

OpenNSL

Release Note

(AG5648)

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Signature of Approval

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Contents:

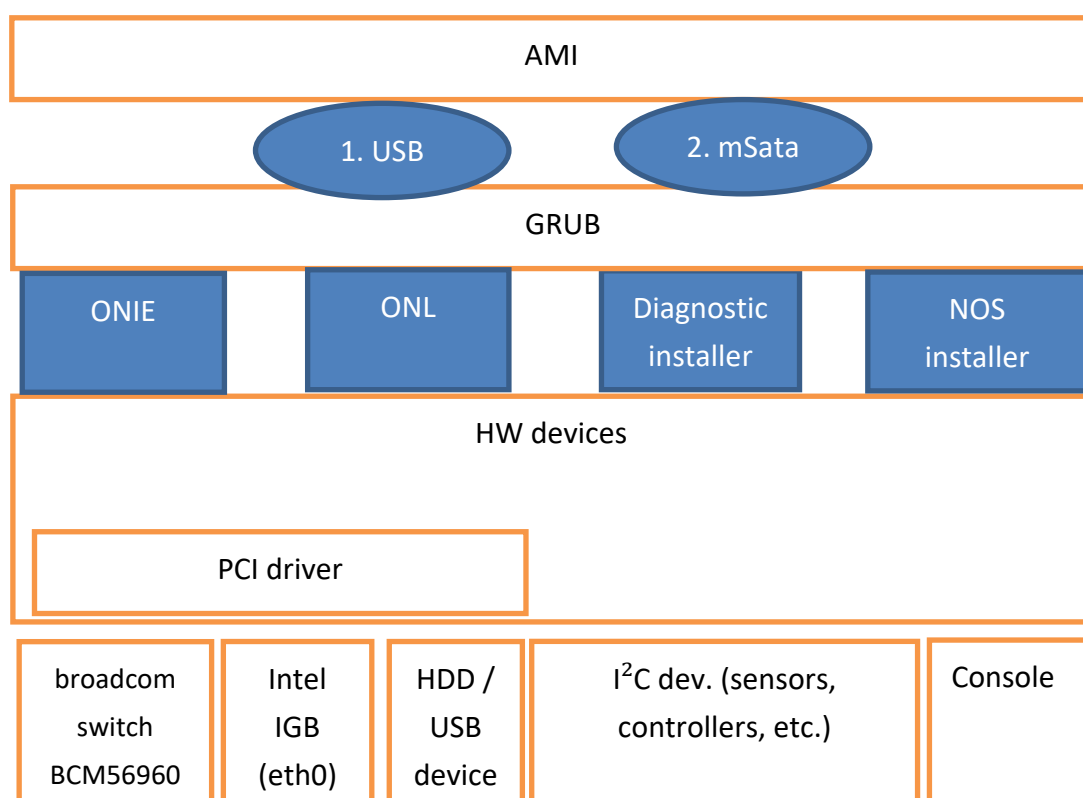
| | | |
|----|---------------------------------|---|
| 1. | General description | 3 |
| 2. | Base Hardware information | 4 |
| 3. | ONL..... | 4 |
| 4. | Install OpenNSL Package | 4 |
| 5. | Software Features support | 5 |
| 6. | New Features support | 5 |
| 7. | Known Bugs and Limitations..... | 6 |
| 8. | Description of Bug Fixed | 6 |

Revision History

| Date | Version | Author | Comment |
|------------|-----------|------------|--|
| 07/06/2017 | 3.3.0.2-1 | Hans Tseng | 1. First edition 2. Base on the openssl 3.3.0.2 3. Version: OpenNSL AG5648-3.3.0.2-1.deb |
| 07/12/2017 | 3.3.0.2-2 | Hans Tseng | 1. Fix the wrong share lib of libopenssl.so.1 |
| | | | |

