

1. 测试环境

测试固件:

RP0084_LED_disable_arp_84220010, RP0075_LED_disable_arp_84120010.img

测试平台: NF5280M6, BMC4.19.06, BIOS6.00.02

测试系统: centos7.7, 内核: 3.10.0-1062.el7.x86_64

测试驱动: txgbe-1.3.5.1

MD5 值:

35157314a604ae7d9aeb7a3cd13146ef RP0084_LED_disable_arp_84220010.img

ea16bd9293e8cb6c6797e25b1c709213 RP0075_LED_disable_arp_84120010.img

2. 测试用例

2.1 固件 img 检查

84120010 和 83120010 区别:

SVID, vpd 定制不一样, pxe 不一样 (84120010 用的 20010 的 undi, 83120010 用的增加定制新的 SVID: 1ff9 的 undi)

Hex editor comparison tool showing two files side-by-side. The left pane displays the file 'F:\...\2000f\wx-oem-tool-1.0.4\img\1ff9_0075_83120010.log' and the right pane displays 'F:\...\固件版本记录\2000f\wx-oem-tool-1.0.4\img\0075_84120010.log'. Both panes show hex data with corresponding ASCII representations. Red boxes highlight specific differences or areas of interest in the hex data. The interface includes a menu bar with options like 'File', 'Edit', 'View', and 'Tools', and a status bar at the bottom showing the current cursor position (100: 48).

2024/1/8 16:25:55 3,145,736 字节 其它一切 ANSI UNIX

2024/1/8 16:24:11 3,145,736 字节 其它一切 ANSI UNIX

0000130 ffff ffff ffff ffff 0007 0010 8312 ffff

0000150 0000 ffff ffff ffff ffff ffff 4eff

0000500 5082 4500 6874 7265 656e 2074 6441 7061

0000510 6574 2072 4e45 5750 3131 3130 532d 3250

0000520 6620 726f 3120 4730 4562 202c 6157 676e

0000530 7578 206e 5053 3031 3030 2041 6f43 746e

0000540 6f72 6c6c 7265 2020 2020 2020 2020 2020

0000550 2020 9020 0036 4e50 5914 4e5a 2d43 3330

0000560 3532 2d35 3031 2039 2020 2020 5320 144e

0000570 414e 2020 2020 2020 2020 2020 2020 2020

0000580 2020 2020 5652 9c05 0000 0000 ff78 ffff

0000620 ff00 0000 002c 0f00 ff04 0000 1ff9 0075

0000630 ff02 0000 002c 0f00 ff06 0000 1ff9 0075

0010130 ffff ffff ffff ffff 0007 0010 8312 ffff

0010150 0000 ffff ffff ffff ffff ffff 4f07

0010500 5082 4500 6874 7265 656e 2074 6441 7061

0010510 6574 2072 4e45 5750 3131 3130 532d 3250

0010520 6620 726f 3120 4730 4562 202c 6157 676e

0010530 7578 206e 5053 3031 3030 2041 6f43 746e

0010540 6f72 6c6c 7265 2020 2020 2020 2020 2020

0010550 2020 9020 0036 4e50 5914 4e5a 2d43 3330

0010560 3532 2d35 3031 2039 2020 2020 5320 144e

0010570 414e 2020 2020 2020 2020 2020 2020 2020

0010580 2020 2020 5652 9c05 0000 0000 ff78 ffff

0010620 ff00 0000 002c 0f00 ff04 0000 1ff9 0075

0010630 ff02 0000 002c 0f00 ff06 0000 1ff9 0075

00a0000 aa55 e985 00a2 003f 0000 0000 0000

00b0a30 0003 0000 0000 0000 b7bb 0000 7498 0001

00b0a40 1025 618f bd7b 495b d5eb 49ae b564 6901

00b0a50 20c0 042d e512 ca82 b6a0 e428 0ea0 b691

00b0a60 91e3 cd25 004a 887a 30b7 7b62 5b95 9097

00b0a70 0401 7925 5e20 9911 515f 6c47 9bec cad5

00b0a80 ca38 548e 8902 4a49 4059 c254 7239 64e3

00b0a90 aaa8 1172 5104 0000 fd09 eeff e4fc 8a00

00b0aa0 f9fe bef7 7def c5f7 7eef e7fc df81 be2b

00b0ab0 7e1f c477 95ef 03df 86bd 47b2 6d1c f5d6

100: 48

0000630 ff02 0000 002c 0f00 ff06 0000 1ff9 0075

0000630 ff02 0000 002c 0f00 ff06 0000 1bd4 0075

0000130 ffff ffff ffff ffff 0007 0010 8412 ffff

0000150 0000 ffff ffff ffff ffff ffff a223

0000500 2982 5700 6e61 7867 6e75 4e28 7465 7773

0000510 6669 2974 3120 4730 4562 4e20 6d61 6c69

0000520 2079 6f43 746e 6f72 6c6c 7265 1c90 5000

0000530 0e4e 5a59 434e 302d 3233 3535 312d 3130

0000540 4e53 5200 0556 00be 0000 7800 ffff ffff

0000550 ffff ffff ffff ffff ffff ffff ffff ffff

0000560 ffff ffff ffff ffff ffff ffff ffff ffff

0000570 ffff ffff ffff ffff ffff ffff ffff ffff

0000580 ffff ffff ffff ffff ffff ffff ffff ffff

0000620 ff00 0000 002c 0f00 ff04 0000 1bd4 0075

0000630 ff02 0000 002c 0f00 ff06 0000 1bd4 0075

0010130 ffff ffff ffff ffff 0007 0010 8412 ffff

0010150 0000 ffff ffff ffff ffff ffff a22b

0010500 2982 5700 6e61 7867 6e75 4e28 7465 7773

0010510 6669 2974 3120 4730 4562 4e20 6d61 6c69

0010520 2079 6f43 746e 6f72 6c6c 7265 1c90 5000

0010530 0e4e 5a59 434e 302d 3233 3535 312d 3130

0010540 4e53 5200 0556 00be 0000 7800 ffff ffff

0010550 ffff ffff ffff ffff ffff ffff ffff ffff

0010560 ffff ffff ffff ffff ffff ffff ffff ffff

0010570 ffff ffff ffff ffff ffff ffff ffff ffff

0010580 ffff ffff ffff ffff ffff ffff ffff ffff

0010620 ff00 0000 002c 0f00 ff04 0000 1bd4 0075

0010630 ff02 0000 002c 0f00 ff06 0000 1bd4 0075

00a0000 aa55 e985 00a2 0018 0000 0000 0000

00b0a30 0003 0000 0000 0000 b75e 0000 7428 0001

00b0a40 1025 a206 7af7 94b6 b5b2 2cd9 c090 3b2d

00b0a50 2a00 4150 192e 9505 6d51 5cc4 062a 3632

00b0a60 3bdc 5516 00a0 405c 1413 6722 3197 9db6

00b0a70 0080 2b21 02d9 0cf4 3ef2 5545 a6f2 b8e2

00b0a80 2a0e ae0a 2805 9415 dab6 ae0a aa00 308a

00b0a90 2a82 a4bd 1441 a040 3f01 7ebf 9dff 1190

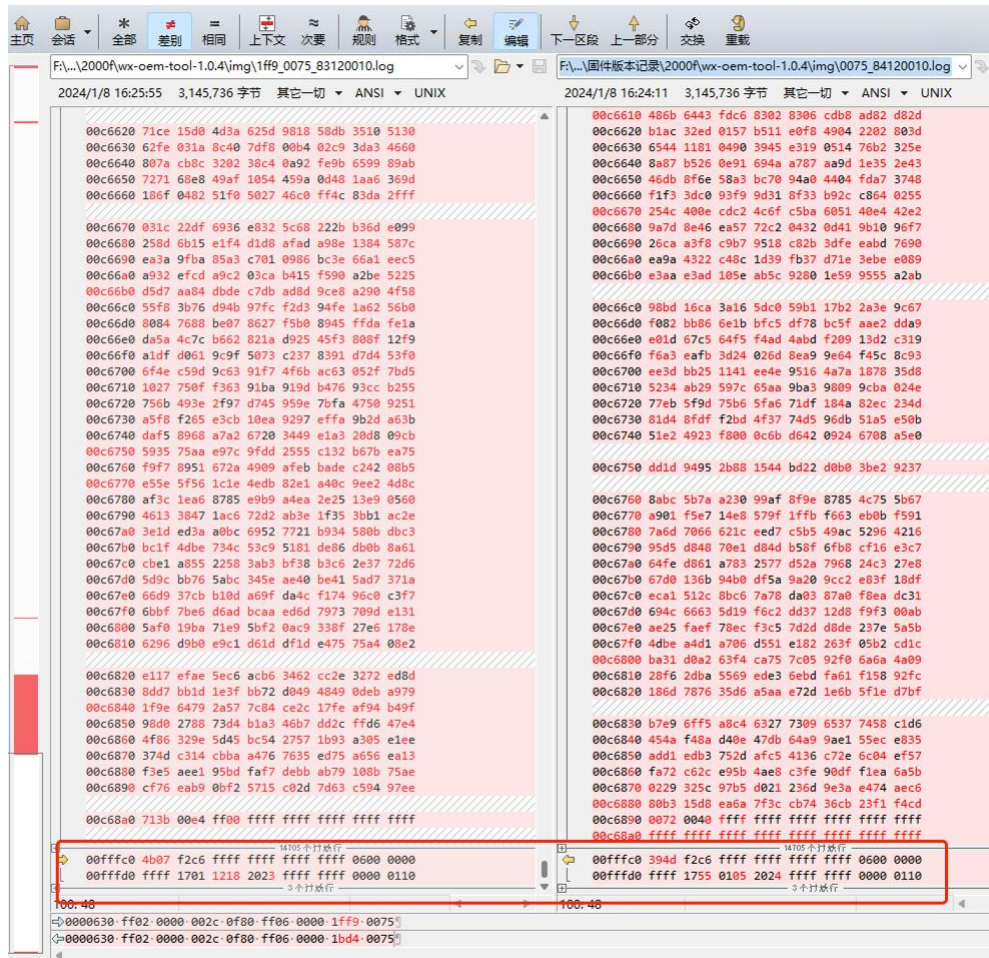
00b0aa0 fb5d 7377 f7de 7717 b7ef bc81 e1ad bdef

00b0ab0 dec4 f056 b037 48d6 8de3 9eba 2fa9 7dfd

100: 48

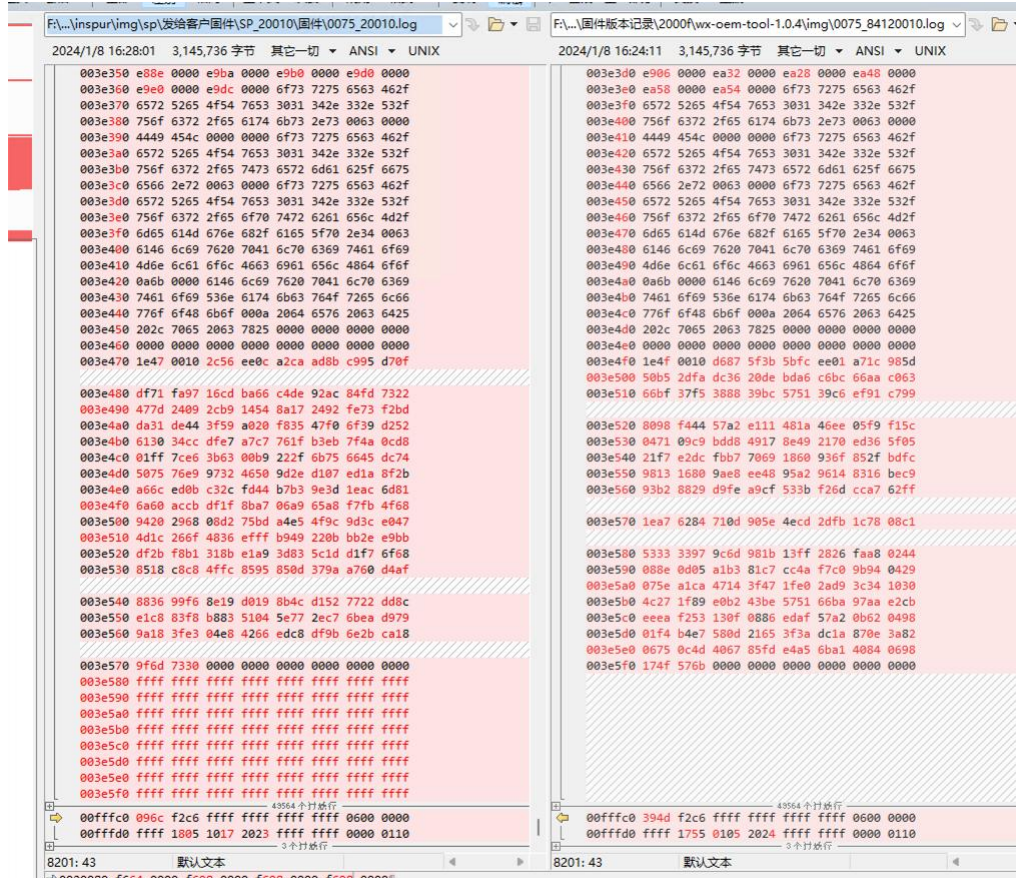
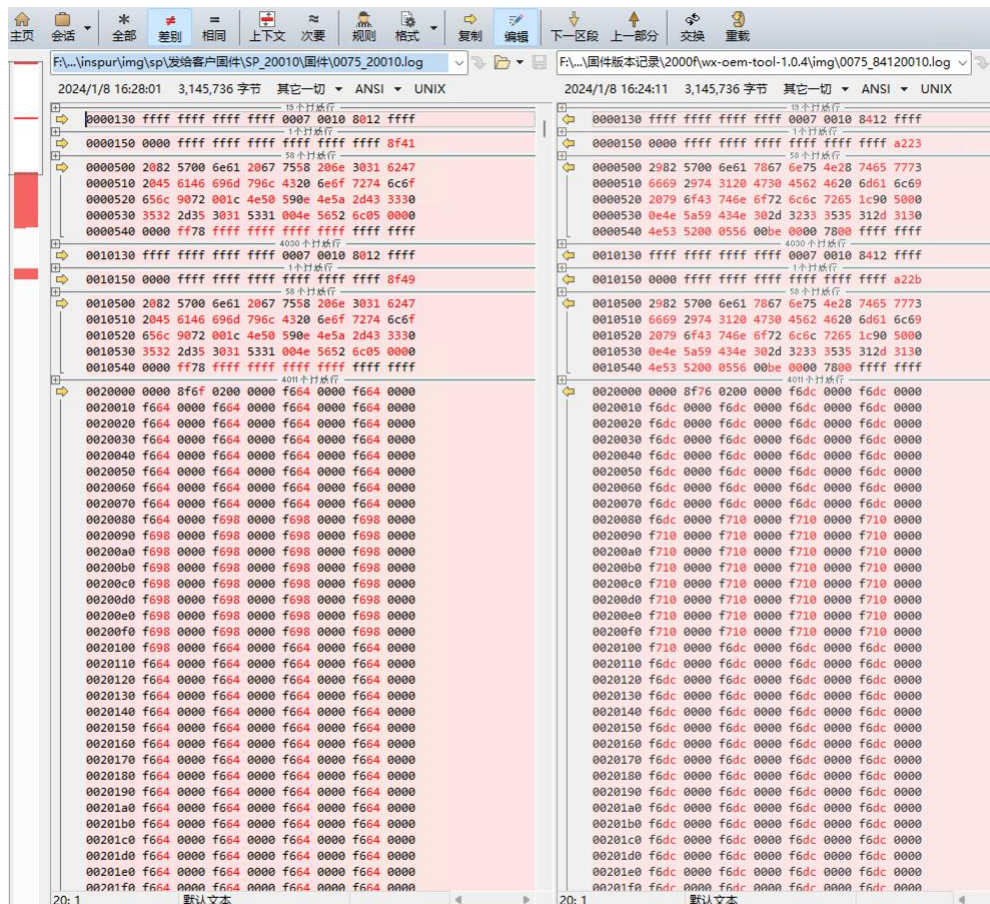
0000630 ff02 0000 002c 0f00 ff06 0000 1bd4 0075

0000630 ff02 0000 002c 0f00 ff06 0000 1bd4 0075

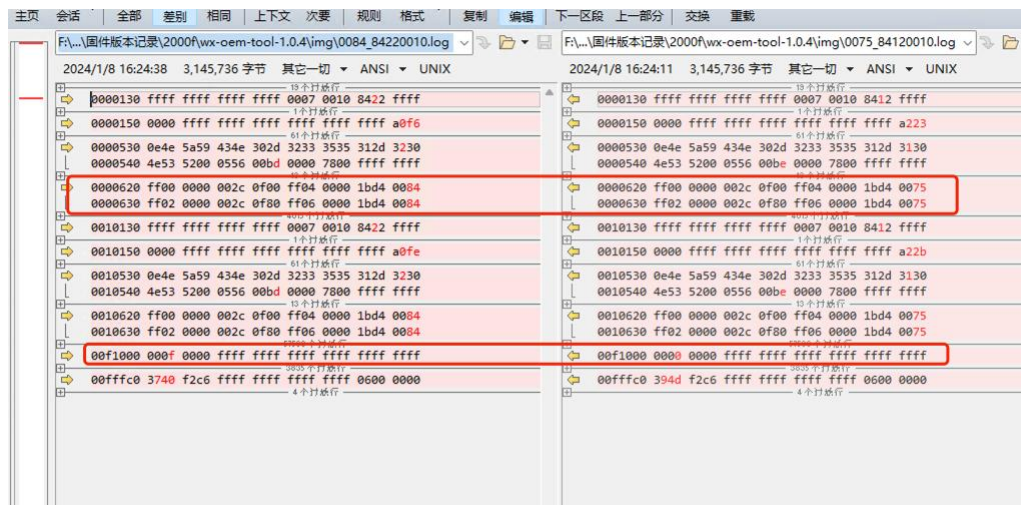


84120010 与 20010 的区别:

fw 修复了有源光模块适配问题, VPD 新增了 Netswfit 字段。



0084 和 0075 区别：LLDP 默认开关不同，VDP（PN）不同。



```
[root@localhost 3.7.3]# ./wxtool_x86 -F RP0075_LED_disable_arp_84120010/RP0075_LED_disable_arp_84120010.img -S
Please Select which kind of NIC to upgrade:
1. 1000M_nics_1ports
2. 1000M_nics_2ports
3. 1000M_nics_4ports
4. 10_Gigabit_nics
please input choose number: 4
SIG_FILE:RP0075_LED_disable_arp_84120010/RP0075_LED_disable_arp_84120010.sig

FILE SHA256 sum:
393b3266f66443a035be39091e54c6fe40da65fb4233760c4fbd306e7b081ee RP0075_LED_disable_arp_84120010/RP0075_LED_disable_arp_84120010.sig
af2e5d5df8b145db2078275bfae89daf23a6ca5ceb4c487eb3bb07ec8f779e3d RP0075_LED_disable_arp_84120010/RP0075_LED_disable_arp_84120010.img

Verified OK

Raptor PCI Utils tool is started.
We will download 1 in 1 cards depends on the configuration.

Checking sub_id .....
The image's sub_id : 0075
The card's sub_id : 0075
It is a right image
Checking dev_id .....
The image's dev_id : 1001
The card's dev_id : 1001
flash write-protect register val : 0
Start to download No.0 adaptor card [ 0000:02:00.0 ]:
Old: MAC Address0 is: b4055dac63ab
MAC Address1 is: b4055dac63ac
Old: SN is SN-123456
vpd_sn_change_t
id_str: Wangxun(Netswift) 10GbE Family Controller
pn_str: YZNC-03255-101
sn_str: SN-123456

Erase sector1 command, return status = 0
Retore mac addr in backup area
Start to erase flash ..... complete 100%
Start to download image to adaptor ..... complete 99%
lan0 - 0x18036 : 1804 - 0x18037 : 0050
lan0 : main: 24 - pre: 4 - post: 16
lan1 - 0x18036 : 1804 - 0x18037 : 0050
lan1 : main: 24 - pre: 4 - post: 16
New: MAC Address0 is: 0xb4055dac63ab
MAC Address1 is: 0xb4055dac63ac
New SN is SN-123456
Download Complete 100
[ ^_^ ] Raptor PCI Utils upgrading is succeeded! 1 cards are upgraded!!

[root@localhost 3.7.3]#
```



```

[root@localhost ~]#
[root@localhost ~]# lspci -d 8088: -nm
01:00.0 '0200' '8088' '0101' -r01 '8088' 'c201'
01:00.1 '0200' '8088' '0101' -r01 '8088' 'c201'
02:00.0 '0200' '8088' '1001' -r03 '1bd4' '0075'
02:00.1 '0200' '8088' '1001' -r03 '1bd4' '0075'
[root@localhost ~]# ethtool -i p12p1
driver: txgbe
version: 1.3.5.1
firmware-version: 0x84120010
expansion-rom-version:
bus-info: 0000:02:00.0
supports-statistics: yes
supports-test: yes
supports-eeprom-access: yes
supports-register-dump: yes
supports-priv-flags: yes
[root@localhost ~]#

```

```

[root@localhost ~]#
[root@localhost ~]# lspci -s 02:00.0 -vvv
02:00.0 Ethernet controller: Beijing Wangxun Technology Co., Ltd. Ethernet Controller RP1000 for 10GbE SFP+ (rev 03)
Subsystem: Inspur Electronic Information Industry Co., Ltd. Device 0075
Control: I/O- Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop- ParErr- Stepping- SERR- FastB2B- DisINTx+
Status: Cap+ 66MHz- UDF- FastB2B- ParErr- DEVSEL=fast >TAbort- <TAbort- <MAbort- <SERR- <PERR- INTx-
Latency: 0
Interrupt: pin A routed to IRQ 89
NUMA node: 0
Region 0: Memory at ec900000 (64-bit, non-prefetchable) [size=128K]
Region 4: Memory at ec940000 (64-bit, non-prefetchable) [size=16K]
Expansion ROM at ec880000 [disabled] [size=512K]
Capabilities: [40] Power Management version 3
Flags: PMEClk- DSI- D1- D2- AuxCurrent=375mA PME(D0+,D1-,D2-,D3hot+,D3cold-)
Status: D0 NoSoftRst- PME-Enable- DSel=0 DScale=0 PME-
Capabilities: [50] MSI: Enable- Count=1/1 Maskable+ 64bit+
Address: 0000000000000000 Data: 0000
Masking: 00000000 Pending: 00000000
Capabilities: [70] Express (v2) Endpoint, MSI 00
DevCap: MaxPayload 512 bytes, PhantFunc 0, Latency L0s unlimited, L1 unlimited
ExtTag+ AttnBtn- AttnInd- PwrInd- RBE+ FLReset+ SlotPowerLimit 0.000W
DevCtl: CorrErr+ NonFatalErr+ FatalErr+ UnsupReq-
RlxdOrd+ ExtTag+ PhantFunc- AuxPwr- NoSnoop+ FLReset-
MaxPayload 512 bytes, MaxReadReq 256 bytes
DevSta: CorrErr- NonFatalErr- FatalErr- UnsupReq+ AuxPwr- TransPend-
LnkCap: Port #0, Speed 8GT/s, Width x8, SPM L0s L1, Exit Latency L0s <512ns, L1 <4us
ClockPM- Surprise- LLActRep- BwNot- ASPMOptComp+
LnkCtl: ASPM Disabled; RCB 64 bytes Disabled- CommClk+
ExtSynch- ClockPM- AutWidDis- BWInt- AutBWInt-
LnkSta: Speed 8GT/s (ok), Width x4 (downgraded)
TrErr- Train- SlotClk+ DLActive- BWMgmt- ABWMgmt-
DevCap2: Completion Timeout: Not Supported, TimeoutDis+, LTR-, OBFF Not Supported
AtomicOpsCap: 32bit- 64bit- 128bitCAS-
DevCtl2: Completion Timeout: 50us to 50ms, TimeoutDis+, LTR-, OBFF Disabled
AtomicOpsCtl: ReqEn-
LnkCtl2: Target Link Speed: 8GT/s, EnterCompliance- SpeedDis-
Transmit Margin: Normal Operating Range, EnterModifiedCompliance- ComplianceSOS-
Compliance De-emphasis: -6dB
LnkSta2: Current De-emphasis Level: -3.5dB, EqualizationComplete+, EqualizationPhase1+
EqualizationPhase2+, EqualizationPhase3+, LinkEqualizationRequest-
Capabilities: [b0] MSI-X: Enable+ Count=64 Masked-
Vector table: BAR=4 offset=00000000
PBA: BAR=4 offset=00002000
Capabilities: [d0] Vital Product Data
Product Name: Wangxun(Netswift) 10GbE Family Controller
Read-only fields:
[PN] Part number: YZNC-03255-101
[SN] Serial number: SN-123456
[RV] Reserved: checksum good, 4 byte(s) reserved
End
Capabilities: [100 v2] Advanced Error Reporting

```

```

[root@localhost 3.7.3]# ./wxtool_x86 show -s 02:00.0 -i
02:00.0 Class 0200: Device 8088:1001 (rev 03)

chip status: ok
flash status: ok
Cab0 0: c000003f
Flash 0: 5aa54000
fw version: 84120010
fw init: 00000033
wol: disable
ncsi: disable
oprom arch: arm64/x86
TX_EQ: 24 - 4 - 16
image_name: RP1000
oem conf: [000255aa]-[ffffffff]-[000f1253]-[ffffffff]-[ffffffff]
[root@localhost 3.7.3]#

```

```
[root@localhost 3.7.3]#
[root@localhost 3.7.3]# ./wxtool_x86 -F RP0084_LED_disable_arp_84220010/RP0084_LED_disable_arp_84220010.img -T -S
Please Select which kind of NIC to upgrade:
  1. 1000M_nics_1ports
  2. 1000M_nics_2ports
  3. 1000M_nics_4ports
  4. 10_Gigabit_nics
please input choose number: 4
SIG_FILE:RP0084_LED_disable_arp_84220010/RP0084_LED_disable_arp_84220010.sig

FILE SHA256 sum:
e6af4929f1d5d2d5ddcbef6e39b12cb0d98a9549437fcbd92d8b2dc32d3c0b656 RP0084_LED_disable_arp_84220010/RP0084_LED_disable_arp_84220010.sig
750f3493c5600e089b43fb8bb06208d56acb9ac5b6141ec1379cac0945448bbf RP0084_LED_disable_arp_84220010/RP0084_LED_disable_arp_84220010.img

Verified OK

Raptor PCI Utils tool is started.
We will download 1 in 1 cards depends on the configuration.

flash write-protect register val : 0
Start to download No.0 adaptor card [ 0000:02:00.0 ]:
Old: MAC Address0 is: b4055dac63ab
MAC Address1 is: b4055dac63ac
Old: SN is SN-123456
vpd_sn_change.t
id_str: Wangxun(Netswift) 10GbE Family Controller
pn_str: YZNC-03255-102
sn_str: SN-123456

Erase sector1 command, return status = 0
Retore mac addr in backup area
Start to erase flash ..... complete 100%
Start to download image to adaptor ..... complete 99%
lan0 - 0x18036 : 1804 - 0x18037 : 0050
lan0 : main: 24 - pre: 4 - post: 16
lan1 - 0x18036 : 1804 - 0x18037 : 0050
lan1 : main: 24 - pre: 4 - post: 16
New: MAC Address0 is: 0xb4055dac63ab
MAC Address1 is: 0xb4055dac63ac
New SN is SN-123456
Download Complete 100
[ ^_^ ] Raptor PCI Utils upgrading is succeeded! 1 cards are upgraded!!

[root@localhost 3.7.3]# reboot
```

```
[root@localhost ~]#
[root@localhost ~]# lspci -d 8088: -nm
01:00.0 "0200" "8088" "0101" -r01 "8088" "c201"
01:00.1 "0200" "8088" "0101" -r01 "8088" "c201"
02:00.0 "0200" "8088" "1001" -r03 "1bd4" "0084"
02:00.1 "0200" "8088" "1001" -r03 "1bd4" "0084"

[root@localhost ~]# ethtool -i p12p1
driver: txgbe
version: 1.3.5.1
firmware-version: 0x84220010
expansion-rom-version:
bus-info: 0000:02:00.0
supports-statistics: yes
supports-test: yes
supports-eeprom-access: yes
supports-register-dump: yes
supports-priv-flags: yes

[root@localhost ~]# ethtool p12p1
Settings for p12p1:
Supported ports: [ FIBRE ]
Supported link modes: 10000baseSR/Full
10000baseLR/Full
Supported pause frame use: Symmetric
Supports auto-negotiation: No
Supported FEC modes: Not reported
Advertised link modes: 10000baseSR/Full
10000baseLR/Full
Advertised pause frame use: Symmetric
Advertised auto-negotiation: No
Advertised FEC modes: Not reported
Speed: 10000Mb/s
Duplex: Full
Port: Other
PHYAD: 0
Transceiver: internal
Auto-negotiation: off
Supports Wake-on: umbg
Wake-on: d
Current message level: 0x00000007 (7)
drv probe link
Link detected: yes
```

```
[root@localhost 3.7.3]#
[root@localhost 3.7.3]# ./wxtool_x86 show -s 02:00.0 -i
02:00.0 Class 0200: Device 8088:1001 (rev 03)

chip status: ok
flash status: ok
Cab 0: c000003f
Flash 0: 5aa54000
fw version: 84220010
fw init: 00000133
wol: disable
ncsi: disable
oprom arch: arm64/x86
TX_EQ: 24 - 4 - 16
image_name:RP1000
oem conf: [000255aa]-[ffffffff]-[000f1253]-[ffffffff]-[fffffffe]
[root@localhost 3.7.3]#
```

```

[root@localhost ~]# lspci -s 02:00.0 -vvv
02:00.0 Ethernet controller: Beijing Wangxun Technology Co., Ltd. Ethernet Controller RP1000 for 10GbE SFP+ (rev 03)
Subsystem: Inspur Electronic Information Industry Co., Ltd. Device 0084
Control: I/O- Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop- ParErr- Stepping- SERR- FastB2B- DisINTx+
