MOCHABIN BOX- Quick Start Guide

V1.0- Jan 10, 2020

Revision History

Date	Revision	Board Rev	Description
Jan 10, 2020	Rev 01	V0-0-0	

Index

A. Appearance

B. Package contents

	Content List	Qti	Std/ Opt	Remark
1	MOCHABIN BOX(with enclosure)	1 unit	standard	*1
2	AC to DC 12V Power Adapter	1 pc	standard	Input 90-240VAC / output 12V,3A DC (optional)
3	RS-232 D9 to USB cable	1 pc	optional	For debug console use
4	Warranty card	1 pc	standard	

Note *1: There are two SKUs of MOCHABIN BOX and MOCHABIN PCBA, this Quick Start Guide is for MOCHABIN BOX.

C. Key Features

SoC	• Marvell ARMADA 88F7040 • Quad Core ARMv8 Cortex-A72 • CPU frequency @1400MHz	
Memory	• 1 GB / 2GB DDR4 -8bit (8bitx8)	
Storage	• 4MB SPI NOR flash • 8GB eMMC flash • M.2 SSD socket	
Ethernet	• 1x 10 Gb SFP+ , fiber optic • 1x 1Gb SFP, fiber optic • 1x 1Gb RJ45 WAN • 4x 1GB RJ45 LAN •	
Wireless	None	
USB	• 2x USB 3.0 port,	
Expansion	• 16-pin (2x8) MikroBus connector • 1x Mini-PCIe 3.0 • 1x PCI express 3.0 • 1x M.2 SATA	On board connectors, not reachable from the panel
Debugging	• 1x JTAG port, 10-pin (on board inside enclosure) • 1x RS-232 D9 connector on back panel, use RS232 to USB cable connecting to PC • 1x micro USB UART connector (on board, not reachable)	
Miscellaneous	• DC 12V power Jack • Power on/off button • 3x tri-color LEDs (on board, not reachable) • Reset button (on board, not reachable)	
LEDs	• Bleu LED- power LED located on the power switch light rim • Red LED- on board M.2 SATA hard drive LED located on the power switch light rim	

D. I/O ports on the enclosure

D-1. Front panel

No	Part location	Name	Description
1	J30	Power switch	Push 1 sec to power on Push again to power off
2	J33	Power LED	Blue LED
3	J34	SATA HDD LED on M.2 edge connector	Red LED

D-2. Back panel

No	Part location	Name	Description
4	J4	DC jack for 12VDC in	Center pin positive 2.1mm diameter
5	J9-A	RJ45	1Gb RJ45 for LAN#1
6	J9-B	RJ45	1Gb RJ45 for LAN#2
7	J9-C	RJ45	1Gb RJ45 for LAN#3
8	J9-D	RJ45	1Gb RJ45 for LAN#4
9	J12	RJ45	1Gb RJ45 for WAN
10	J13	SFP	1Gb Fiber connector
11	J10	SFP+	10Gb Fiber connector
12	J32	RS-232-D9	Pin2-RXD, pin4-TXD
13	J31-B	USB3.0 typeA female	
14	J31-A	USB3.0 typeA female	

