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videodev evdev snd_soc_core ralink_gdma virt_dma mt76x8 ralink_eeeprom_api ledtrig_oneshot ledtrig_morse ledtrig_heartbeat
ledtrig_gpio ip6t_REJECT nf_reject_ipv6 nf_log_ipv6 nf_log_common ip6table_mangle ip6table_filter ip6_tables x_tables msdos
snd_pcm_dmaengine snd_compress snd_pcm_oss snd_mixer_oss snd_pcm snd_timer snd_rawmidi snd_seq_device snd_hwdep snd
input_core soundcore vfat fat ntfs configfs autofs4 nls_utf8 nls_iso8859_1 nls_cp437 regmap_i2c dma_shared_buffer ecb cmac
mmc_block usb_storage sdhci_pltfm sdhci mtk_sd mmc_core leds_gpio ohci_platform ohci_hcd ledtrig_transient ehci_platform
ehci_hcd sd_mod scsi_mod gpio_button_hotplug ext4 jbd2 mbcache exfat usbcore nls_base usb_common crc16 aead crypto_null
cryptomgr crc32c_generic crypto_hash
[ 26.439955] Process RtmpCmdQTask (pid: 1170, threadinfo=8735c000, task=87dcc000, tls=00000000)
[ 26.448679] Stack : 02020200 80086720 ffffffff 87221160 87f51b00 870680a0 00000000 00000000
                   87221160 00000000 a70b2000 c0457000 c0530f54 8703a56c 00000000 8738fd20
                   00000000 803caa00 0000ff00 803ca4c0 00000000 00000001 8644204c 00000000
                   00000001 00000001 00000000 8644204c 00040008 87376c00 00000000 c0457000
                   87376c00 c0530f50 c0537000 c0530f6c c0530f7c 87039884 00000000 87062934
                   ...
[ 26.484808] Call Trace:
[ 26.487308] [<800206a0>] r4k_dma_cache_wback_inv+0xc/0xc8
[ 26.493097] [<870680a0>] linux_pci_map_single+0x88/0xb4 [mt76x8]
[ 26.499810] [<8703a56c>] AndesMTPciKickOutCmdMsg+0x104/0x238 [mt76x8]
[ 26.506965] [<87039884>] AndesSendCmdMsg+0x1b4/0xd98 [mt76x8]
[ 26.513412] [<8703d588>] CmdSlotTimeSet+0xb4/0x1c4 [mt76x8]
[ 26.519687] [<87041014>] MtAsicSetSlotTime+0x20/0x2c [mt76x8]
[ 26.526134] [<8702a6d0>] CMDHandler+0x1b4/0x224 [mt76x8]
[ 26.532140] [<87066bc4>] RTPCIcmdThread+0xb4/0x198 [mt76x8]
[ 26.538104] [<8003bf48>] kthread+0xd8/0xec
[ 26.542265] [<80004478>] ret_from_kernel_thread+0x14/0x1c
[ 26.547733]
[ 26.549239]
Code: 27bdfef8 2ca20001 afbf0014 <0020336> 3c02803c 24426060 8c430008 7c630440 10600013
[ 26.559423] ---[ end trace cd7273509f71098f ]---
[ 26.566720] Fatal exception: panic in 5 seconds
[ 30.319602] Kernel panic - not syncing: Fatal exception
[ 30.327715] Rebooting in 3 seconds..

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Board: Onion Omega2 APSoC DRAM: 128 MB
relocate_code Pointer at: 87f60000
flash manufacture id: c2, device id 20 19
find flash: MX25L25635E
*** Warning - bad CRC, using default environment

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=====
Onion Omega2 UBoot Version: 4.3.0.3
=====
ASIC 7628_MP (Port5<->None)
DRAM component: 1024 Mbits DDR, width 16
DRAM bus: 16 bit
Total memory: 128 MBytes
Flash component: SPI Flash
Date:Oct 18 2016 Time:17:29:05
=====
icache: sets:512, ways:4, linesz:32 ,total:65536
dcache: sets:256, ways:4, linesz:32 ,total:32768
CPU freq = 575 MHZ
Estimated memory size = 128 Mbytes
Resetting MT7628 PHY.
Initializing MT7688 GPIO system.

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*****
* Hold Reset button for more options *
*****

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Boot Linux from Flash NO RESET PRESSED.
## Booting image at bc050000 ...
   Image Name:   MIPS LEDE Linux-4.4.46
   Image Type:   MIPS Linux Kernel Image (lzma compressed)
   Data Size:    1340558 Bytes = 1.3 MB
   Load Address: 80000000
   Entry Point:  80000000
   Verifying Checksum ... OK
   Uncompressing Kernel Image ... OK
No initrd
## Transferring control to Linux (at address 80000000) ...
## Giving linux memsize in MB, 128

Starting kernel ...

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```
[ 0.000000] Linux version 4.4.46 (root@2272a3272872) (gcc version 5.4.0 (LEDE GCC 5.4.0 r3273-a0888ec) ) #0 Thu Feb 2
23:46:03 2017
[ 0.000000] Board has DDR2
[ 0.000000] Analog PMU set to hw control
[ 0.000000] Digital PMU set to hw control
[ 0.000000] SoC Type: MediaTek MT7688 ver:1 eco:2
[ 0.000000] bootconsole [early0] enabled
[ 0.000000] CPU0 revision is: 00019655 (MIPS 24KEc)
[ 0.000000] MIPS: machine is Onion Omega2+
[ 0.000000] Determined physical RAM map:
[ 0.000000] memory: 08000000 @ 00000000 (usable)
[ 0.000000] Initrd not found or empty - disabling initrd
[ 0.000000] Zone ranges:
[ 0.000000] Normal [mem 0x0000000000000000-0x0000000007fffffff]
[ 0.000000] Movable zone start for each node
[ 0.000000] Early memory node ranges
[ 0.000000] node 0: [mem 0x0000000000000000-0x0000000007fffffff]
[ 0.000000] Initmem setup node 0 [mem 0x0000000000000000-0x0000000007fffffff]
[ 0.000000] Primary instruction cache 64kB, VIPT, 4-way, linesize 32 bytes.
[ 0.000000] Primary data cache 32kB, 4-way, PIPT, no aliases, linesize 32 bytes
[ 0.000000] Built 1 zonelists in Zone order, mobility grouping on. Total pages: 32512
[ 0.000000] Kernel command line: console=ttyS0,115200 rootfstype=squashfs,jffs2
[ 0.000000] PID hash table entries: 512 (order: -1, 2048 bytes)
[ 0.000000] Dentry cache hash table entries: 16384 (order: 4, 65536 bytes)
[ 0.000000] Inode-cache hash table entries: 8192 (order: 3, 32768 bytes)
[ 0.000000] Writing ErrCtl register=0005385f
[ 0.000000] Readback ErrCtl register=0005385f
[ 0.000000] Memory: 125492K/131072K available (3100K kernel code, 147K rwdata, 740K rodata, 164K init, 196K bss, 5580K
reserved, 0K cma-reserved)
[ 0.000000] SLUB: HWalign=32, Order=0-3, MinObjects=0, CPUs=1, Nodes=1
[ 0.000000] NR_IRQS:256
[ 0.000000] intc: using register map from devicetree
[ 0.000000] CPU Clock: 580MHz
[ 0.000000] clocksource_probe: no matching clocksources found
[ 0.000000] clocksource: MIPS: mask: 0xffffffff max_cycles: 0xffffffff, max_idle_ns: 6590553264 ns
[ 0.000011] sched_clock: 32 bits at 290MHz, resolution 3ns, wraps every 7405115902ns
[ 0.007520] Calibrating delay loop... 385.84 BogoMIPS (lpj=1929216)
[ 0.070036] pid_max: default: 32768 minimum: 301
[ 0.074632] Mount-cache hash table entries: 1024 (order: 0, 4096 bytes)
[ 0.080967] Mountpoint-cache hash table entries: 1024 (order: 0, 4096 bytes)
[ 0.094474] clocksource: jiffies: mask: 0xffffffff max_cycles: 0xffffffff, max_idle_ns: 19112604462750000 ns
[ 0.104111] pinctrl core: initialized pinctrl subsystem
[ 0.109829] NET: Registered protocol family 16
[ 0.134587] mt7621_gpio 10000600.gpio: registering 32 gpios
[ 0.140068] mt7621_gpio 10000600.gpio: registering 32 gpios
[ 0.145570] mt7621_gpio 10000600.gpio: registering 32 gpios
[ 0.152029] i2c-mt7621 10000900.i2c: clock 100KHz, re-start not support
[ 0.159588] clocksource: Switched to clocksource MIPS
[ 0.166080] NET: Registered protocol family 2
[ 0.171319] TCP established hash table entries: 1024 (order: 0, 4096 bytes)
[ 0.178013] TCP bind hash table entries: 1024 (order: 0, 4096 bytes)
[ 0.184203] TCP: Hash tables configured (established 1024 bind 1024)
[ 0.190398] UDP hash table entries: 256 (order: 0, 4096 bytes)
[ 0.196002] UDP-Lite hash table entries: 256 (order: 0, 4096 bytes)
[ 0.202359] NET: Registered protocol family 1
[ 0.212722] futex hash table entries: 256 (order: -1, 3072 bytes)
[ 0.218683] Crashlog allocated RAM at address 0x3f00000
[ 0.240358] squashfs: version 4.0 (2009/01/31) Phillip Lougher
[ 0.245947] jffs2: version 2.2 (NAND) (SUMMARY) (LZMA) (RTIME) (CMODE_PRIORITY) (c) 2001-2006 Red Hat, Inc.
[ 0.258743] io scheduler noop registered
[ 0.262542] io scheduler deadline registered (default)
[ 0.268336] rt2880-pinctrl pinctrl: pin io18 already requested by pinctrl; cannot claim for 10005000.pwm
[ 0.277411] rt2880-pinctrl pinctrl: pin-18 (10005000.pwm) status -22
[ 0.283419] rt2880-pinctrl pinctrl: could not request pin 18 (io18) from group pwm0 on device rt2880-pinctrl
[ 0.292822] mtk-pwm 10005000.pwm: Error applying setting, reverse things back
[ 0.300188] Serial: 8250/16550 driver, 4 ports, IRQ sharing disabled
[ 0.307729] console [ttyS0] disabled
[ 0.311219] 10000c00.uartlite: ttyS0 at MMIO 0x10000c00 (irq = 28, base_baud = 2500000) is a 16550A
[ 0.319939] console [ttyS0] enabled
[ 0.319939] console [ttyS0] enabled
[ 0.326937] bootconsole [early0] disabled
[ 0.326937] bootconsole [early0] disabled
[ 0.335600] 10000d00.uart1: ttyS1 at MMIO 0x10000d00 (irq = 29, base_baud = 2500000) is a 16550A
[ 0.345110] 10000e00.uart2: ttyS2 at MMIO 0x10000e00 (irq = 30, base_baud = 2500000) is a 16550A
[ 0.355707] spi-mt7621 10000b00.spi: sys_freq: 193333333
[ 0.366041] m25p80 spi32766.0: using chunked io (size=31)
[ 0.371603] m25p80 spi32766.0: mx25l25635e (32768 Kbytes)
[ 0.377110] 4 ofpart partitions found on MTD device spi32766.0
[ 0.383035] Creating 4 MTD partitions on "spi32766.0":
[ 0.388251] 0x0000000000000-0x0000000030000 : "u-boot"
[ 0.395119] 0x0000000030000-0x0000000040000 : "u-boot-env"
[ 0.402452] 0x0000000040000-0x0000000050000 : "factory"