Status: Cap+ 66MHz- UDF- FastB2B- ParErr- DEVSEL=fast >TAbort- <TAbort- <MAbort- <SERR- <PERR- INTx-
Latency: 0
Interrupt: pin A routed to IRQ 89
NUMA node: 0
Region 0: Memory at ec900000 (64-bit, non-prefetchable) [size=128K]
Region 4: Memory at ec940000 (64-bit, non-prefetchable) [size=16K]
Expansion ROM at ec800000 [disabled] [size=512K]
Capabilities: [40] Power Management version 3
Flags: PMEClk- DSI- D1- D2- AuxCurrent=375mA PME(D0+,D1-,D2-,D3hot+,D3cold-)
Status: D0 NoSoftRst- PME-Enable- DSel=0 DScale=0 PME-
Capabilities: [50] MSI: Enable- Count=1/1 Maskable+ 64bit+
Address: 0000000000000000 Data: 0000
Masking: 00000000 Pending: 00000000
Capabilities: [70] Express (v2) Endpoint, MSI 00
DevCap: MaxPayload 512 bytes, PhantFunc 0, Latency L0s unlimited, L1 unlimited
ExtTag+ AttnBtm- AttnInd- PwrInd- RBE+ FLReset+ SlotPowerLimit 0.000W
DevCtl: CorrErr+ NonFatalErr+ FatalErr+ UnsupReq-
RlxdOrd+ ExtTag+ PhantFunc- AuxPwr- NoSnoop+ FLReset-
MaxPayload 512 bytes, MaxReadReq 256 bytes
DevSta: CorrErr+ NonFatalErr- FatalErr- UnsupReq+ AuxPwr- TransPend-
LnkCap: Port #0, Speed 8GT/s, Width x8, ASPM L0s L1, Exit Latency L0s <512ns, L1 <4us
ClockPM- Surprise- LLActRep- BwNot- ASPMOptComp+
LnkCtl: ASPM Disabled; RCB 64 bytes Disabled- CommClk+
ExtSynch- ClockPM- AutWidDis- BWInt- AutBWInt-
LnkSta: Speed 8GT/s (ok), Width x4 (downgraded)
TrErr- Train- SlotClk+ DLActive- BWMgmt- ABWMgmt-
DevCap2: Completion Timeout: Not Supported, TimeoutDis+, LTR-, OBFF Not Supported
AtomicOpsCap: 32bit- 64bit- 128bitCAS-
DevCtl2: Completion Timeout: 50us to 50ms, TimeoutDis+, LTR-, OBFF Disabled
AtomicOpsCtl: ReqEn-
LnkCtl2: Target Link Speed: 8GT/s, EnterCompliance- SpeedDis-
Transmit Margin: Normal Operating Range, EnterModifiedCompliance- ComplianceSOS-
Compliance De-emphasis: -6dB
LnkSta2: Current De-emphasis Level: -3.5dB, EqualizationComplete+, EqualizationPhase1+
EqualizationPhase2+, EqualizationPhase3+, LinkEqualizationRequest-
Capabilities: [b0] MSI-X: Enable+ Count=64 Masked-
Vector table: BAR=4 offset=00000000
PBA: BAR=4 offset=00002000
Capabilities: [d0] Vital Product Data
Product Name: Wangxun(Netswift) 10GbE Family Controller
Read-only fields:
[PN] Part number: YZNC-03255-102
[SN] Serial number: SN-123456
[RV] Reserved: checksum good, 4 byte(s) reserved
End
Capabilities: [100 v2] Advanced Error Reporting

```

2.2 烧录测试

```

[root@localhost ~]# ./wxtool_x86 -F dc/inspur/RP0084_LED_disable_arp_84220010.img -T
Please Select which kind of NIC to upgrade:
1. 1000M_nics_1ports
2. 1000M_nics_2ports
3. 1000M_nics_4ports
4. 10_Gigabit_nics
please input choose number: 4
SIG_FILE:dc/inspur/RP0084_LED_disable_arp_84220010.sig

FILE SHA256 sum:
e6af4929f1d5d2d5ddcbe6e39b12cb0d98a9549437fcbd92d8b2dc32d3c0b656 dc/inspur/RP0084_LED_disable_arp_84220010.sig
750f3493c5600e089b43fb8bb06208d56acb9ac5b6141ec1379cac0945448bbf dc/inspur/RP0084_LED_disable_arp_84220010.img

Verified OK

Raptor PCI Utils tool is started.
We will download 1 in 1 cards depends on the configuration.

flash write-protect register val : 0
Start to download No.0 adaptor card [ 0000:01:00.0 ]:
Old: MAC Address0 is: 3009f9257365
MAC Address1 is: 3009f9257366
SN is: ffffffffffffffff

vpd_sn_change_t
id_str: Wangxun(Netswift) 10GbE Family Controller
pn_str: YZNC-03255-102
sn_str: ffffffffffffffff
Erase sector1 command, return status = 0
Retore mac addr in backup area
Start to erase flash ..... complete 100%
Start to download image to adaptor ..... complete 99%
lan0 - 0x18036 : 1804 - 0x18037 : 0050
lan0 - main: 24 - pre: 4 - post: 16
lan1 - 0x18036 : 1804 - 0x18037 : 0050
lan1 - main: 24 - pre: 4 - post: 16
New: MAC Address0 is: 0x3009f9257365
MAC Address1 is: 0x3009f9257366
SN is: ffffffffffffffff

Download Complete 100
[ ^_^ ] Raptor PCI Utils upgrading is succeeded! 1 cards are upgraded!!

