dev/rim08 /dev/swap
```

makes partition 8 on Priam disk 0 the system swap area.

The 8.2 installation script `/etc/install/82inst` prompts for pertinent information and sets up the required filesystems and swap area. It is **STRONGLY** recommended that subsequent changes to the system disk configuration be made by using `/etc/install/mk disk dev`, rather than by hand.

## 9. Example Disk Configuration

Consider a system which has 1 Priam 70 Mb ( p7050 ) and two Fujitsu 170 Mb ( f2246e ) disks. Suppose we want to boot from the Priam ( i.e. we want to have the root filesystem on the Priam disk ), and that we need 120 Mb swap area and a large `u0` filesystem.

The root filesystem will be on partition 6 of the Priam, i.e. `/dev/rim06`.

The swap area `/dev/swap` will be linked to the first partition on the first Fujitsu, i.e. `/dev/is01`.

The `u0` filesystem will be mounted on partition 1 of the second Fujitsu, i.e. `/dev/is11`.

This leaves some space on the Priam for additional filesystems. Alternatively, the 10th partition on the Priam, i.e. /dev/rim0a, could be used for the u0 filesystem, which would leave all of the second Fujitsu available for additional filesystems.

**Note:**

Partitions in unix are numbered in hex, so rd(0,10) becomes /dev/rim0a, and id(1,11) becomes /dev/is1b, etc.

3(3)	32(50)	90(144)	178(376)	204(516)	251(609)	290(656)	324(804)	349(841)
5	4 [62M]	F [290M]		E [180M]				
	6	2 [42M]	7 [102M]	B [102M]		C [86M]		
		3 [143M]	8 [62M]		9 [62M]	A [65M]		
		1 [352M]						
		0 [370M]						

Fuji M2351a Eagle  
New map - Bootable  
474 Mbyte

3(3)	2C(44)	57(87)	E6(230)	175(373)	204(516)	293(659)	322(802)	324(804)	349(841)
5	1	D [100M]	9 [63M]	A [63M]	B [63M]	C [63M]	3	4	
		7 [82M]	E [252M]						
		6	8 [63M]						
		F [333M]							
		2 [352M]							
		0 [370M]							

Fuji M2351a Eagle  
Old map  
474 Mbyte

3(3)	F4(244)	AC(172)	181(385)	209(521)	419(1049)	3F1(1009)
5	6 [9M]	E [20M]	D [28M]			
		9 [4M]	A [44M]			
		8 [12M]	B [35M]			
		1 [57M]				
		0 [60M]				

Priam P7050  
70 Mbyte

3(3)	F4(244)	AC(172)	15A(346)	203(515)	20D(525)
5	6 [9M]	9 [4M]	A [15M]		
		8 [10M]	B [9M]		
		1 [29M]			
		0 [30M]			

Priam P3450  
35 Mbyte

Cylinder: HEX<DECIMAL>

Partition: Number [Size]

3(3)	DF(223)	1BB(443)	296(662)	2C0(716)	2F2(754)
5	6 [20M]	3 [41M]			
	4 [20M]	2 [20M]			
	8 [41M]	7 [25M]			
	1 [67M]				
	0 [70M]				

Fuji F2243as  
85 Mbyte

0 0 - 823  
1 3 - 780  
2 131 - 386  
3 82  
4 4 - 182  
6 3 - 386  
7 387 - 780

3(3)	83(131)	183(387)	30D(781)	337(823)
5	6 [20M]	2 [41M]	7 [63M]	
	4 [62M]			
	1 [125M]			
	0 [131M]			

Fuji F2246e / Hitachi dk512  
170 Mbyte

5 Nov 86

cat disktab

p3450|P3450|Priam3450:ty=winchester:se#512:nt#5:ns#23:nc#515\

:p0#60368:b0#4096:f0#512\  
:p1#58880:b1#4096:f1#512\  
:p2#0:b2#0:f2#0\  
:p3#0:b3#0:f3#0\  
:p4#115:b4#4096:f4#512\  
:p5#230:b5#4096:f5#512\  
:p6#19432:b6#4096:f6#512\  
:p7#0:b7#0:f7#0\  
:p8#20008:b8#4096:f8#512\  
:p9#8280:b9#4096:f9#512\  
:pa#31160:ba#4096:fa#512\  
:pb#19432:bb#4096:fb#512\  
:pc#0:bc#4096:fc#512\  
:pd#0:bd#4096:fd#512\  
:pe#0:be#4096:fe#512\  
:pf#0:bf#4096:ff#512

p7050|P7050|Priam7050:ty=winchester:se#512:nt#5:ns#23:nc#1009\

:p0#120632:b0#4096:f0#512\  
:p1#115688:b1#4096:f1#512\  
:p2#0:b2#0:f2#0\  
:p3#0:b3#0:f3#0\  
:p4#115:b4#4096:f4#512\  
:p5#230:b5#4096:f5#512\  
:p6#19432:b6#4096:f6#512\  
:p7#0:b7#0:f7#0\  
