**1401-01-06**

Finding Kernel version:

#Command: “uname -r”

To-do list:

1. Ser2net pgp name manager copy from modem
2. Send name manager to GitLab

**1401-01-07**

1. Debug SMS-gateway

**1401-01-08**

1. Debug SMS-gateway
2. Push changes to GitLab

**1401-01-09**

1. Debug SMS-gateway

**1401-01-10**

1. Debug SMS-gateway

**1401-01-11**

1. Debug SMS-gateway

**1401-01-14**

To-do list:

1. Learning more about GPIO pin control in Linux kernel
2. Change kernel GPIO pinctl file for mt7628

Directory:

1. Send name manager to GitLab
2. Push changes to GitHub and GitLab

**1401-01-15**

1. SMS-gateway test Ahvaz failed
2. SMS not rebooting system
3. Gem module USB failure diagnosis by
4. #command “dmesg | grep GSM
5. Refrences :

https://www.kernel.org/doc/html/v4.19/driver-api/gpio/index.html

1. https://docs.onion.io/omega2-docs/using-gpios.html

find / -name sysfs

gpioget gpiochip0 20

gpioget: error reading GPIO values: Resource busy

gpioinfo 10000600.pinctrl

gpioset gpiochip0

omon gpiochip0 20

gpiomon: error waiting for events: Resource busy

sudo cat /sys/kernel/debug/pinctrl/ahb:apb:pinctrl@fffff200/pinmux-pins

gpiomon --format="%e %o %s %n" --falling-edge gpiochip0 20

gpiomon: error waiting for events: Resource busy

**1401-01-16**

1. Testing SMS-gateway on modem version 6.5
2. Finding bugs in SMS initial
3. Finding bug in SMS
4. Changing GPIOs by blink.sh

#!/bin/sh

cd /sys/class/gpio

echo 20 > unexport;

echo 20 > export; echo out >gpio20/direction

while true; do

echo 0 > gpio20/value

sleep 2

echo 1 > gpio20/value

sleep 2

done

1. Chmod +x blink.sh
2. Run blink.sh by ./blink.sh
3. Testing gpio 20 outputs from optocoupler
4. Finding solution for bug in openwrt build system fatal revision

Cd openwrt and nano file named getver.sh

nano scripts/getver.sh

change line value hash from error similar this:

REBOOT=ee53a240ac902dc83209008a2671e7fdcf55957a

**1401-01-17**

1. Push gpio ctl to GitLab
2. Work on SMS-gateway
3. Push lede to GitLab
4. For listing usb devices in a tree order

lsusb -t

/: Bus 02.Port 1: Dev 1, Class=root\_hub, Driver=ohci-platform/1p, 12M

/: Bus 01.Port 1: Dev 1, Class=root\_hub, Driver=ehci-platform/1p, 480M

|\_\_ Port 1: Dev 2, If 0, Class=Hub, Driver=hub/4p, 480M

|\_\_ Port 1: Dev 3, If 0, Class=Hub, Driver=hub/4p, 480M

|\_\_ Port 3: Dev 5, If 0, Class=Vendor Specific Class, Driver=ch341, 12M

|\_\_ Port 4: Dev 8, If 0, Class=Vendor Specific Class, Driver=ch341, 12M

|\_\_ Port 2: Dev 4, If 0, Class=Hub, Driver=hub/4p, 480M

|\_\_ Port 3: Dev 11, If 0, Class=Vendor Specific Class, Driver=ch341, 12M

|\_\_ Port 1: Dev 7, If 0, Class=Vendor Specific Class, Driver=ch341, 12M

|\_\_ Port 2: Dev 10, If 0, Class=Vendor Specific Class, Driver=ch341, 12M

|\_\_ Port 3: Dev 6, If 0, Class=Wireless, Driver=rndis\_host, 480M

|\_\_ Port 3: Dev 6, If 1, Class=CDC Data, Driver=rndis\_host, 480M

|\_\_ Port 3: Dev 6, If 2, Class=Vendor Specific Class, Driver=option, 480M

|\_\_ Port 3: Dev 6, If 3, Class=Vendor Specific Class, Driver=option, 480M

|\_\_ Port 3: Dev 6, If 4, Class=Vendor Specific Class, Driver=option, 480M

|\_\_ Port 4: Dev 9, If 1, Class=CDC Data, Driver=rndis\_host, 480M

|\_\_ Port 4: Dev 9, If 4, Class=Vendor Specific Class, Driver=option, 480M

|\_\_ Port 4: Dev 9, If 2, Class=Vendor Specific Class, Driver=option, 480M

|\_\_ Port 4: Dev 9, If 0, Class=Wireless, Driver=rndis\_host, 480M

|\_\_ Port 4: Dev 9, If 3, Class=Vendor Specific Class, Driver=option, 480M

1. Serial to network name manager

Write this at second line of /etc/hotplug.d/tty/00-pgp-tty-name-manger.sh file

echo "${DEVPATH}" >> /tmp/devlog

then we can find list of all physical addresses for ttyUSB devices

**1401-01-18**

1. Solving uboot problem on pin20 by update uboot version to uboot-omega2p-20200512

Gpio set to high on reboot but in kernel it set that to low

Note : it sending wrong value to relay ant turn relay on after rebooting system that is not safe !

1. Omega 2+ uboot is editable by downloading sources from github and customizing c codes for special purposes.
2. Search for changing uboot from openwrt:

<https://openwrt.org/docs/techref/mtd#example_flash_u-boot_from_openwrt>

root@PM-1809:~# cat /proc/mtd

dev: size erasesize name

mtd0: 00030000 00010000 "u-boot"

mtd1: 00010000 00010000 "u-boot-env"

mtd2: 00010000 00010000 "factory"

mtd3: 01fb0000 00010000 "firmware"

mtd4: 0018da88 00010000 "kernel"

mtd5: 01e22578 00010000 "rootfs"

mtd6: 01650000 00010000 "rootfs\_data"

1. Its not working on mt7628 maybe needs some other things to work
2. Mtd erase and unlock dose not working

root@PM-1809:/tmp# mtd -r write /tmp/uboot-omega2p-20191017.bin /dev/mtd0

Could not open mtd device: /dev/mtd0

Can't open device for writing!

root@PM-1809:/tmp# mtd erase /dev/mtd0

Could not open mtd device: /dev/mtd0

Could not open mtd device: /dev/mtd0

root@PM-1809:/tmp# mtd erase /dev/mtd1

Could not open mtd device: /dev/mtd1

Could not open mtd device: /dev/mtd1

root@PM-1809:/tmp# mtd unlock /dev/mtd0

Could not open mtd device: /dev/mtd0

Could not open mtd device: /dev/mtd0

**1401-01-20**

To-do list:

1. SMS-gateway changes and finding solution for smsinitial bug
2. Finding solution for changing uboot from openwrt
3. <https://wiki.8devices.com/openwrt:recipes:build_mtdblock0_writeable:for_u-boot_upgrade_with_writeable_mtdblock0_1_partitions>
4. Creating bash for flashing uboot on first boot of openwrt
5. Changing gpio shift register on boot for LEDs turn off