```



```

[root@localhost ~]# ./wxtool_x86 -F dc/inspur/RP0075_LED_disable_arp_84120010.img -T
Please Select which kind of NIC to upgrade:
  1. 1000M_nics_1ports
  2. 1000M_nics_2ports
  3. 1000M_nics_4ports
  4. 10_Gigabit_nics
Please input choose number: 4
SIG_FILE:dc/inspur/RP0075_LED_disable_arp_84120010.sig

FILE SHA256 sum:
393b3266f666443a035be39091e54c6fe40da65fb4233760c4fbd306e7b081ee dc/inspur/RP0075_LED_disable_arp_84120010.sig
af2e5d5df8b145db2078275bfae89daf23a6ca5ceb4c487eb3bb07ec8f779e3d dc/inspur/RP0075_LED_disable_arp_84120010.img

Verified OK

More than one of our networking adaptor cards were found, but without of '-A' option specified. Please select a adaptor to download.
[ 0 ] 0000:31:00.00 [ 1 ] 0000:98:00.00 :
Please select slot index: 0

Raptor PCI Utils tool is started.
We will download 2 in 1 cards depends on the configuration.

flash write-protect register val : 0
Start to download No.0 adaptor card [ 0000:31:00.0 ]:
Old: MAC Address0 is: b4055dac63ab
MAC Address1 is: b4055dac63ac
SN is: 00000000000000000000

vpd_sn_change_t
id_str: Wangxun(Netswift) 10GbE Family Controller
pn_str: YZNC-03255-101
sn_str: 00000000000000000000
Erase sector1 command, return status = 0
Retore mac addr in backup area
Start to erase flash ..... complete 100%
Start to download image to adaptor ..... complete 99%
lan0 - 0x18036 : 1804 - 0x18037 : 0050
lan0 - main: 24 - pre: 4 - post: 16
lan1 - 0x18036 : 1804 - 0x18037 : 0050
lan1 - main: 24 - pre: 4 - post: 16
New: MAC Address0 is: 0xb4055dac63ab
MAC Address1 is: 0xb4055dac63ac
SN is: 00000000000000000000

Download Complete 100
[ ^_^ ] Raptor PCI Utils upgrading is succeeded! 1 cards are upgraded!!

[root@localhost ~]# poweroff

```

2.3 LLDP

0084:

1. 烧录固件后，LLDP 状态默认 on，可以设置 on/off

```

[root@localhost ~]# ethtool --show-priv-flags ens5f0
Private flags for ens5f0:
lldp: on
[root@localhost ~]# ethtool --show-priv-flags ens5f1
Private flags for ens5f1:
lldp: on
[root@localhost ~]# ethtool --set-priv-flags ens5f0 lldp off

```

2. 当网口 lldp 为 on 时，会发送 lldp 报文，对端 lldp 为 off 时可以收到对应的 lldp 报文；而 lldp 为 on 时 lldp 报文被固件过滤掉，无法抓到
3. os 下 ifconfig 临时修改所有网口 mac 地址，查看 LLDP 报文源 mac 地址没有跟随改变，对端使用 tcpdump 抓到的 LLDP 报文，源 mac 地址一直都是默认的地址。

```
[root@localhost ~]# tcpdump -ntei ens5f0
tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
listening on ens5f0, link-type EN10MB (Ethernet), capture size 262144 bytes
b4:05:5d:ac:63:ab > 01:80:c2:00:00:0e, ethertype LLDP (0x88cc), length 60: LLDP, length 46: WangXun_SP_firmware
b4:05:5d:ac:63:ab > Broadcast, ethertype IPv4 (0x0800), length 342: 0.0.0.0.bootpc > 255.255.255.255.bootps: BOOTP/DHCP, Request from b4:05:5d:ac:63:ab, length 300
b4:05:5d:ac:63:ab > Broadcast, ethertype IPv4 (0x0800), length 342: 0.0.0.0.bootpc > 255.255.255.255.bootps: BOOTP/DHCP, Request from b4:05:5d:ac:63:ab, length 300
b4:05:5d:ac:63:ac > 01:80:c2:00:00:0e, ethertype LLDP (0x88cc), length 60: LLDP, length 46: WangXun_SP_firmware
b4:05:5d:ac:63:ac > 01:80:c2:00:00:0e, ethertype LLDP (0x88cc), length 60: LLDP, length 46: WangXun_SP_firmware
b4:05:5d:ac:63:ac > 01:80:c2:00:00:0e, ethertype LLDP (0x88cc), length 60: LLDP, length 46: WangXun_SP_firmware
b4:05:5d:ac:63:ac > Broadcast, ethertype IPv4 (0x0800), length 342: 0.0.0.0.bootpc > 255.255.255.255.bootps: BOOTP/DHCP, Request from b4:05:5d:ac:63:ac, length 300
b4:05:5d:ac:63:ac > 01:80:c2:00:00:0e, ethertype LLDP (0x88cc), length 60: LLDP, length 46: WangXun_SP_firmware
b4:05:5d:ac:63:ac > Broadcast, ethertype IPv4 (0x0800), length 342: 0.0.0.0.bootpc > 255.255.255.255.bootps: BOOTP/DHCP, Request from b4:05:5d:ac:63:ac, length 300
b4:05:5d:ac:63:ac > Broadcast, ethertype IPv4 (0x0800), length 342: 0.0.0.0.bootpc > 255.255.255.255.bootps: BOOTP/DHCP, Request from b4:05:5d:ac:63:ac, length 300
b4:05:5d:ac:63:ac > Broadcast, ethertype IPv4 (0x0800), length 342: 0.0.0.0.bootpc > 255.255.255.255.bootps: BOOTP/DHCP, Request from b4:05:5d:ac:63:ac, length 300
b4:05:5d:ac:63:ac > 01:80:c2:00:00:0e, ethertype LLDP (0x88cc), length 60: LLDP, length 46: WangXun_SP_firmware
b4:05:5d:ac:63:ac > 01:80:c2:00:00:0e, ethertype LLDP (0x88cc), length 60: LLDP, length 46: WangXun_SP_firmware
b4:05:5d:ac:63:ac > 01:80:c2:00:00:0e, ethertype LLDP (0x88cc), length 60: LLDP, length 46: WangXun_SP_firmware

4 packets captured
4 packets received by filter
0 packets dropped by kernel
```