:p8#24488:b8#4096:f8#512\  
:p9#8280:b9#4096:f9#512\  
:pa#87968:ba#4096:fa#512\  
:pb#71760:bb#4096:fb#512\  
:pc#0:bc#4096:fc#512\  
:pd#0:bd#4096:fd#512\  
:pe#0:be#4096:fe#512\  
:pf#0:bf#4096:ff#512

c513:se#512:ns#50:nt#19:nc#800:\

:p0#802750:b0#4096:f0#512\  
:p1#2850:b1#4096:f1#512\  
:p2#794200:b2#4096:f2#512\  
:p3#1900:b3#4096:f3#512\  
:p4#13300:b4#4096:f4#512\  
:p5#32300:b5#4096:f5#512\  
:p6#35150:b6#4096:f6#512\  
:p7#178600:b7#4096:f7#512\  
:p8#143450:b8#4096:f8#512\  
:p9#143450:b9#4096:f9#512\  
:pa#143450:ba#4096:fa#512\  
:pb#143450:bb#4096:fb#512\  
:pc#143450:bc#4096:fc#512

:pd#210900:bd#4096:fd#512:\  
:pe#573800:be#4096:fe#512:\  
:pf#752400:bf#4096:ff#512  
eagle|f2351|F2351|fujitsu eagle:ty=winchester:se#512:ns#44:nt#20:nc#802:\  
p0#740960:\  
:p1#2640:\  
:p2#703120:b2#4096:f2#512:\  
:p3#1760:b3#4096:f3#512:\  
:p4#33440:b4#4096:f4#512:\  
:p5#36080:b5#4096:f5#512:\  
:p6#37840:b6#4096:f6#512:\  
:p7#163680:b7#4096:f7#512:\  
:p8#125840:b8#4096:f8#512:\  
:p9#125840:b9#4096:f9#512:\  
:pa#125840:ba#4096:fa#512:\  
:pb#125840:bb#4096:fb#512:\  
:pc#125840:bc#4096:fc#512:\  
:pd#199760:bd#4096:fd#512:\  
:pe#503360:be#4096:fe#512:\  
:pf#667040:bf#4096:ff#512

csh:

p3450|P3450|Priam3450:ty=winchester:se#512:nt#5:ns#23:nc#515\  
:p0#60368:b0#4096:f0#512\  
:p1#58880:b1#4096:f1#512\  
:p2#0:b2#0:f2#0\  
:p3#0:b3#0:f3#0\  
:p4#115:b4#4096:f4#512\  
:p5#230:b5#4096:f5#512\  
:p6#19432:b6#4096:f6#512\  
:p7#0:b7#0:f7#0\  
:p8#20008:b8#4096:f8#512\  
:p9#8280:b9#4096:f9#512\  
:pa#31160:ba#4096:fa#512\  
:pb#19432:bb#4096:fb#512\  
:pc#0:bc#4096:fc#512\  
:pd#0:bd#4096:fd#512\  
:pe#0:be#4096:fe#512\  
:pf#0:bf#4096:ff#512

p7050|P7050|Priam7050:ty=winchester:se#512:nt#5:ns#23:nc#1009\  
:p0#120632:b0#4096:f0#512\  
:p1#115688:b1#4096:f1#512\  
:p2#0:b2#0:f2#0\  
:p3#0:b3#0:f3#0\  
:p4#115:b4#4096:f4#512\  
:p5#230:b5#4096:f5#512\  
:p6#19432:b6#4096:f6#512\  
:p7#0:b7#0:f7#0\  
:p8#24488:b8#4096:f8#512\  
:p9#8280:b9#4096:f9#512\  
:p0#120632:b0#4096:f0#512\  
:p1#115688:b1#4096:f1#512\  
:p2#0:b2#0:f2#0\  
:p3#0:b3#0:f3#0\  
:p4#115:b4#4096:f4#512\  
:p5#230:b5#4096:f5#512\  
:p6#19432:b6#4096:f6#512\  
:p7#0:b7#0:f7#0\  
:p8#24488:b8#4096:f8#512\  
:p9#8280:b9#4096:f9#512

:pa#87968:ba#4096:fa#512\  
:pb#71760:bb#4096:fb#512\  
:pc#0:bc#4096:fc#512\  
:pd#0:bd#4096:fd#512\  
:pe#0:be#4096:fe#512\  
:pf#0:bf#4096:ff#512

c513:se#512:ns#50:nt#19:nc#800:\

:p0#802750:b0#4096:f0#512\  
:p1#2850:b1#4096:f1#512\  
:p2#794200:b2#4096:f2#512\  
:p3#1900:b3#4096:f3#512\  
:p4#13300:b4#4096:f4#512\  
:p5#32300:b5#4096:f5#512\  
:p6#35150:b6#4096:f6#512\  
:p7#178600:b7#4096:f7#512\  
:p8#143450:b8#4096:f8#512\  
:p9#143450:b9#4096:f9#512\  
:pa#143450:ba#4096:fa#512\  
:pb#143450:bb#4096:fb#512\  
:pc#143450:bc#4096:fc#512\  
:pd#210900:bd#4096:fd#512\  
:pe#573800:be#4096:fe#512\  
:pf#752400:bf#4096:ff#512

eagle|f2351|F2351|fujitsu eagle:ty=winchester:se#512:ns#44:nt#20:nc#802:\

:p0#740960\  
:p1#2640\  
:p2#703120:b2#4096:f2#512\  
:p3#1760:b3#4096:f3#512\  
:p4#33440:b4#4096:f4#512\  
:p5#36080:b5#4096:f5#512\  
:p6#37840:b6#4096:f6#512\  
:p7#163680:b7#4096:f7#512\  
:p8#125840:b8#4096:f8#512\  
:p9#125840:b9#4096:f9#512\  
:pa#125840:ba#4096:fa#512\  
:pb#125840:bb#4096:fb#512\  
:pc#125840:bc#4096:fc#512\  
:pd#199760:bd#4096:fd#512\  
:pe#503360:be#4096:fe#512\  
:pf#667040:bf#4096:ff#512

csh: