

Re: Issues with uli526x networking module

Source: <http://linux.derkeiler.com/Mailing-Lists/Kernel/2006-03/msg09724.html>

- *From:* Nigel Cunningham <ncunningham@xxxxxxxxxxxxxx>
 - *Date:* Wed, 29 Mar 2006 07:47:32 +1000
-

Hi.

On Wednesday 29 March 2006 03:30, Prakash Punnoor wrote:

Hi, I am just wondering whether you found out what the issue is with the link problem. If you have some patch ready (even if it is hackish) I would be happy to use it.

Anyways, I know you are busy with swsusp2. ;-)

Cheers,

Yes, I do have a patch. It is hackish at the moment because as you've rightly guessed, I haven't gotten around to finishing it. It also doesn't work perfectly – I sometimes need to rmmmod and insmod after booting a new kernel to get the link to come up. But, apart from that, it works fine. Attached. (Jeff, I'm sure it doesn't need saying, but please don't apply!)

Regards,

Nigel

```
uli526x.c | 335 +-----
1 file changed, 255 insertions(+), 80 deletions(-)
diff -ruNp 180-uli-power-management.patch-old/drivers/net/tulip/uli526x.c
180-uli-power-management.patch-new/drivers/net/tulip/uli526x.c
--- 180-uli-power-management.patch-old/drivers/net/tulip/uli526x.c 2006-03-13 10:02:46.000000000
+1000
+++ 180-uli-power-management.patch-new/drivers/net/tulip/uli526x.c 2006-03-15 09:35:15.000000000
+1000
@@ -13,8 +13,8 @@
*/
```

```
#define DRV_NAME "uli526x"
-#define DRV_VERSION "0.9.3"
-#define DRV_RELDATE "2005-7-29"
+#define DRV_VERSION "0.9.4"
+#define DRV_RELDATE "2006-1-17"
```

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```
#include <linux/module.h>

@@ -248,6 +248,68 @@ static void uli526x_set_phyxcer(struct u

/* ULI526X network board routine ----- */

+static void uli526x_free_resources(struct uli526x_board_info *db)
+{
+ if(db->desc_pool_ptr) {
+ pci_free_consistent(db->pdev, sizeof(struct tx_desc) * DESC_ALL_CNT + 0x20,
+ db->desc_pool_ptr, db->desc_pool_dma_ptr);
+ db->desc_pool_ptr = NULL;
+ }
+
+ if(db->buf_pool_ptr != NULL) {
+ pci_free_consistent(db->pdev, TX_BUF_ALLOC * TX_DESC_CNT + 4,
+ db->buf_pool_ptr, db->buf_pool_dma_ptr);
+ db->buf_pool_ptr = NULL;
+ }
+ }
+
+static int uli526x_get_resources(struct uli526x_board_info *db)
+{
+ /* Allocate Tx/Rx descriptor memory */
+ db->desc_pool_ptr = pci_alloc_consistent(db->pdev, sizeof(struct tx_desc) * DESC_ALL_CNT + 0x20,
+ &db->desc_pool_dma_ptr);
+ if(!db->desc_pool_ptr)
+ return -ENOMEM;
+
+ db->buf_pool_ptr = pci_alloc_consistent(db->pdev, TX_BUF_ALLOC * TX_DESC_CNT + 4,
+ &db->buf_pool_dma_ptr);
+ return db->buf_pool_ptr ? 0 : -ENOMEM;
+ }
+
+static void do_reset(struct net_device *dev)
+{
+ struct uli526x_board_info *db = netdev_priv(dev);
+ int i;
+
+ printk("Do_reset\n");
+
+ /* read 64 word srom data */
+ for (i = 0; i < 64; i++)
+ ((u16 *) db->srom)[i] = cpu_to_le16(read_srom_word(db->ioaddr, i));
+
+ /* Set Node address */
+ if(((u16 *) db->srom)[0] == 0xffff || ((u16 *) db->srom)[0] == 0) /* SROM absent, so read MAC address
from ID Table */
+ {
+ outl(0x10000, db->ioaddr + DCR0); //Diagnosis mode
+ outl(0x1c0, db->ioaddr + DCR13); //Reset dianostic pointer port
```

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```
+ outl(0, db->ioaddr + DCR14); //Clear reset port
+ outl(0x10, db->ioaddr + DCR14); //Reset ID Table pointer
+ outl(0, db->ioaddr + DCR14); //Clear reset port
+ outl(0, db->ioaddr + DCR13); //Clear CR13
+ outl(0x1b0, db->ioaddr + DCR13); //Select ID Table access port
+ //Read MAC address from CR14
+ for (i = 0; i < 6; i++)
+ dev->dev_addr[i] = inl(db->ioaddr + DCR14);
+ //Read end
+ outl(0, db->ioaddr + DCR13); //Clear CR13
+ outl(0, db->ioaddr + DCR0); //Clear CR0
+ udelay(10);
+ }
+ else /*Exist SROM*/
+ {
+ for (i = 0; i < 6; i++)
+ dev->dev_addr[i] = db->srom[20 + i];
+ }
+ }
+
+/*
+ * Search ULI526X board, allocate space and register it
+ */
@@ -256,18 +318,30 @@ static int __devinit uli526x_init_one (s
const struct pci_device_id *ent)
{
struct uli526x_board_info *db; /* board information structure */
- struct net_device *dev;
+ struct net_device *dev = NULL;
int i, err;

ULI526X_DEBUG(0, "uli526x_init_one()", 0);
+ printk("uli526x_init_one()\n");

if (!printed_version++)
printk(version);

+
+ /* Enable Master/IO access, Disable memory access */
+ err = pci_enable_device(pdev);
+ if (err)
+ goto err_out_free;
+
+ pci_set_power_state(pdev, PCI_D0);
+
+ /* Init network device */
dev = alloc_etherdev(sizeof(*db));
- if (dev == NULL)
- return -ENOMEM;
+ if (dev == NULL) {
+ err = -ENOMEM;