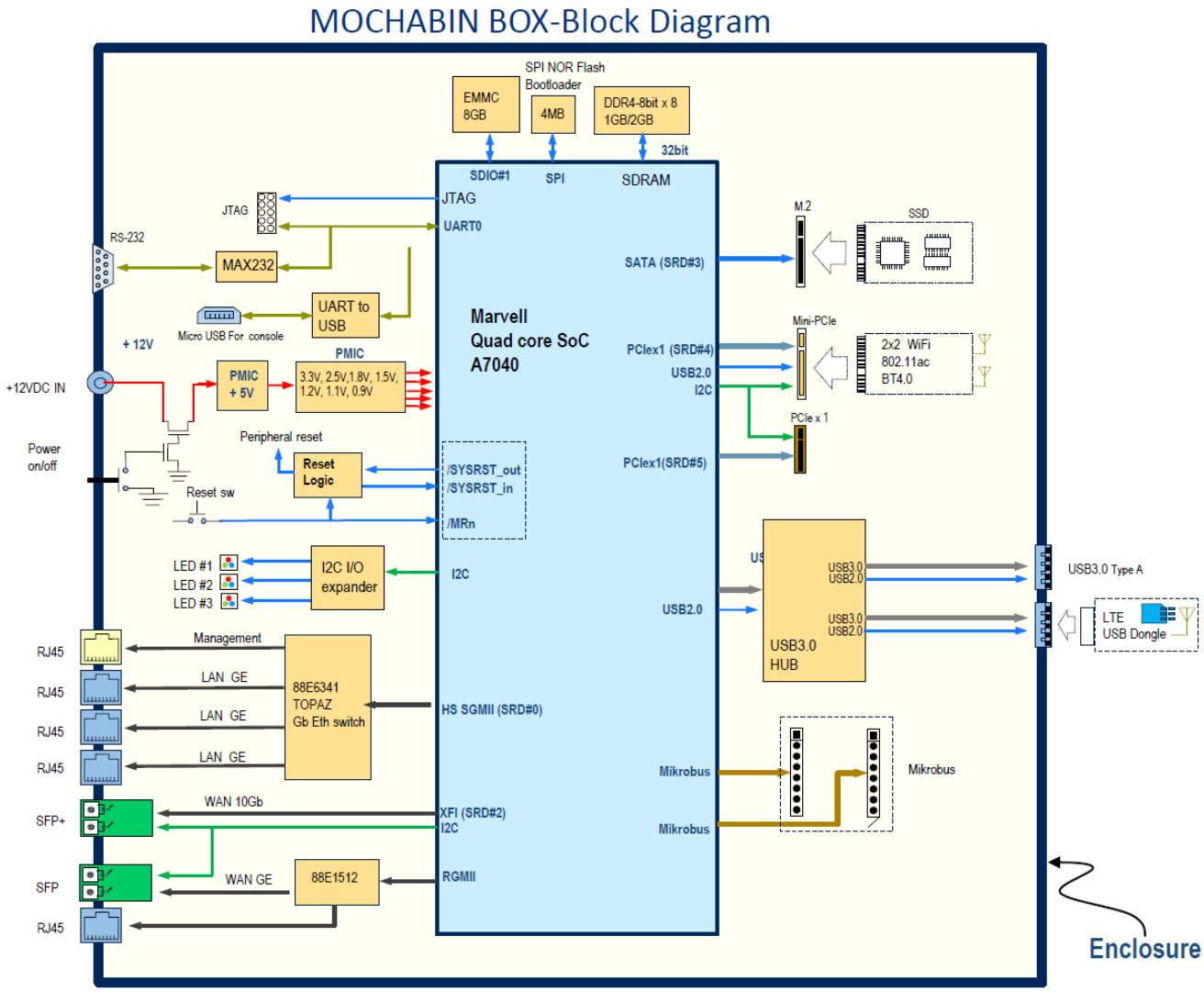
E. User interfaces

E-1. RS-232-D9 connector

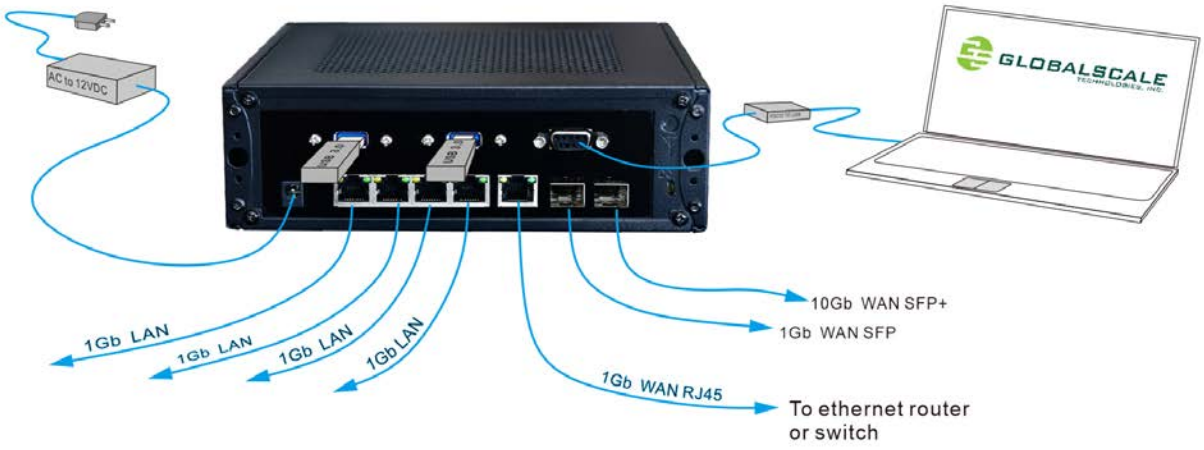
Pin#	Signal	Remark
1	NC	
2	RXD	Signal receiving pin
3	TXD	Signal transmitting pin
4	NC	
5	NC	
6	NC	
7	NC	
8	NC	
9	NC	

One RS-232 to USB cable is needed for the debugging console.

F. Block Diagram



G. Cable connection for testing



H. Preparation for power on

H-1. Hardware:

a. Linux PC installed with minicom, putty or Windows PC installed with putty
b. MOCHABIN unit
c. Ethernet cable from IP router or IP switch (optional)
d. USB3.0 Flash disks (optional)
e. RS-232 to USB cable

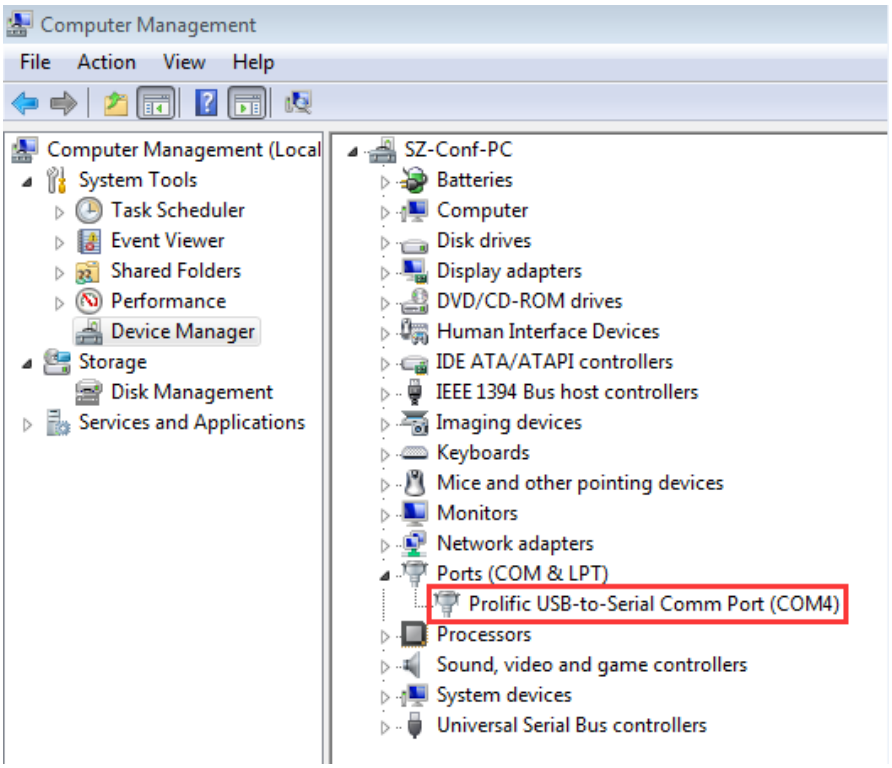
H-2. Software:

a. Putty for linux or Windows PC
   Please go on web and download putty.exe

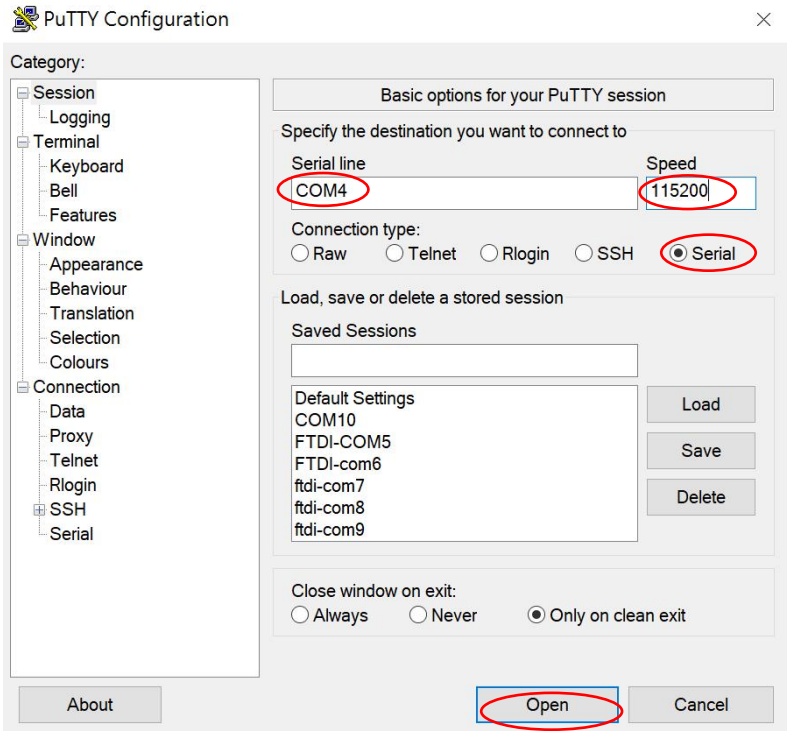
Visit the following web site for more information
http://www.globalscaletechnologies.com/t-downloads.aspx

I. Find com port and connect with putty

1. Connect MOCHABIN's RS-232 port to PC's USB port by using the dedicated cable
2. Go to [my computer] [device manager] and you will see a new COM port after plugging in the USB cable , here is COM4 for example



3. Run putty, select serial connection then enter the COM port you've found in previous step, The baud rate speed is 115200 then press "open"



J. Start running MOCHABIN

J-1. Check U-boot version and some system information

Power on the board then press enter to terminate uboot running, you can see messages on screen like the followings

```
BootROM - 2.03
Starting CP-0 IOROM 1.07
Booting from SPI NOR flash 1 (0x32)
Found valid image at boot postion 0x000
lmv_ddr: mv_ddr-devel-19.02.0-ga54123f (Dec 03 2019 - 17:58:15)
mv_ddr: completed successfully
BL2: Initiating SCP_BL2 transfer to SCP


U-Boot 2018.03-devel-19.02.1-01041-g8427fcf82d (Dec 03 2019 - 17:56:32 +0800)

Model: Marvell Armada 7040 Mochabin development board
SoC: Armada7040-B0; AP806-B0; CP115-A0
Clock:  CPU     1400 [MHz]
        DDR     800  [MHz]
        FABRIC  800  [MHz]
        MSS     200  [MHz]
LLC Enabled (Exclusive Mode)
DRAM:  8 GiB
Bus spi@700680 CS0 configured for direct access 00000000f9000000:0x1000000
SF: Detected mx25l12805 with page size 256 Bytes, erase size 64 KiB, total 16 MiB
Comphy chip #0:
Comphy-0: SGMII1        3.125 Gbps
Comphy-1: USB3_HOST0
Comphy-2: SFI0          10.3125 Gbps
Comphy-3: SATA1
Comphy-4: PEX1
Comphy-5: PEX2
UTMI PHY 0 initialized to USB Host0
UTMI PHY 1 initialized to USB Host1
PCIE-0: Link down
PCIE-2: Link down
MMC:   sdhci@6e0000: 0
Loading Environment from SPI Flash... OK
Model: Marvell Armada 7040 Mochabin development board
Net:   eth0: mvpp2-0 [PRIME], eth1: mvpp2-1, eth2: mvpp2-2
Hit any key to stop autoboot:  0
Marvell>>
```

Enter “boot” to continue boot up if interrupted.

```
Marvell>>
Marvell>> boot
```

J-2. login “root” with password “admin”

```
Password:
Ubuntu 16.04.6 LTS mocha0e70be ttyS0

mocha0e70be login: root
Password:
Last login: Thu Jan  2 09:53:55 UTC 2020 on ttyS0
Welcome to Ubuntu 16.04.6 LTS (GNU/Linux 4.14.76-devel-19.02.1-01683-g87819ab79c0f aarch64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage
root@mocha0e70be:~#
```

```
root@localhost:~# whoami
root
root@localhost:~# pwd
/root
root@localhost:~#
```

J-3. Check the kernal version

Enter command : uname –a

```
root@mocha0e70be:~# uname -a
Linux mocha0e70be 4.14.76-devel-19.02.1-01683-g87819ab79c0f #12 SMP PREEMPT Tue Dec 3 18:17:40 CST 2019
aarch64 aarch64 aarch64 GNU/Linux
root@mocha0e70be:~#
```