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[ 0.409448] 0x000000050000-0x000002000000 : "firmware"
[ 0.457274] 2 ubinimage-fw partitions found on MTD device firmware
[ 0.463324] 0x000000050000-0x000001974ce : "kernel"
[ 0.470118] 0x0000001974ce-0x000002000000 : "rootfs"
[ 0.476992] mtd: device 5 (rootfs) set to be root filesystem
[ 0.482868] 1 squashfs-split partitions found on MTD device rootfs
[ 0.489144] 0x0000006f0000-0x000002000000 : "rootfs_data"
[ 0.506359] rt3050-esw 10110000.esw: link changed 0x00
[ 0.514145] mtk_soc_eth 10100000.ethernet eth0: mediatek frame engine at 0xb0100000, irq 5
[ 0.522791] i2c /dev entries driver
[ 0.526910] mt7621_wdt 10000120.watchdog: Initialized
[ 0.533625] NET: Registered protocol family 10
[ 0.542386] NET: Registered protocol family 17
[ 0.546985] bridge: automatic filtering via arp/ip/ip6tables has been deprecated. Update your scripts to load
br_netfilter if you need this.
[ 0.559848] 8021q: 802.1Q VLAN Support v1.8
[ 0.571250] VFS: Mounted root (squashfs filesystem) readonly on device 31:5.
[ 0.579310] Freeing unused kernel memory: 164K (803e7000 - 80410000)
[ 1.575719] init: Console is alive
[ 1.579385] init: - watchdog -
[ 4.023489] kmodloader: loading kernel modules from /etc/modules-boot.d/*
[ 4.177542] usbcore: registered new interface driver usbfs
[ 4.183285] usbcore: registered new interface driver hub
[ 4.188786] usbcore: registered new device driver usb
[ 4.200445] exFAT: Version 1.2.9
[ 4.242434] SCSI subsystem initialized
[ 4.253285] ehci_hcd: USB 2.0 'Enhanced' Host Controller (EHCI) Driver
[ 4.261712] ehci-platform: EHCI generic platform driver
[ 4.277373] phy phy-10120000.usbphy.0: remote usb device wakeup disabled
[ 4.284190] phy phy-10120000.usbphy.0: UTMI 16bit 30MHz
[ 4.289518] ehci-platform 101c0000.ehci: EHCI Host Controller
[ 4.295392] ehci-platform 101c0000.ehci: new USB bus registered, assigned bus number 1
[ 4.303558] ehci-platform 101c0000.ehci: irq 26, io mem 0x101c0000
[ 4.329627] ehci-platform 101c0000.ehci: USB 2.0 started, EHCI 1.00
[ 4.337174] hub 1-0:1.0: USB hub found
[ 4.341419] hub 1-0:1.0: 1 port detected
[ 4.350477] ohci_hcd: USB 1.1 'Open' Host Controller (OHCI) Driver
[ 4.358420] ohci-platform: OHCI generic platform driver
[ 4.364060] ohci-platform 101c1000.ohci: Generic Platform OHCI controller
[ 4.371032] ohci-platform 101c1000.ohci: new USB bus registered, assigned bus number 2
[ 4.379151] ohci-platform 101c1000.ohci: irq 26, io mem 0x101c1000
[ 4.444797] hub 2-0:1.0: USB hub found
[ 4.449067] hub 2-0:1.0: 1 port detected
[ 4.466430] MTK MSDC device init.
[ 4.509766] mtk-sd: MediaTek MT6575 MSDC Driver
[ 4.517782] sdhci: Secure Digital Host Controller Interface driver
[ 4.524133] sdhci: Copyright(c) Pierre Ossman
[ 4.530046] sdhci-pltfm: SDHCI platform and OF driver helper
[ 4.540396] usbcore: registered new interface driver usb-storage
[ 4.550341] kmodloader: done loading kernel modules from /etc/modules-boot.d/*
[ 4.568182] init: - preinit -
[ 4.791476] usb 1-1: new high-speed USB device number 2 using ehci-platform
[ 5.098796] random: procd: uninitialized urandom read (4 bytes read, 9 bits of entropy available)
[ 5.108588] usb-storage 1-1:1.0: USB Mass Storage device detected
[ 5.128346] scsi host0: usb-storage 1-1:1.0
[ 5.448320] rt3050-esw 10110000.esw: link changed 0x00
Press the [f] key and hit [enter] to enter failsafe mode
Press the [1], [2], [3] or [4] key and hit [enter] to select the debug level
[ 6.489415] scsi 0:0:0:0: Direct-Access Samsung Flash Drive FIT 1100 PQ: 0 ANSI: 6
[ 6.500859] sd 0:0:0:0: [sda] 125304832 512-byte logical blocks: (64.2 GB/59.8 GiB)
[ 6.509822] sd 0:0:0:0: [sda] Write Protect is off
[ 6.515803] sd 0:0:0:0: [sda] Write cache: enabled, read cache: enabled, doesn't support DPO or FUA
[ 6.543143] sda: sda1 sda2
[ 6.551181] sd 0:0:0:0: [sda] Attached SCSI removable disk
[ 8.902272] jffs2: notice: (417) jffs2_build_xattr_subsystem: complete building xattr subsystem, 0 of xdatum (0
unchecked, 0 orphan) and 0 of xref (0 dead, 0 orphan) found.
[ 8.920035] mount_root: overlay filesystem has not been fully initialized yet
[ 8.975076] mount_root: switching to jffs2 overlay
[ 9.009382] urandom-seed: Seed file not found (/etc/urandom.seed)
[ 9.176247] procd: - early -
[ 9.179286] procd: - watchdog -
[ 9.835727] procd: - ubus -
[ 10.041163] random: ubusd: uninitialized urandom read (4 bytes read, 29 bits of entropy available)
[ 10.050879] random: ubusd: uninitialized urandom read (4 bytes read, 29 bits of entropy available)
[ 10.060106] random: ubusd: uninitialized urandom read (4 bytes read, 29 bits of entropy available)
[ 10.069730] random: ubusd: uninitialized urandom read (4 bytes read, 29 bits of entropy available)
[ 10.078883] random: ubusd: uninitialized urandom read (4 bytes read, 29 bits of entropy available)
[ 10.088200] random: ubusd: uninitialized urandom read (4 bytes read, 29 bits of entropy available)
[ 10.097570] random: ubusd: uninitialized urandom read (4 bytes read, 29 bits of entropy available)
[ 10.107121] procd: - init -
Please press Enter to activate this console.
[ 10.748057] kmodloader: loading kernel modules from /etc/modules.d/*
[ 10.784266] nftfs: driver 2.1.32 [Flags: R/O MODULE].

