Release note for firmware 05_27

Introduction

This is the release note for the DKTCOMEGA CPE 797xx firmware. Special precaution must be taken into account when performing the upgrade, please refer to the instruction guide available on www.dktcomega.com -> support -> firmware

Please contact jb@dktcomega.com for questions or concerns.

Changes in firmware

2017-05-17
DKT_F2_Firmware_v05_27:
Clean Up Release. Align bootloader(u-boot) version to Firmware Release version. As of this release, future release note now contains two new entries:

- UBOOT in the TOP guiding to the last release containing changes in uboot.
- u-boot as part of every release containing details of any changes or simply "no changes" in case of none.

Buildenv:
Align u-boot internal version to Firmware Release version.

u-boot:
autoconf.h version now becomes Firmware Version
Effect: DHCP Option43 from uboot now has same version as the Firmware Release.

2017-05-03
DKT_F2_Firmware_v05_26

All variants:
- snmpd supports custom snmpd.conf file. If cust_snmpd_conf=1 then `/mnt/flash/saved_configuration/snmpd.conf` is used if the file exists.
- DyingGasp fixes.
Use real MAC as src address, was hard coded as DKT_01234. Enable packet to be sent at power out regardless of OAM state by using `# echo 1 > /proc/dkt_config/debug_dying_gasp_oam`

2017-04-25
DKT_F2_Firmware_v05_25

- U-boot: Do not include option50 in DHCP Release Message, as per the RFC

2017-04-24
DKT_F2_Firmware_v05_24

Buildenv:
- Error in git patch 739 when doing git restore, no error in build

All variants:
- Upgraded telnet part of busybox to 1.16: fix missing prompt at reboot
- Fix usage message in /etc/init.d/telnetd

2017-01-24
DKT_F2_Firmware_v05_23

DKTCOMEGA
Fanoevej 6
DK-4060 Kirke Saaby

TIf +45 4646 2626
Fax +45 4646 2625
E-mail mail@dktcomega.com
Web www.dktcomega.com

All variants:
- Support for dumping vlans in (diag_rtl) conf tool
- SNMP support of reporting vlans from above changes in conf tool
- New entry added to dkt_f2.mib
- Add support for custom rules in igmpd.
To enable use (fw_)setenv igmpd_custom_rules 1.
Define and remove rules must be implemented in scripts called
from /etc/init.d/igmpd
/mnt/flash/saved_configuration/igmpd_start
/mnt/flash/saved_configuration/igmpd_stop

2016-12-19
DKT_F2_Firmware_v05_22

All variants:
- Bugfix in udhcp startup script, now handles dhcp_unicast=y and dhcp_unicast=Y properly
- Added support of custom forwarding and filtering rules for LAN to WAN
Enabled by setting dhcprelayd_ext_rules and dhcprelayd_filtering in flash - (fw_)setenv

---

2016-11-16
DKT_F2_Firmware_v05_21

All variants:
- CATV monitoring for setting up LEDS now runs every 4 second rather than every 1 second. If signal level is detected too low additional check is done 2 seconds later to verify signal level remains low before changing LED state.
- Added validation of GPIO 10 for SC/UPC or SC/APC pigtail. To be used for detecting item 74742 or 74743 (special customer variant)

TR069 all variants:
- Added support for downloading and executing Vendor Configuration File.
- PeriodicInform fixed properly from 05_20
- CATV status reporting changed. Runs every 6 second, if signal level too low detected, new check is done 1 second later to verify signal level remains low before changing state in TR069 database.
- Optimized shut down process before upgrading through ACS

2016-10-17
DKT_F2_Firmware_v05_20
General:
- Added support for unicast of DHCP discover in u-boot and linux. Enable by using (fw_)setenv dhcp_unicast 1 and reboot
- u-boot stepped version from 0514 to 0515
- SNMP supports reading serial number.
- Clean up in learned MAC address code for SNMP

2016-06-22
DKT_F2_Firmware_v05_19

All variants:
- When DyingGasp isr is executed CATV is turned off and system is forced to reboot to avoid interrupt storm in the case where power is not lost as expected. ISR storm causes very high CPU load making ONT very unresponsive.

2016-06-21
DKT_F2_Firmware_v0518

DKTCOMEGA
Fanoevej 6
DK-4060 Kirke Saaby

Tlf +45 4646 2626
Fax +45 4646 2625
E-mail mail@dktcomega.com
Web www.dktcomega.com

All variants:

TR069.
- Data base optimization
- Stop monitor and added sleep to ensure all changes written to flash before database is replaced with default database. Then start monitor again for new changes to apply.

DKT variants:
- Bugfix for SNMP MTU reporting. Learned MAC Addresses.
- Added Learned MAC Addresses support to SNMP. Limited functionality! Learned MAC adresses are requested pr LAN port [0 - 3] The chosen support of LAN ports only is a software limitation.

All variants:
- Enable changing password for Administrator by adding shadow files

TDC variant:
- Factory reset change idg_url to https from http

2016-05-11

TDC variant:
- If link partner can't autonegotiate link speed, RFC mandates 100Mbit HD even if device can do 100Mbit FD. If link target uses 100Mbit FD, change link state to 100MBit FD. Detection is done by traffic detection being FD.
- Changed to original patch for S35, removed hardcoded mode for DKT
  lan port 1.
  Lan port will start as 100MBit HD and autodetect 100MBit FD mode used by link partner. (linux patch number 721)

DKT_F2_Firmware_v05_16
- Internal release

DKT_F2_Firmware_v05_15
- Add support for management VLAN
If U-boot environment variable vlan is defined, then this value is used for management VLAN ID for the Linux firmware.
The switch engine is configured for this VID, so all frames automatically is tagged. This should be taken in account when defining other VLANs and transparency mode.
Overruling:
If the file /mnt/flash/saved_configuration/config_vlan.sh is defined then that file is executed instead of defining the management VLAN.
This should be taken in account when defining other VLANs. Also note that the U-boot vlan variable defines U-boot's VLAN configuration.

DKT_F2_Firmware_v05_14

<u>Default configuration:</u>
- Disable VLAN transparency mode (again) and forwarding of broadcast and multicast
This feature had some unwanted side effects when creating VLAN table.

DKT_F2_Firmware_v05_13

<u>Default configuration:</u>

DKTCOMEGA
Fanoevej 6
DK-4060 Kirke Saaby

Tlf +45 4646 2626
Fax +45 4646 2625
E-mail mail@dktcomega.com
Web www.dktcomega.com

- Enable VLAN transparency mode and forwarding of broadcast and multicast packages in VLAN.
These features can be switched off in the user's configuration file.

DKT_F2_Firmware_v05_12

telnetd
- Fixed support for username/password login in telnet. The login executable was not included in the file system. This is fixed in this version.
To enable telnet login, put this in the configuration file:
```
telnetd -l /bin/login
```

NOTE:
The above will have not have the usual line, which starts a command shell without login prompt:
```
telnetd -l /bin/sh
```

DKT_F2_Firmware_v05_11

telnetd
- Added support for username/password login in telnet.
- Do not allow root login.

SNMP
- Added support for SNMPv3 with authorization and data encryption.
- Fixed default configuration file to match current version of Net-SNMP.

DKT_F2_Firmware_v05_10
- DHCP client: Fixed XID in DHCP release packet.
The XID was a random number.

- Fixed DHCP relaying. VLAN tagging is applied by LAN port when relaying the packets.
- Fixed IGMP snooping. VLAN tagging is applied by LAN port when relaying the packets.

DKT_F2_Firmware_v05_08
- OpenSSL is upgraded to version 1.0.1p
- wget is upgraded to version 1.11 with support for https.
- CATV power-on is now not initialized by the Linux driver, so that if the bootloader has powered-off the CATV module, then it does not get powered-on by the Linux driver.

DHCP relay agent:
- Added option '`-i`' which makes the DHCP relaying agent only add the option 82 field, leaving the BOOTP header untouched.
- Command line arguments can be passed through `/etc/init.d/dhcprelayd`
Ex:
```
/etc/init.d/dhcprelayd start -i --t1 "From port 1" --t2 "LAN port 2"
```
- Fixed handling of the CPU port's DHCP packets (they were blocked).

DHCP client:
- Fixed startup of the link-local address assigning process (zcip).

2015-10-09
DKT_F2_Firmware_v05_07
- Improved lan-follow-wan timing. If no DHCP server was accessible on WAN at the time WAN link went up, then LAN power on would be delayed until DHCP finished or timed out, and that could take a long time. Now LAN power up happens before DHCP negotiation on WAN port after WAN link up.

DKTCOMEGA
Fanoevej 6
DK-4060 Kirke Saaby
Tlf +45 4646 2626
Fax +45 4646 2625
E-mail mail@dktcomega.com
Web www.dktcomega.com

- DHCP option 125: If VLAN is configured, then also setup the same VLAN for U-boot. And if VLAN is set to 0, then remove VLAN from U-boot also.
- Increased number of possible telnet sessions from 2 to 16.