J-4. Check the CPU information

J-4.1 check with command “cat /proc/cpuinfo”

You may see there are 4 processors

```
root@mocha0e70be:~# cat /proc/cpuinfo
processor       : 0
BogoMIPS        : 50.00
Features        : fp asimd aes pmull sha1 sha2 crc32 cpuid
CPU implementer : 0x41
CPU architecture: 8
CPU variant     : 0x0
CPU part        : 0xd08
CPU revision    : 1

processor       : 1
BogoMIPS        : 50.00
Features        : fp asimd aes pmull sha1 sha2 crc32 cpuid
CPU implementer : 0x41
CPU architecture: 8
CPU variant     : 0x0
CPU part        : 0xd08
CPU revision    : 1

processor       : 2
BogoMIPS        : 50.00
Features        : fp asimd aes pmull sha1 sha2 crc32 cpuid
CPU implementer : 0x41
CPU architecture: 8
CPU variant     : 0x0
CPU part        : 0xd08
CPU revision    : 1

processor       : 3
BogoMIPS        : 50.00
Features        : fp asimd aes pmull sha1 sha2 crc32 cpuid
CPU implementer : 0x41
CPU architecture: 8
CPU variant     : 0x0
CPU part        : 0xd08
CPU revision    : 1

root@mocha0e70be:~#
```

J-4.2 check with lscpu command

```
root@mocha0e70be:~# lscpu
Architecture:          aarch64
Byte Order:            Little Endian
CPU(s):                4
On-line CPU(s) list:   0-3
Thread(s) per core:    1
Core(s) per socket:    2
Socket(s):             2
NUMA node(s):          1
Hypervisor vendor:     horizontal
Virtualization type:   full
L1d cache:             32K
L1i cache:             48K
L2 cache:              512K
NUMA node0 CPU(s):     0-3
root@mocha0e70be:~#
```

J-5. Check the memory information

```
root@mocha0e70be:~# cat /proc/meminfo
MemTotal:        8153028 kB
MemFree:         7948980 kB
MemAvailable:    7910264 kB
Buffers:           18576 kB
Cached:            79212 kB
SwapCached:            0 kB
```

J-6. Check the network information

Connect RJ45 cable from the WAN port to the ethernet router or switch

type in “dhclient” then ifconfig”

J-6.1 check with ifconfig command

```
root@mocha0e70be:~# ifconfig
bond0     Link encap:Ethernet  HWaddr f0:ad:4e:0e:70:be
          inet addr:192.168.3.20  Bcast:192.168.3.255  Mask:255.255.255.0
          inet6 addr: fe80::f2ad:4eff:fe0e:70be/64 Scope:Link
          UP BROADCAST RUNNING MASTER MULTICAST  MTU:1500  Metric:1
          RX packets:199 errors:0 dropped:0 overruns:0 frame:0
          TX packets:30 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:14328 (14.3 KB)  TX bytes:2944 (2.9 KB)

br0       Link encap:Ethernet  HWaddr 00:51:82:11:22:03
          inet addr:192.168.84.1  Bcast:192.168.84.255  Mask:255.255.255.0
          UP BROADCAST MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

eth0      Link encap:Ethernet  HWaddr f0:ad:4e:0e:70:be
          UP BROADCAST SLAVE MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:2048
          RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

eth1      Link encap:Ethernet  HWaddr f0:ad:4e:0e:70:bd
          inet6 addr: fe80::f2ad:4eff:fe0e:70bd/64 Scope:Link
          UP BROADCAST RUNNING PROMISC MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:12 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:2048
          RX bytes:0 (0.0 B)  TX bytes:936 (936.0 B)

eth2      Link encap:Ethernet  HWaddr f0:ad:4e:0e:70:be
          UP BROADCAST RUNNING SLAVE MULTICAST  MTU:1500  Metric:1
          RX packets:199 errors:0 dropped:0 overruns:0 frame:0
          TX packets:30 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:2048
          RX bytes:14328 (14.3 KB)  TX bytes:2944 (2.9 KB)
```

```
lan0      Link encap:Ethernet  HWaddr 00:51:82:11:22:03
          UP BROADCAST MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

lan1      Link encap:Ethernet  HWaddr f0:ad:4e:0e:70:bd
          UP BROADCAST MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

lan2      Link encap:Ethernet  HWaddr f0:ad:4e:0e:70:bd
          UP BROADCAST MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

lan3      Link encap:Ethernet  HWaddr f0:ad:4e:0e:70:bd
          UP BROADCAST MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:65536  Metric:1
          RX packets:160 errors:0 dropped:0 overruns:0 frame:0
          TX packets:160 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:11840 (11.8 KB)  TX bytes:11840 (11.8 KB)

root@mocha0e70be:~#
```