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[ 10.853983] ip6_tables: (C) 2000-2006 Netfilter Core Team
[ 10.878292] Ralink/MTK WiFi EEPROM API Build for MT7620.
[ 10.921601] WRTnode AP Driver version: 4.1.0.0
[ 10.997279] Linux video capture interface: v2.00
[ 11.223714] hidraw: raw HID events driver (C) Jiri Kosina
[ 11.268655] Bluetooth: Core ver 2.21
[ 11.272479] NET: Registered protocol family 31
[ 11.276988] Bluetooth: HCI device and connection manager initialized
[ 11.283463] Bluetooth: HCI socket layer initialized
[ 11.288413] Bluetooth: L2CAP socket layer initialized
[ 11.293593] Bluetooth: SCO socket layer initialized
[ 11.301071] Bluetooth: BNEP (Ethernet Emulation) ver 1.3
[ 11.306470] Bluetooth: BNEP filters: protocol multicast
[ 11.311853] Bluetooth: BNEP socket layer initialized
[ 11.323805] usbcore: registered new interface driver btusb
[ 11.333511] usbcore: registered new interface driver cdc_acm
[ 11.339262] cdc_acm: USB Abstract Control Model driver for USB modems and ISDN adapters
[ 11.367830] Bluetooth: HCI UART driver ver 2.3
[ 11.372425] Bluetooth: HCI UART protocol H4 registered
[ 11.377632] Bluetooth: HCI UART protocol BCSP registered
[ 11.387250] Bluetooth: HIDP (Human Interface Emulation) ver 1.2
[ 11.393352] Bluetooth: HIDP socket layer initialized
[ 11.401688] ip_tables: (C) 2000-2006 Netfilter Core Team
[ 11.423640] nf_conntrack version 0.5.0 (1963 buckets, 7852 max)
[ 11.482850] Bluetooth: RFCOMM TTY layer initialized
[ 11.487836] Bluetooth: RFCOMM socket layer initialized
[ 11.493138] Bluetooth: RFCOMM ver 1.11
[ 11.505074] spidev spi32766.1: buggy DT: spidev listed directly in DT
[ 11.511699] -----[ cut here ]-----
[ 11.516394] WARNING: CPU: 0 PID: 506 at drivers/spi/spidev.c:720 0x8717433c()
[ 11.523635] Modules linked in: spidev(+) snd_usbmidi lib slhc rfcomm nf_reject_ipv4 nf_nat_redirect
nf_nat_masquerade_ipv4 nf_conntrack_ipv4 nf_nat_ipv4 nf_nat nf_log_ipv4 nf_defrag_ipv6 nf_defrag_ipv4 nf_conntrack_rtcache
nf_conntrack iptable_mangle iptable_filter ip_tables hidp hid_generic hci_uart crc_ccitt cdc_acm btusb btintel bnep
bluetooth snd_soc_simple_card snd_soc_ralink_i2s snd_soc_wm8960 videobuf2_vmalloc videobuf2_memops videobuf2_core hid
v4l2_common videodev evdev snd_soc_core ralink_gdma virt_dma mt76x8 ralink_eeprom_api ledtrig_oneshot ledtrig_morse
ledtrig_heartbeat ledtrig_gpio ip6t_REJECT nf_reject_ipv6 nf_log_ipv6 nf_log_common ip6table_mangle ip6table_filter
ip6_tables x_tables msdos snd_pcm_dmaengine snd_compress snd_pcm_oss snd_mixer_oss snd_pcm snd_timer snd_rawmidi
snd_seq_device snd_hwdep snd_input_core soundcore vfat fat ntfs configfs autofs4 nls_utf8 nls_iso8859_1 nls_cp437
regmap_i2c dma_shared_buffer ecb cmac mmc_block usb_storage sdhci_pltfm sdhci mtk_sd mmc_core leds_gpio ohci_platform
ohci_hcd ledtrig_transient ehci_platform ehci_hcd sd_mod scsi_mod gpio_button_hotplug ext4 jbd2 mbcache exfat usbcore
nls_base usb_common crc16 aead crypto_null cryptomgr crc32c_generic crypto_hash
[ 11.633173] CPU: 0 PID: 506 Comm: kmodloader Not tainted 4.4.46 #0
[ 11.639436] Stack : 803806c0 00000000 00000001 803d0000 87daaac4 803cae63 80361b48 000001fa
80413438 0000000e 0000001a 024000c0 800662c8 8004aee8 80367044 803c0000
00000003 0000000e 80365448 875bdb4c 800662c8 80048e54 00000000 00000000
00000001 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
...
[ 11.675595] Call Trace:
[ 11.678133] [<800662c8>] module_sect_show+0x0/0x18
[ 11.683013] [<8004aee8>] vprintk_default+0x24/0x30
[ 11.687889] [<800662c8>] module_sect_show+0x0/0x18
[ 11.692761] [<80048e54>] printk+0x2c/0x38
[ 11.696844] [<800254d8>] warn_slowpath_common+0xa0/0xd0
[ 11.702170] [<8014da98>] dump_stack+0x14/0x28
[ 11.706590] [<8001491c>] show_stack+0x50/0x84
[ 11.711021] [<800254d8>] warn_slowpath_common+0xa0/0xd0
[ 11.716324] [<8717433c>] 0x8717433c
[ 11.719892] [<80025590>] warn_slowpath_null+0x18/0x24
[ 11.725034] [<801faf78>] of_match_node+0x20/0x44
[ 11.729752] [<8717433c>] 0x8717433c
[ 11.733312] [<801c06d8>] devm_kfree+0x20/0x44
[ 11.737745] [<801e191c>] spi_drv_probe+0x3c/0x84
[ 11.742455] [<801bd208>] driver_probe_device+0x120/0x288
[ 11.747864] [<8008b824>] kstrdup+0x44/0x8c
[ 11.752046] [<801e181c>] spi_match_device+0x38/0xa8
[ 11.757015] [<801bd3ec>] __driver_attach+0x7c/0xb4
[ 11.761886] [<801bb610>] next_device+0x10/0x30
[ 11.766401] [<801bd370>] __driver_attach+0x0/0xb4
[ 11.771185] [<801bb6cc>] bus_for_each_dev+0x9c/0xac
[ 11.776166] [<80303404>] klist_add_tail+0x24/0x50
[ 11.780960] [<801bb4a0>] bus_get+0x2c/0x50
[ 11.785133] [<801bc900>] bus_add_driver+0xec/0x20c
[ 11.790012] [<800ae880>] exact_match+0x0/0x8
[ 11.794345] [<800aed88>] exact_lock+0x0/0x24
[ 11.798694] [<801bdb04>] driver_register+0xa8/0xf8
[ 11.803572] [<8717d000>] init_module+0x0/0xdc [spidev]
[ 11.808811] [<8717d098>] init_module+0x98/0xdc [spidev]
[ 11.814133] [<80159668>] kasprintf+0x1c/0x28
[ 11.818483] [<80045840>] __wake_up+0x24/0x48
[ 11.822832] [<8717d000>] init_module+0x0/0xdc [spidev]
[ 11.828065] [<8000d938>] do_one_initcall+0x1e8/0x214
[ 11.833129] [<80045840>] __wake_up+0x24/0x48