4. lldp on/off 时, iperf 测试无异常。

0075:

1. 烧录固件后, LLDP 状态默认 off, 可以设置 on/off
2. 当网口 lldp 为 on 时, 会发送 lldp 报文, 对端 lldp 为 off 时可以收到对应的 lldp 报文; 而 lldp 为 on 时 lldp 报文被固件过滤掉, 无法抓到
3. os 下 ifconfig 临时修改所有网口 mac 地址, 查看 LLDP 报文源 mac 地址没有跟随改变, 对端使用 tcpdump 抓到的 LLDP 报文, 源 mac 地址一直都是默认的地址。

```
[root@localhost ~]# ethtool --show-priv-flags ens5f0
Private flags for ens5f0:
lldp: on
[root@localhost ~]# ethtool --show-priv-flags ens5f1
Private flags for ens5f1:
lldp: on
[root@localhost ~]# ethtool --set-priv-flags ens5f1 lldp off
[root@localhost ~]# tcpdump -ntei ens5f0
tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
listening on ens5f0, link-type EN10MB (Ethernet), capture size 262144 bytes

0 packets captured
0 packets received by filter
0 packets dropped by kernel
[root@localhost ~]# tcpdump -ntei ens5f1
tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
listening on ens5f1, link-type EN10MB (Ethernet), capture size 262144 bytes
b4:05:5d:ac:63:ab > 01:80:c2:00:00:0e, ethertype LLDP (0x88cc), length 60: LLDP, length 46: WangXun_SP_firmware
b4:05:5d:ac:63:ab > 01:80:c2:00:00:0e, ethertype LLDP (0x88cc), length 60: LLDP, length 46: WangXun_SP_firmware
b4:05:5d:ac:63:ab > 01:80:c2:00:00:0e, ethertype LLDP (0x88cc), length 60: LLDP, length 46: WangXun_SP_firmware
b4:05:5d:ac:63:ab > 01:80:c2:00:00:0e, ethertype LLDP (0x88cc), length 60: LLDP, length 46: WangXun_SP_firmware
b4:05:5d:ac:63:ab > 01:80:c2:00:00:0e, ethertype LLDP (0x88cc), length 60: LLDP, length 46: WangXun_SP_firmware
b4:05:5d:ac:63:ab > 01:80:c2:00:00:0e, ethertype LLDP (0x88cc), length 60: LLDP, length 46: WangXun_SP_firmware
b4:05:5d:ac:63:ab > 01:80:c2:00:00:0e, ethertype LLDP (0x88cc), length 60: LLDP, length 46: WangXun_SP_firmware

7 packets captured
7 packets received by filter
0 packets dropped by kernel
```

```
[root@localhost ~]# ifconfig ens5f0 hw ether 02:02:03:03:04:04
[root@localhost ~]# tcpdump -ntei ens5f1
tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
listening on ens5f1, link-type EN10MB (Ethernet), capture size 262144 bytes
b4:05:5d:ac:63:ac > Broadcast, ethertype IPv4 (0x0800), length 342: 0.0.0.0.bootpc > 255.255.255.255.bootps: BOOTP/DHCP, Request from b4:05:5d:ac:63:ac, length 300
b4:05:5d:ac:63:ab > 01:80:c2:00:00:0e, ethertype LLDP (0x88cc), length 60: LLDP, length 46: WangXun_SP_firmware
b4:05:5d:ac:63:ac > Broadcast, ethertype IPv4 (0x0800), length 342: 0.0.0.0.bootpc > 255.255.255.255.bootps: BOOTP/DHCP, Request from b4:05:5d:ac:63:ac, length 300
b4:05:5d:ac:63:ab > Broadcast, ethertype IPv4 (0x0800), length 342: 0.0.0.0.bootpc > 255.255.255.255.bootps: BOOTP/DHCP, Request from b4:05:5d:ac:63:ac, length 300
b4:05:5d:ac:63:ab > 01:80:c2:00:00:0e, ethertype LLDP (0x88cc), length 60: LLDP, length 46: WangXun_SP_firmware
b4:05:5d:ac:63:ac > Broadcast, ethertype IPv4 (0x0800), length 342: 0.0.0.0.bootpc > 255.255.255.255.bootps: BOOTP/DHCP, Request from b4:05:5d:ac:63:ac, length 300
b4:05:5d:ac:63:ab > Broadcast, ethertype IPv4 (0x0800), length 342: 0.0.0.0.bootpc > 255.255.255.255.bootps: BOOTP/DHCP, Request from b4:05:5d:ac:63:ab, length 300
b4:05:5d:ac:63:ac > Broadcast, ethertype IPv4 (0x0800), length 342: 0.0.0.0.bootpc > 255.255.255.255.bootps: BOOTP/DHCP, Request from b4:05:5d:ac:63:ac, length 300
b4:05:5d:ac:63:ab > Broadcast, ethertype IPv4 (0x0800), length 342: 0.0.0.0.bootpc > 255.255.255.255.bootps: BOOTP/DHCP, Request from b4:05:5d:ac:63:ab, length 300
10 packets captured
10 packets received by filter
0 packets dropped by kernel
```

4. lldp on/off 时, iperf 测试无异常。

2.4 SMBUS 测试

ncsi command 测试见测试脚本和测试脚本日志

2.5 PXE 测试

1. 点灯测试:

0075 和 0084 os 下 ethtool 点灯, 速率灯闪烁; bios 点灯正常

2. 安装测试:

uefi, legacy 安装 os, 所有网口都可以成功

3. 稳定性测试:

pxe 安装 os 50 次以上, 每次都能成功

2.6 模块测试:

光模块, AOC 模块, 光转电三种模块在 undi, legacy, txgbe 下都能 link 使用。