J-6.2 Using ping command to verify internet connection

```
root@mocha0e70be:~# ping -c 10 www.google.com
PING www.google.com (172.217.160.100) 56(84) bytes of data.
64 bytes from tsa03s06-in-f4.1e100.net (172.217.160.100): icmp_seq=1 ttl=52 time=51.1 ms
64 bytes from tsa03s06-in-f4.1e100.net (172.217.160.100): icmp_seq=2 ttl=52 time=51.6 ms
64 bytes from tsa03s06-in-f4.1e100.net (172.217.160.100): icmp_seq=3 ttl=52 time=43.3 ms
64 bytes from tsa03s06-in-f4.1e100.net (172.217.160.100): icmp_seq=4 ttl=52 time=334 ms
64 bytes from tsa03s06-in-f4.1e100.net (172.217.160.100): icmp_seq=5 ttl=52 time=240 ms
64 bytes from tsa03s06-in-f4.1e100.net (172.217.160.100): icmp_seq=6 ttl=52 time=300 ms
64 bytes from tsa03s06-in-f4.1e100.net (172.217.160.100): icmp_seq=7 ttl=52 time=45.4 ms
64 bytes from tsa03s06-in-f4.1e100.net (172.217.160.100): icmp_seq=8 ttl=52 time=96.6 ms
64 bytes from tsa03s06-in-f4.1e100.net (172.217.160.100): icmp_seq=9 ttl=52 time=50.4 ms
64 bytes from tsa03s06-in-f4.1e100.net (172.217.160.100): icmp_seq=10 ttl=52 time=55.9 ms

--- www.google.com ping statistics ---
10 packets transmitted, 10 received, 0% packet loss, time 9012ms
rtt min/avg/max/mdev = 43.365/127.000/334.729/110.854 ms
root@mocha0e70be:~#
```

J-7. Check the USB3.0 ports

J-7.1 check USB device without USB disk plugged

Enter command: lsusb

```
root@mocha0e70be:~# lsusb
Bus 004 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
Bus 003 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 002 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
Bus 001 Device 002: ID 0424:2134 Standard Microsystems Corp. Hub
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
root@mocha0e70be:~#
```

J-7.2 check USB device with 2 USB disks plugged

Enter command: lsusb

```
root@mocha0e70be:~# lsusb
Bus 004 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
Bus 003 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 002 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
Bus 001 Device 005: ID 13fe:6300 Kingston Technology Company Inc.
Bus 001 Device 004: ID 05dc:a838 Lexar Media, Inc.
Bus 001 Device 003: ID 0424:2134 Standard Microsystems Corp. Hub
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
root@mocha0e70be:~#
```

J-7.3 check disk partitions

Enter command: cat /proc/partitions

```
root@mocha0e70be:~# cat /proc/partitions
major minor  #blocks  name

   1        0      48000 ram0
  31        0       4032 mtdblock0
  31        1         64 mtdblock1
  31        2      12288 mtdblock2
 179        0   15388672 mmcblk0
 179        1   15387648 mmcblk0p1
 179       96       4096 mmcblk0rpmb
 179       64       4096 mmcblk0boot1
 179       32       4096 mmcblk0boot0
   8        0   15642624 sda
   8        1   15642568 sda1
   8       16   15474688 sdb
   8       17   15466048 sdb1
root@mocha0e70be:~#
```

J-7.4 check disk partitions with “df” command

```
root@mocha0e70be:~# df
Filesystem     1K-blocks    Used Available Use% Mounted on
/dev/root       15014832  587644  13641424   5% /
devtmpfs         3944992       0   3944992   0% /dev
tmpfs            4076512       0   4076512   0% /dev/shm
tmpfs            4076512   12608   4063904   1% /run
tmpfs               5120       0      5120   0% /run/lock
tmpfs            4076512       0   4076512   0% /sys/fs/cgroup
/dev/sda1       15626184 8280112   7346072  53% /media/disk0
/dev/sdb1       15458400 9288768   6169632  61% /media/disk1
root@mocha0e70be:~#
```