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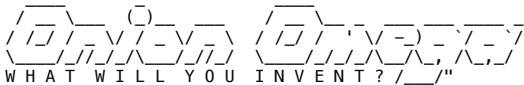
[ 11.837466] [<8717d000>] init_module+0x0/0xdc [spidev]
[ 11.842710] [<800344f8>] call_usermodehelper_exec+0x144/0x160
[ 11.848553] [<80033fe8>] call_usermodehelper_setup+0x38/0xa8
[ 11.854333] [<800662c8>] module_sect_show+0x0/0x18
[ 11.859214] [<800674e8>] do_init_module+0x74/0x1cc
[ 11.864100] [<8009f36c>] __vunmap+0xf0/0x114
[ 11.868465] [<80068d7c>] load_module+0x16c0/0x1b68
[ 11.873343] [<800668b4>] unknown_module_param_cb+0x0/0xac
[ 11.878825] [<8009f860>] __vmalloc_node+0x34/0x40
[ 11.883629] [<800692b8>] Sys_init_module+0x94/0x180
[ 11.888580] [<80069354>] Sys_init_module+0x130/0x180
[ 11.893658] [<800682c>] syscall_common+0x30/0x54
[ 11.898438] [<80008c58>] __bzero+0xbc/0x164
[ 11.902689]
[ 11.904202] ---[ end trace 7f0cf0db953aa26b ]---
[ 11.916456] usbcore: registered new interface driver ums-alauda
[ 11.925645] usbcore: registered new interface driver ums-cypress
[ 11.934900] usbcore: registered new interface driver ums-datafab
[ 11.943900] usbcore: registered new interface driver ums-freecom
[ 11.953119] usbcore: registered new interface driver ums-isd200
[ 11.962398] usbcore: registered new interface driver ums-jumpshot
[ 11.971571] usbcore: registered new interface driver ums-karma
[ 11.981398] usbcore: registered new interface driver ums-sddr09
[ 11.990562] usbcore: registered new interface driver ums-sddr55
[ 12.000090] usbcore: registered new interface driver ums-usbat
[ 12.012555] usbcore: registered new interface driver usbhid
[ 12.018216] usbhid: USB HID core driver
[ 12.026040] usbcore: registered new interface driver usblp
[ 12.040402] usbcore: registered new interface driver usbserial
[ 12.046434] usbcore: registered new interface driver usbserial_generic
[ 12.053213] usbserial: USB Serial support registered for generic
[ 12.072317] Driver for 1-wire Dallas network protocol.
[ 12.098963] xt_time: kernel timezone is -0000
[ 12.105835] usbcore: registered new interface driver ch341
[ 12.111620] usbserial: USB Serial support registered for ch341-uart
[ 12.120497] usbcore: registered new interface driver cp210x
[ 12.126264] usbserial: USB Serial support registered for cp210x
[ 12.135917] usbcore: registered new interface driver ftdi_sio
[ 12.141951] usbserial: USB Serial support registered for FTDI USB Serial Device
[ 12.161065] usbcore: registered new interface driver pl2303
[ 12.166834] usbserial: USB Serial support registered for pl2303
[ 12.178367] PPP generic driver version 2.4.2
[ 12.186098] NET: Registered protocol family 24
[ 12.204373] usbcore: registered new interface driver snd-usb-audio
[ 12.226612] usbcore: registered new interface driver uvcvideo
[ 12.232516] USB Video Class driver (1.1.1)
[ 12.243637] usbcore: registered new interface driver option
[ 12.249406] usbserial: USB Serial support registered for GSM modem (1-port)
[ 12.262167] kmloader: done loading kernel modules from /etc/modules.d/*
[ 12.506378] random: jshn: uninitialized urandom read (4 bytes read, 32 bits of entropy available)
[ 12.677870] random: jshn: uninitialized urandom read (4 bytes read, 33 bits of entropy available)
[ 25.219866] Kernel bug detected[#1]:
[ 25.223521] CPU: 0 PID: 1167 Comm: ifconfig Tainted: G          W          4.4.46 #0
[ 25.230935] task: 87da8f18 ti: 873c6000 task.ti: 873c6000
[ 25.236405] $ 0 : 00000000 00000001 00000001 0000ff00
[ 25.241724] $ 4 : 8644216c 00000000 00000000 00000001
[ 25.247032] $ 8 : 00000001 864421ac 00000000 353d7974
[ 25.252344] $12 : ffffffff 00000058 00000000 00000041
[ 25.257653] $16 : 810c8840 0000016c 80430000 c045c7dc
[ 25.262966] $20 : 8756ee00 c0457000 873ac780 00000001
[ 25.268277] $24 : 00000000 80020694
[ 25.273586] $28 : 873c6000 873c7af8 00000001 870680a0
[ 25.278899] Hi : 00000000
[ 25.281816] Lo : 00000000
[ 25.284766] epc : 800206a0 r4k_dma_cache_wback_inv+0xc/0xc8
[ 25.290946] ra : 870680a0 linux_pci_map_single+0x88/0xb4 [mt76x8]
[ 25.297387] Status: 1100e402 KERNEL EXL
[ 25.301374] Cause : 10800034 (ExcCode 0d)
[ 25.305437] PrId : 00019655 (MIPS 24Kec)
[ 25.309497] Modules linked in: pppoe ppp_async option w1_therm w1_gpio uvcvideo usb_wwan snd_usb_audio pppox ppp_generic
pl2303 nf_conntrack_ipv6 iptable_nat ipt_REJECT ipt_MASQUERADE ftdi_sio cp210x ch341 xt_time xt_tcpudp xt_state xt_nat
xt_multiport xt_mark xt_mac xt_limit xt_conntrack xt_comment xt_TCPMSS xt_REDIRECT xt_LOG wire videobuf2_v4l2 usbserial
usblp usbhid ums_usbata ums_sddr55 ums_sddr09 ums_karma ums_jumpshot ums_isd200 ums_freecom ums_datafab ums_cypress
ums_alauda uinput spidev snd_usbmidi_lib slhc rfcomm nf_reject_ipv4 nf_nat_redirect nf_nat_masquerade_ipv4
nf_conntrack_ipv4 nf_nat_ipv4 nf_nat nf_log_ipv4 nf_defrag_ipv6 nf_defrag_ipv4 nf_conntrack_rtcache nf_conntrack
iptable_mangle iptable_filter ip_tables hidp hid_generic hci_uart crc_ccitt cdc_acm btusb btintel bnep bluetooth
snd_soc_simple_card snd_soc_ralink_i2s snd_soc_wm8960 videobuf2_vmalloc videobuf2_memops videobuf2_core hid_v4l2_common
videodev evdev snd_soc_core ralink_gdma virt_dma mt76x8 ralink_eeprom_api ledtrig_oneshot ledtrig_morse ledtrig_heartbeat
ledtrig_gpio ip6t_REJECT nf_reject_ipv6 nf_log_ipv6 nf_log_common ip6table_mangle ip6table_filter ip6_tables x_tables msdos
snd_pcm_dmaengine snd_compress snd_pcm_oss snd_mixer_oss snd_pcm snd_timer snd_rawmidi snd_seq_device snd_hwdep snd
input_core soundcore vfat fat ntfs configfs autofs4 nls_utf8 nls_iso8859_1 nls_cp437 regmap_i2c dma_shared_buffer ecb cmac
mmc_block usb_storage sdhci_pltfm sdhci_mtk_sd mmc_core leds_gpio ohci_platform ohci_hcd ledtrig_transient ehci_platform
ehci_hcd sd_mod scsi_mod gpio_button_hotplug ext4 jbd2 mbcache exfat usbcore nls_base usb_common crc16 aead crypto_null

```