2015-09-03
DKT_F2_Firmware_v05_06
- Fixed RMON issues, counters not working

2015-07-13
DKT_F2_Firmware_v05_05
- OAM support: Enabled loopback option
- OAM support is enabled in startup process.
Automatic startup can be disabled by defining the variable NO_OAM to 1
in /var/config/daemons_dont_start
Example: `echo "NO_SNMPD=1" >> /var/config/daemons_dont_start`
- SNMP daemon now has two new MIBs dkt.15 (DKT-F2-MIB) and dkt.16 (DKT-F2-RMON-MIB)
The MIB descriptions are found in DKT's MIB release 09.
- SNMP MIBs are now stored in flash here:
`/usr/share/defaults/snmp/*.mib`
- Boot script does not start IGMP snooper per default any more.
- IGMP snooper shuts down nicely and restores the switch state as before the IGMP snooper was started. The L2 table is cleared for entries.
- Output from startup scripts are redirected to the file
`/tmp/startup_log.txt`
so it also can be viewed from remote login.
- Fix: Broadcast packets from CPU was also sent to LAN ports.
- Added optional LAN-follow-WAN feature. If no WAN link, then LAN ports are disabled.
The feature is enabled by running `enable_lan_follow_wan`
`Syntax: enable_lan_follow_wan [ <port> ]`
`ports defines which ports to enable. All other LAN ports will be disabled. Ports is a comma separated list of ports to enable. Port range is 0..3. Default is all ports are enabled. Example: 1,2 Enables LAN1 and LAN2. LAN0 and LAN3 are disabled. The command uses the files lan_follow_wan, lan0_disable, lan1_disable, lan2_disable, lan3_disable in the directory /etc/dkt_config/`
- CATV red LED can be disabled by creating this file in the configuration script:
/etc/dkt_config/disable_catv_red_led
- Add dhcprelay support: `dhcprelayd --t<port> <opt82 circuit ID text>[:<opt82 remote ID text>]`
Defines the content of DHCP agent circuit ID field for the port
Example:
`--t1 "port1" --t2 "port2" --t3 "port3" --t4 "port4"`
- Add support for DHCP option 125 for setting VLAN before issuing the first DHCP Discover request. The data field (see RFC 3925) is formatted as TLV. Type 1 is used for VLAN VID, ASCII number. For example VID=50 (here shown as hexadecimal numbers):
`01 02 35 30`
DKT's enterprise number is 27304 (6aa8 in hexadecimal number). The entire option 125 field could then be like (VID=50):
`7d 09 00 00 6a a8 04 01 02 35 30`
The first time the option 125 is seen, a VLAN configuration file is written to flash and the system is rebooted. The following startup will use the configuration file before network is set up. If VID=0, then the configuration file is removed, and VLAN is NOT setup.

2015-20-03
DKT_F2_Firmware_v05_04

DKTCOMEGA
Fanoevej 6
DK-4060 Kirke Saaby

Tlf +45 4646 2626
Fax +45 4646 2625
E-mail mail@dktcomega.com
Web www.dktcomega.com

- Fix problem when booting without link on the fiber interface. U-boot kept on trying to get link before booting Linux. Now we set net retry to 5, so after 5 failed attempts to get link, we start Linux anyway.
- Create the file /etc/dkt_config/managed - if the board is managed
- Create the file /etc/dkt_config/catv_present - if the board has CATV
- Added the first version of OAM support.
    - Passive mode
    - Dying gasp support
    - Not loopback, not variable requests, not unidirectional, no link events

    Start/stop commands:
    /etc/init.d/dkt_oam start
    /etc/init.d/dkt_oam stop
- Added IGMP snooper
- Added first version of SNMP daemon with VERY limited support

    Only mibs GENERAL .1.3.6.1.4.1.27304.10 and CATV .1.3.6.1.4.1.27304.11 are implemented
- In case of kernel panic, reboot the system.
- LAN LEDs behavior changed:

    Former behavior:
    Amber LED lights in all modes. Green LED lights in 1G and 100Mb.
    Changed to:
    Amber LED lights in 1G and 10Mb. Green LED lights in 1G and 100Mb.

2014-09-12
DKT_F2_Firmware_v05_02

Initial revision for public release

DKTCOMEGA

DKTCOMEGA
Fanoevej 6
DK-4060 Kirke Saaby

Tlf +45 4646 2626
Fax +45 4646 2625
E-mail mail@dktcomega.com
Web www.dktcomega.com