1. General description

The switch device is pre-installed ONIE in mSata storage; user can access system either by console port. BIOS is AMI BIOS, a bunch of system messages are shown in the console while booting. The Diagnostic program on ONIE installer fully leverages BCM shell by adding one extra menu specific to the device. And the ONL base on the ONL github commit ID “add948d33f305d41961ebf07b3983cdd0fb5f238” to develop. The conceptual SW block diagram is as below:



Then boot the system can through console port press or <ESC> key to select the boot mode (the boot option priority is 1. mSATA 3ME , 2. UEFI: Built-in EFI Shell)

Console port settings is: 115200, n, 8, 1

The versions of main software components used in system are listed as below:

ONL kernel: 3.16.9

ONL OS : Debian Jessie

2. Base Hardware information

| Main Chip | Company | Description |
|------------------------------|-----------------|-------------------|
| Intel Rangeley C2538 -1.7GHz | <i>Intel</i> | X86 CPU |
| BCM56960 | <i>Broadcom</i> | Switch Controller |
| DDR3 ECC SO-DIMM | | System Memory |
| 16MB SPI NOR Flash *2 | | Flash ROM |
| mSATA SSD | | Storage |

3. ONL

Open Network Linux (ONL) is a Linux distribution for bare metal switches. ONL builds an ONIE-compatible installer and a switch image which contains a complete Debian distribution with added drivers and configuration for running on bare metal switches.

While logging ONL via enter username “root” and the password “onl”

4. Install OpenNSL Package

4.1 Download package

Download the package to the switch device and here is an examples for using tftp tool to download package

```
root@localhost:~# tftp IPaddress
tftp> binary
tftp> get OpenNSL_AG5648-3.3.0.2-2.deb
tftp> quit
```

4.2 Install the package

```
root@localhost:~# dpkg -i OpenNSL_AG5648-3.3.0.2-2.deb
```

Note: It may be necessary to run the following command before installing OpenNSL because sometimes the ONIE install leaves some packages in a half-configured state:

```
dpkg --configure -a
```

4.3 Insert kernel module

```
root@localhost:~# mknod /dev/linux-kernel-bde c 127 0
root@localhost:~# mknod /dev/linux-user-bde c 126 0
root@localhost:~# mknod /dev/linux-bcm-knet c 122 0
root@localhost:~# insmod linux-kernel-bde.ko
root@localhost:~# insmod linux-user-bde.ko
root@localhost:~# insmod linux-bcm-knet.ko use_rx_skb=1
```

4.4 Configure the port speed

```
root@localhost:~# cd /etc/openns1
```

- set port speed to 100G

```
root@localhost:~# cp -af openns1_100G.cfg openns1.cfg
```

- breakout the port speed to 25G

```
root@localhost:~# cp -af openns1_25G.cfg openns1.cfg
```

- check the port status

```
root@localhost:~# cd - && ./example_drivshell
```

5. Software Features support

| Specification | Version | Date | Description |
|--|-----------|------------|-------------|
| This released package is base on the Broadcom OpenNSL 3.3.0.2 , please the visit opennnels github https://github.com/Broadcom-Switch/OpenNSL to get the more detail information and limitation. If more information or referenced documentation are needed please contact the Broadcom. | 3.3.0.2-1 | 07/13/2017 | |

6. New Features support

| Features Description | SKU | Requested by | Available Version | Date | Status | Reference |
|----------------------|-----|--------------|-------------------|------|--------|-----------|
|----------------------|-----|--------------|-------------------|------|--------|-----------|

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7. Known Bugs and Limitations

| Bug ID/Reporter | | Problems | Version | Open Version | Comments |
|-----------------|--|----------|---------|--------------|----------|
| 1. | | | | | |
| 2. | | | | | |

8. Description of Bug Fixed

Diagnostic:

| Bug ID/Reporter | Description | Fixed Version | Open Date | Close Date | Status |
|-----------------|-------------|---------------|-----------|------------|--------|
| 1 | | | | | |
| 2 | | | | | |

Support

Please email to hans.tseng@delta.com.tw or call +886-2-87973250 ext 3046 for DNI support.