```

cryptomgr crc32c_generic crypto_hash
[ 25.459578] Process ifconfig (pid: 1167, threadinfo=873c6000, task=87da8f18, tls=77603d48)
[ 25.467951] Stack : 87fe0000 873c7bcc 00000000 00000000 0000004a 870680a0 87fe04d6 87fe1000
                87fe04e5 0000a376 a70a1000 c0457000 c0530f54 8703a56c ffffffff 00000058
                00000000 00000041 0000ff00 00000310 00000010 00000001 8644216c 00000000
                00000001 00000001 00000000 8644216c 87fe0000 8756ee00 00000000 c0457000
                8756ee00 c0530f50 c0537000 c0530f6c c0530f7c 87039884 00000000 87062934
                ...
[ 25.504084] Call Trace:
[ 25.506584] [<800206a0>] r4k_dma_cache_wback_inv+0xc/0xc8
[ 25.512372] [<870680a0>] linux_pci_map_single+0x88/0xb4 [mt76x8]
[ 25.519085] [<8703a56c>] AndesMTPciKickOutCmdMsg+0x104/0x238 [mt76x8]
[ 25.526241] [<87039884>] AndesSendCmdMsg+0x1b4/0xd98 [mt76x8]
[ 25.532690] [<87039cc4>] AndesSendCmdMsg+0x5f4/0xd98 [mt76x8]
[ 25.538820]
[ 25.540329]
Code: 27bdf8e8 2ca20001 afbf0014 <00020336> 3c02803c 24426060 8c430008 7c630440 10600013
[ 25.550506] ---[ end trace 7f0cf0db953aa26c ]---
[ 25.558654] Fatal exception: panic in 5 seconds
[ 26.449727] Kernel bug detected[#2]:
[ 26.453563] CPU: 0 PID: 1168 Comm: RtmpCmdQTask Tainted: G          D W          4.4.46 #0
[ 26.461331] task: 87daa338 ti: 873da000 task.ti: 873da000
[ 26.466801] $ 0 : 00000000 80410000 00000001 0000ff00
[ 26.472116] $ 4 : 8644204c 00000000 00000000 00000001
[ 26.477426] $ 8 : 00000001 86442088 00000000 00000000
[ 26.482736] $12 : 00000000 c04587ac 00000000 00000000
[ 26.488045] $16 : 810c8840 0000004c 80430000 c045c7dc
[ 26.493357] $20 : 8756e500 c0457000 873ac840 00000001
[ 26.498668] $24 : 00000000 80020694
[ 26.503980] $28 : 873da000 873dbce8 00000000 870680a0
[ 26.509294] Hi : 00000000
[ 26.512210] Lo : 00000000
[ 26.515161] epc : 800206a0 r4k_dma_cache_wback_inv+0xc/0xc8
[ 26.521323] ra : 870680a0 linux_pci_map_single+0x88/0xb4 [mt76x8]
[ 26.527764] Status: 1100e402 KERNEL EXL
[ 26.531751] Cause : 10800034 (ExcCode 0d)
[ 26.535815] PrId : 00019655 (MIPS 24KEc)
[ 26.539874] Modules linked in: pppoe ppp_async option w1_therm w1_gpio uvcvideo usb_wwan snd_usb_audio pppox ppp_generic
pl2303 nf_conntrack_ipv6 iptable_nat ipt_REJECT ipt_MASQUERADE ftdi_sio cp210x ch341 xt_time xt_tcpudp xt_state xt_nat
xt_multiport xt_mark xt_mac xt_limit xt_conntrack xt_comment xt_TCPMSS xt_REDIRECT xt_LOG wire videobuf2_v4l2 usbserial
usb_lipusbhid ums_usbat ums_sddr55 ums_sddr09 ums_karma ums_jumpshot ums_isd200 ums_freecom ums_datafab ums_cypress
ums_alauda uinput spidev snd_usbmidi_lib slhc rfcomm nf_reject_ipv4 nf_nat_redirect nf_nat_masquerade_ipv4
nf_conntrack_ipv4 nf_nat_ipv4 nf_nat nf_log_ipv4 nf_defrag_ipv6 nf_defrag_ipv4 nf_conntrack_rtcache nf_conntrack
iptable_mangle iptable_filter iptables_hidp hid_generic hci_uart crc_ccitt cdc_acm btusb btintel bnep bluetooth
snd_soc_simple_card snd_soc_ralink_i2s snd_soc_wm8960 videobuf2_vmalloc videobuf2_core hid v4l2_common
videodev evdev snd_soc_core ralink_gdma virt_dma mt76x8 ralink_eepprom_api ledtrig_oneshot ledtrig_morse ledtrig_heartbeat
ledtrig_gpio ip6t_REJECT nf_reject_ipv6 nf_log_ipv6 nf_log_common ip6table_mangle ip6table_filter ip6_tables x_tables msdos
snd_pcm_dmaengine snd_compress snd_pcm_oss snd_mixer_oss snd_pcm snd_timer snd_rawmidi snd_seq_device snd_hwdep snd
input_core soundcore vfat fat ntfs configfs autofs4 nls_utf8 nls_iso8859_1 nls_cp437 regmap_i2c dma_shared_buffer ecb cmac
mmc_block usb_storage sdhci_plttfm sdhci mtk_sd mmc_core leds_gpio ohci_platform ohci_hcd ledtrig_transient ehci_platform
ehci_hcd sd_mod scsi_mod gpio_button_hotplug ext4 jbd2 mbcache exfat usbcore nls_base usb_common crc16 aead crypto_null
cryptomgr crc32c_generic crypto_hash
[ 26.689966] Process RtmpCmdQTask (pid: 1168, threadinfo=873da000, task=87daa338, tls=00000000)