```

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```
+ goto err_out_disable;
+ }
+
SET_MODULE_OWNER(dev);
SET_NETDEV_DEV(dev, &pdev->dev);

@@ -277,11 +351,6 @@ static int __devinit uli526x_init_one (s
goto err_out_free;
}

- /* Enable Master/IO access, Disable memory access */
- err = pci_enable_device(pdev);
- if (err)
- goto err_out_free;
-
if (!pci_resource_start(pdev, 0)) {
printk(KERN_ERR DRV_NAME ": I/O base is zero\n");
err = -ENODEV;
@@ -303,19 +372,9 @@ static int __devinit uli526x_init_one (s
/* Init system & device */
db = netdev_priv(dev);

- /* Allocate Tx/Rx descriptor memory */
- db->desc_pool_ptr = pci_alloc_consistent(pdev, sizeof(struct tx_desc) * DESC_ALL_CNT + 0x20,
&db->desc_pool_dma_ptr);
- if(db->desc_pool_ptr == NULL)
- {
- err = -ENOMEM;
- goto err_out_nomem;
- }
- db->buf_pool_ptr = pci_alloc_consistent(pdev, TX_BUF_ALLOC * TX_DESC_CNT + 4,
&db->buf_pool_dma_ptr);
- if(db->buf_pool_ptr == NULL)
- {
- err = -ENOMEM;
+ err = uli526x_get_resources(db);
+ if (err)
goto err_out_nomem;
- }

db->first_tx_desc = (struct tx_desc *) db->desc_pool_ptr;
db->first_tx_desc_dma = db->desc_pool_dma_ptr;
@@ -341,34 +400,8 @@ static int __devinit uli526x_init_one (s
dev->ethtool_ops = &netdev_ethtool_ops;
spin_lock_init(&db->lock);

-
- /* read 64 word srom data */
- for (i = 0; i < 64; i++)
- ((u16 *) db->srom)[i] = cpu_to_le16(read_srom_word(db->ioaddr, i));
+ do_reset(dev);
```

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```
- /* Set Node address */
- if(((u16 *) db->srom)[0] == 0xffff || ((u16 *) db->srom)[0] == 0) /* SROM absent, so read MAC address
from ID Table */
- {
- outl(0x10000, db->ioaddr + DCR0); //Diagnosis mode
- outl(0x1c0, db->ioaddr + DCR13); //Reset dianostic pointer port
- outl(0, db->ioaddr + DCR14); //Clear reset port
- outl(0x10, db->ioaddr + DCR14); //Reset ID Table pointer
- outl(0, db->ioaddr + DCR14); //Clear reset port
- outl(0, db->ioaddr + DCR13); //Clear CR13
- outl(0x1b0, db->ioaddr + DCR13); //Select ID Table access port
- //Read MAC address from CR14
- for (i = 0; i < 6; i++)
- dev->dev_addr[i] = inl(db->ioaddr + DCR14);
- //Read end
- outl(0, db->ioaddr + DCR13); //Clear CR13
- outl(0, db->ioaddr + DCR0); //Clear CR0
- udelay(10);
- }
- else /*Exist SROM*/
- {
- for (i = 0; i < 6; i++)
- dev->dev_addr[i] = db->srom[20 + i];
- }
err = register_netdev (dev);
if (err)
goto err_out_res;
@@ -379,25 +412,34 @@ static int __devinit uli526x_init_one (s
printk("%c%02x", i ? ':' : ' ', dev->dev_addr[i]);
printk(", irq %d.\n", dev->irq);

+ pci_set_power_state(pdev, PCI_D0);
+
pci_set_master(pdev);

+ printk("Register 0 is %x.\n", inl(db->ioaddr));
+ printk("Register 3 is %x.\n", inl(db->ioaddr + 0x18));
+ printk("Register 4 is %x.\n", inl(db->ioaddr + 0x20));
+ printk("Register 5 is %x.\n", inl(db->ioaddr + 0x28));
+ printk("Register 6 is %x.\n", inl(db->ioaddr + 0x30));
+ printk("Register 7 is %x.\n", inl(db->ioaddr + 0x38));
+ printk("Register 8 is %x.\n", inl(db->ioaddr + 0x40));
+ printk("Register 9 is %x.\n", inl(db->ioaddr + 0x48));
+ printk("Register 10 is %x.\n", inl(db->ioaddr + 0x50));
+ printk("Register 11 is %x.\n", inl(db->ioaddr + 0x58));
+ printk("Register 12 is %x.\n", inl(db->ioaddr + 0x60));
+ printk("Register 15 is %x.\n", inl(db->ioaddr + 0x78));
return 0;

err_out_res:
```

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```
pci_release_regions(pdev);
err_out_nomem:
- if(db->desc_pool_ptr)
- pci_free_consistent(pdev, sizeof(struct tx_desc) * DESC_ALL_CNT + 0x20,
- db->desc_pool_ptr, db->desc_pool_dma_ptr);
-
- if(db->buf_pool_ptr != NULL)
- pci_free_consistent(pdev, TX_BUF_ALLOC * TX_DESC_CNT + 4,
- db->buf_pool_ptr, db->buf_pool_dma_ptr);
+ uli526x_free_resources(db);
err_out_disable:
pci_disable_device(pdev);
err_out_free:
pci_set_drvdata(pdev, NULL);
- free_netdev(dev);
+ if (dev)
+ free_netdev(dev);

return err;
}
@@ -410,15 +452,19 @@ static void __devexit uli526x_remove_one

ULI526X_DEBUG(0, "uli526x_remove_one()", 0);

- pci_free_consistent(db->pdev, sizeof(struct tx_desc) *
- DESC_ALL_CNT + 0x20, db->desc_pool_ptr,
- db->desc_pool_dma_ptr);
- pci_free_consistent(db->pdev, TX_BUF_ALLOC * TX_DESC_CNT + 4,
- db->buf_pool_ptr, db->buf_pool_dma_ptr);
+ //20060306 - Uncommented
+ //netif_poll_disable(dev);
+
+ //netif_stop_queue(dev);
unregister_netdev(dev);
- pci_release_regions(pdev);
+ uli526x_free_resources(db);
free_netdev(dev); /* free board information */
+
+ //20060306 - Uncommented
+ //pci_iounmap(pdev, (void *) dev->base_addr);
+ pci_release_regions(pdev);
pci_set_drvdata(pdev, NULL);
+ pci_set_power_state(pdev, PCI_D3hot);
pci_disable_device(pdev);
ULI526X_DEBUG(0, "uli526x_remove_one() exit", 0);
}
@@ -435,6 +481,7 @@ static int uli526x_open(struct net_device
struct uli526x_board_info *db = netdev_priv(dev);