J-7.5 check disk partitions with “fdisk -l” command

```
root@mocha0e70be:~# fdisk -l
Disk /dev/ram0: 46.9 MiB, 49152000 bytes, 96000 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes


Disk /dev/mtdblock0: 4 MiB, 4128768 bytes, 8064 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes


Disk /dev/mtdblock1: 64 KiB, 65536 bytes, 128 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/mtdblock2: 12 MiB, 12582912 bytes, 24576 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/mmcblk0: 14.7 GiB, 15758000128 bytes, 30777344 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x89708921
```

check disk partitions with “fdisk -l” command (continued)

```
Device         Boot Start      End  Sectors  Size Id Type
/dev/mmcblk0p1 *     2048 30777343 30775296 14.7G 83 Linux



Disk /dev/mmcblk0boot1: 4 MiB, 4194304 bytes, 8192 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes


Disk /dev/mmcblk0boot0: 4 MiB, 4194304 bytes, 8192 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes


Disk /dev/sda: 14.9 GiB, 16018046976 bytes, 31285248 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0xc3072e18

Device     Boot Start      End  Sectors  Size Id Type
/dev/sda1         112 31285247 31285136 14.9G  c W95 FAT32 (LBA)


Disk /dev/sdb: 14.8 GiB, 15846080512 bytes, 30949376 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0xb9fc2146

Device     Boot Start      End  Sectors  Size Id Type
/dev/sdb1       17280 30949375 30932096 14.8G  c W95 FAT32 (LBA)
root@mocha0e70be:~#
```

J-8. top command

```
root@mocha0e70be:~# top
top - 12:39:08 up  2:30,  1 user,  load average: 0.01, 0.04, 0.00
Tasks: 121 total,   1 running,  59 sleeping,   0 stopped,   0 zombie
%Cpu(s):  0.0 us,  0.0 sy,  0.0 ni,100.0 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
KiB Mem :  8153028 total,  7949632 free,    79948 used,   123448 buff/cache
KiB Swap:        0 total,        0 free,        0 used.  7910212 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR S  %CPU %MEM     TIME+ COMMAND
 1323 root      20   0       0      0      0 I   0.3  0.0   0:00.29 kworker/u8+
 4823 root      20   0    5720   2700   2192 R   0.3  0.0   0:00.17 top
    1 root      20   0    6932   5240   3468 S   0.0  0.1   0:03.85 systemd
    2 root      20   0       0      0      0 S   0.0  0.0   0:00.00 kthreadd
    4 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 kworker/0:+
    6 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 mm_percpu_+
    7 root      20   0       0      0      0 S   0.0  0.0   0:00.04 ksoftirqd/0
    8 root      20   0       0      0      0 I   0.0  0.0   0:00.01 rcu_preempt
    9 root      20   0       0      0      0 I   0.0  0.0   0:00.00 rcu_sched
   10 root      20   0       0      0      0 I   0.0  0.0   0:00.00 rcu_bh
   11 root      rt   0       0      0      0 S   0.0  0.0   0:00.01 migration/0
   12 root      20   0       0      0      0 S   0.0  0.0   0:00.00 cpuhp/0
   13 root      20   0       0      0      0 S   0.0  0.0   0:00.00 cpuhp/1
   14 root      rt   0       0      0      0 S   0.0  0.0   0:00.01 migration/1
   15 root      20   0       0      0      0 S   0.0  0.0   0:00.00 ksoftirqd/1
   17 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 kworker/1:+
   18 root      20   0       0      0      0 S   0.0  0.0   0:00.02 rcuop/1
```

J-9. other useful command like “lspci” and “lsmod”

```
root@mocha0e70be:~# lspci
0000:00:00.0 PCI bridge: Marvell Technology Group Ltd. Device 0110
0001:00:00.0 PCI bridge: Marvell Technology Group Ltd. Device 0110
root@mocha0e70be:~#
```

```
root@mocha0e70be:~# lsmod
Module                  Size  Used by
uio_pdrv_genirq        16384  0
bonding               131072  0
mac80211              421888  0
cfg80211              327680  1 mac80211
root@mocha0e70be:~#
```

=== End of File ===