[ 26.698690] Stack : 02020200 00000000 00000001 800be67c 87825b28 870680a0 00000141 00005cb4
                87a292a8 8007b2e8 a70a1000 c0457000 c0530f54 8703a56c 00000141 00000001
                803caa00 803caa00 0000ff00 803ca4c0 00000000 00000001 8644204c 00000000
                00000001 00000001 00000000 8644204c 803c8fa0 8756e500 00000000 c0457000
                8756e500 c0530f50 c0537000 c0530f6c c0530f7c 87039884 00000000 87062934
                ...
[ 26.734822] Call Trace:
[ 26.737323] [<800206a0>] r4k_dma_cache_wback_inv+0xc/0xc8
[ 26.743111] [<870680a0>] linux_pci_map_single+0x88/0xb4 [mt76x8]
[ 26.749824] [<8703a56c>] AndesMTPciKickOutCmdMsg+0x104/0x238 [mt76x8]
[ 26.756979] [<87039884>] AndesSendCmdMsg+0x1b4/0xd98 [mt76x8]
[ 26.763428] [<8703d588>] CmdSlotTimeSet+0xb4/0x1c4 [mt76x8]
[ 26.769703] [<87041014>] MtAsicSetSlotTime+0x20/0x2c [mt76x8]
[ 26.776151] [<8702a6d0>] CMDHandler+0x1b4/0x224 [mt76x8]
[ 26.782157] [<87066bc4>] RTPCICommandThread+0xb4/0x198 [mt76x8]
[ 26.788122] [<8003bf48>] kthread+0xd8/0xec
[ 26.792281] [<80004478>] ret_from_kernel_thread+0x14/0x1c
[ 26.797749]
[ 26.799257]
Code: 27bdf8e8 2ca20001 afbf0014 <00020336> 3c02803c 24426060 8c430008 7c630440 10600013
[ 26.809440] ---[ end trace 7f0cf0db953aa26d ]---
[ 26.816681] Fatal exception: panic in 5 seconds
[ 30.569603] Kernel panic - not syncing: Fatal exception
[ 30.577660] Rebooting in 3 seconds..

```



Board: Onion Omega2 APSoC DRAM: 128 MB
relocate_code Pointer at: 87f60000
flash manufacture id: c2, device id 20 19
find flash: MX25L25635E
*** Warning - bad CRC, using default environment

=====
Onion Omega2 UBoot Version: 4.3.0.3
=====

ASIC 7628_MP (Port5<->None)
DRAM component: 1024 Mbits DDR, width 16
DRAM bus: 16 bit
Total memory: 128 MBytes
Flash component: SPI Flash
Date:Oct 18 2016 Time:17:29:05

=====
icache: sets:512, ways:4, linesz:32 ,total:65536
dcache: sets:256, ways:4, linesz:32 ,total:32768
CPU freq = 575 MHZ
Estimated memory size = 128 Mbytes
Resetting MT7628 PHY.
Initializing MT7688 GPIO system.

* Hold Reset button for more options *

You have 40 seconds left to select a menu option...

Please select option:
[Enter]: Boot Omega2.
[0]: Start Web recovery mode.
[1]: Start command line mode.
[2]: Flash firmware from USB storage.

Option [2] selected.
System Load Linux then write to Flash via USB Storage.
Looking for a USB Storage.
If suitable image is found on USB Storage writing to Flash will be attempted.
U-Boot will look for a FAT file system.
(Re)start USB...
LOW LEVEL INIT USB0:
Scanning bus 0 for devices...
New Device 0
usb_control_msg: request: 0x6, requesttype: 0x80
value 0x100 index 0x0 length 0x8
usb_control_msg: status = success?

INSIDE USB INIT

INSIDE USB INIT: Device responded.
set address 1
usb_control_msg: request: 0x5, requesttype: 0x0
value 0x1 index 0x0 length 0x0
usb_control_msg: status = success?
usb_control_msg: request: 0x6, requesttype: 0x80
value 0x100 index 0x0 length 0x12
usb_control_msg: status = success?
usb_control_msg: request: 0x6, requesttype: 0x80
value 0x200 index 0x0 length 0x9
usb_control_msg: status = success?
usb_control_msg: request: 0x6, requesttype: 0x80
value 0x200 index 0x0 length 0x19
usb_control_msg: status = success?
get_conf_no 0 Result 25, wLength 25
if 0, ep 0
##EP epmaxpacketin[1] = 2
set configuration 1
usb_control_msg: request: 0x9, requesttype: 0x0
value 0x1 index 0x0 length 0x0
usb_control_msg: status = success?
new device strings: Mfr=0, Product=1, SerialNumber=0
usb_control_msg: request: 0x6, requesttype: 0x80
value 0x300 index 0x0 length 0xFF
usb_control_msg: status = success?
USB device number 1 default language ID 0x409
usb_control_msg: request: 0x6, requesttype: 0x80
value 0x301 index 0x409 length 0xFF
usb_control_msg: status = success?

