

Two types of kernel :

monolithic kernel:- it is signal large process runnig entairly in a single address space

Eg:- linux kernel

micro kernel:- it is broken down into separate process known as servers . Some of the servers run in kernel space and some of the servers run in user space .

MAC OS usseses micro kernel

Porting RTLinux on Raspberry pi

VGA :- only video signals transfer

HDMI:- it can transfer the both audio and video signals

RJ45:- LAN cable connector

RCA jack

SD card :- secure digital card

SSH:- secure shell

ssh ip-addr -l logine-name

uname -m :- it display the ARCH name

uname -r :- kernel version

unmae -a :- all information

cat /proc/cpuinfo

- hardware : bcm2708

-processor : 0

.....

cat /var/lib/misc/dnsmasq leases

Repalcng the GPOS kernel from Raspberry pi to RT kernel

Board Bringup images

1.Bootloader

2.kernel

3.RFS(root file system)

| GPOS(Linux) | Embedded system(RT Linux) |
|-------------------------------|--------------------------------------|
| Bootloader - GRUB | Bootloader -Universal Bootloader |
| Old bootloader -LILO | U-Boot |
| Windows – NILDR | Bare Box |
| | Super ViVI |
| Kernel image VmLinux-x.x.x | Kernel image zImage,Image ,uImage |

Boot partition
Fat file system

RFS partition
Ext (linux file system)

| | |
|--------------------------------|-----|
| -Boot loader -kernel (GPOS) | RFS |
|--------------------------------|-----|

Micro SD card

coping the RT kernel into Boot partition in place of GPOS kernel

partition checking

```
sudo bash  
homw/pi# fdisk -l
```

RT kernel image
~/desktop/respberrypi/xxxx/rtpatch

TFTP NFS for raspberry pi

<https://dynamicparallax.wordpress.com/2015/08/20/how-to-setup-raspberry-pi-as-a-tftp-server/>

<https://www.raspberrypi.org/documentation/remote-access/ssh/>

<https://www.wikihow.com/Get-Started-with-the-Raspberry-Pi>