```
Manufacturer
Product      OHCI Root Hub
SerialNumber
Device is a hub?
usb_control_msg: request: 0x6, requesttype: 0xA0
value 0x2900 index 0x0 length 0x4
usb_control_msg: status = success?
usb_control_msg: request: 0x6, requesttype: 0xA0
value 0x2900 index 0x0 length 0x9
usb_control_msg: status = success?
usb_control_msg: request: 0x0, requesttype: 0xA0
value 0x0 index 0x0 length 0x4
usb_control_msg: status = success?
usb_control_msg: request: 0x1, requesttype: 0x23
value 0x8 index 0x1 length 0x0
usb_control_msg: status = success?
usb_control_msg: request: 0x0, requesttype: 0xA3
value 0x0 index 0x1 length 0x4
usb_control_msg: status = success?
usb_control_msg: request: 0x3, requesttype: 0x23
value 0x8 index 0x1 length 0x0
usb_control_msg: status = success?
usb_control_msg: request: 0x0, requesttype: 0xA3
value 0x0 index 0x1 length 0x4
usb_control_msg: status = success?
usb_control_msg: request: 0x1, requesttype: 0x23
value 0x10 index 0x1 length 0x0
usb_control_msg: status = success?
usb_control_msg: request: 0x3, requesttype: 0x23
value 0x4 index 0x1 length 0x0
usb_control_msg: status = success?
usb_control_msg: request: 0x0, requesttype: 0xA3
value 0x0 index 0x1 length 0x4
usb_control_msg: status = success?
usb_control_msg: request: 0x1, requesttype: 0x23
value 0x14 index 0x1 length 0x0
usb_control_msg: status = success?
New Device 1
usb_control_msg: request: 0x6, requesttype: 0x80
value 0x100 index 0x0 length 0x8
usb_control_msg: status = success?
```

INSIDE USB INIT

```
INSIDE USB INIT: Device responded.
set address 2
usb_control_msg: request: 0x5, requesttype: 0x0
value 0x2 index 0x0 length 0x0
usb_control_msg: status = success?
usb_control_msg: request: 0x6, requesttype: 0x80
value 0x100 index 0x0 length 0x12
usb_control_msg: status = success?
usb_control_msg: request: 0x6, requesttype: 0x80
value 0x200 index 0x0 length 0x9
usb_control_msg: status = success?
usb_control_msg: request: 0x6, requesttype: 0x80
value 0x200 index 0x0 length 0x20
usb_control_msg: status = success?
get_conf_no 0 Result 32, wLength 32
if 0, ep 0
if 0, ep 1
##EP epmaxpacketout[1] = 64
##EP epmaxpacketin[2] = 64
set configuration 1
usb_control_msg: request: 0x9, requesttype: 0x0
value 0x1 index 0x0 length 0x0
usb_control_msg: status = success?
new device strings: Mfr=1, Product=2, SerialNumber=3
usb_control_msg: request: 0x6, requesttype: 0x80
value 0x300 index 0x0 length 0xFF
usb_control_msg: status = success?
USB device number 2 default language ID 0x409
usb_control_msg: request: 0x6, requesttype: 0x80
value 0x301 index 0x409 length 0xFF
usb_control_msg: status = success?
usb_control_msg: request: 0x6, requesttype: 0x80
value 0x302 index 0x409 length 0xFF
usb_control_msg: status = success?
usb_control_msg: request: 0x6, requesttype: 0x80
value 0x303 index 0x409 length 0xFF
```



```
usb_control_msg: status = success?
Manufacturer Samsung
Product Flash Drive FIT
SerialNumber 0340216050004428
Device is a hub?
2 USB Device(s) found
scan end
    Scanning bus for storage devices...
```

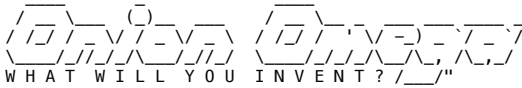
```
=====
1: Hub, USB Revision 1.10
- OHCI Root Hub
- Class: Hub
- PacketSize: 8 Configurations: 1
- Vendor: 0x0000 Product 0x0000 Version 0.0
```

```
=====
2: Mass Storage, USB Revision 2.10
- Samsung Flash Drive FIT 0340216050004428
- Class: (from Interface) Mass Storage
- PacketSize: 64 Configurations: 1
- Vendor: 0x090c Product 0x1000 Version 17.0
Testing BULK mode...Identifying a storage device...*
USB_STORAGE: 1 Storage Device(s) found
```

```
*****
* [!] This will take several minutes *
* please do not power off your Omega2 *
*****
```

```
*
*
```

```
CMD_FAT: ** Unable to use usb 0:1 for fatload **
Upgrade F/W from USB storage failed.
```



```
Board: Onion Omega2 APSoC DRAM: 128 MB
relocate_code Pointer at: 87f60000
```