ULI526X_DEBUG(0, "uli526x_open", 0);
+ printk("uli526x_open\n");
```

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```
ret = request_irq(dev->irq, &uli526x_interrupt, SA_SHIRQ, dev->name, dev);
if (ret)
@@ -443,6 +490,7 @@ static int uli526x_open(struct net_devic
/* system variable init */
db->cr6_data = CR6_DEFAULT | uli526x_cr6_user_set;
db->tx_packet_cnt = 0;
+ //ULI526X_DEBUG(0, "db->tx_packet_cnt reset to %d.", db->tx_packet_cnt);
db->rx_avail_cnt = 0;
db->link_failed = 1;
netif_carrier_off(dev);
@@ -488,6 +536,7 @@ static void uli526x_init(struct net_devi
u16 phy_reg_reset;

ULI526X_DEBUG(0, "uli526x_init()", 0);
+ printk("uli526x_init\n");

/* Reset M526x MAC controller */
outl(ULI526X_RESET, ioaddr + DCR0); /* RESET MAC */
@@ -557,7 +606,7 @@ static int uli526x_start_xmit(struct sk_
struct tx_desc *txptr;
unsigned long flags;

- ULI526X_DEBUG(0, "uli526x_start_xmit", 0);
+ //ULI526X_DEBUG(0, "uli526x_start_xmit", 0);

/* Resource flag check */
netif_stop_queue(dev);
@@ -593,6 +642,7 @@ static int uli526x_start_xmit(struct sk_
if ( (db->tx_packet_cnt < TX_DESC_CNT) ) {
txptr->tdes0 = cpu_to_le32(0x80000000); /* Set owner bit */
db->tx_packet_cnt++; /* Ready to send */
+ //ULI526X_DEBUG(0, "db->tx_packet_cnt = %d.", db->tx_packet_cnt);
outl(0x1, dev->base_addr + DCR1); /* Issue Tx polling */
dev->trans_start = jiffies; /* saved time stamp */
}
@@ -638,6 +688,8 @@ static int uli526x_stop(struct net_devic
/* free interrupt */
free_irq(dev->irq, dev);

+ netif_carrier_off(dev);
+
/* free allocated rx buffer */
uli526x_free_rxbuffer(db);

@@ -678,6 +730,7 @@ static irqreturn_t uli526x_interrupt(int
db->cr5_data = inl(ioaddr + DCR5);
outl(db->cr5_data, ioaddr + DCR5);
if ( !(db->cr5_data & 0x180c1) ) {
+ ULI526X_DEBUG(1, "Earlier return. CR5=", db->cr5_data);
spin_unlock_irqrestore(&db->lock, flags);
```

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```
outl(db->cr7_data, ioaddr + DCR7);
return IRQ_HANDLED;
@@ -698,7 +751,7 @@ static irqreturn_t uli526x_interrupt(int
uli526x_rx_packet(dev, db);

/* reallocate rx descriptor buffer */
- if (db->rx_avail_cnt < RX_DESC_CNT)
+ if (db->rx_avail_cnt < RX_DESC_CNT)
allocate_rx_buffer(db);

/* Free the transmitted descriptor */
@@ -729,8 +782,10 @@ static void uli526x_free_tx_pkt(struct net
if (tdes0 & 0x80000000)
break;

+ //ULI526X_DEBUG(0, "Free tx pkt.\n", NULL);
/* A packet sent completed */
db->tx_packet_cnt--;
+ //ULI526X_DEBUG(0, "db->tx_packet_cnt = %d.", db->tx_packet_cnt);
db->stats.tx_packets++;

/* Transmit statistic counter */
@@ -788,10 +843,9 @@ static void uli526x_rx_packet(struct net
while(db->rx_avail_cnt) {
rdes0 = le32_to_cpu(rxptr->rdes0);
if (rdes0 & 0x80000000) /* packet owner check */
- {
break;
- }

+ //ULI526X_DEBUG(0, "rx pkt.", NULL);
db->rx_avail_cnt--;
db->interval_rx_cnt++;

@@ -799,7 +853,7 @@ static void uli526x_rx_packet(struct net
if ( (rdes0 & 0x300) != 0x300) {
/* A packet without First/Last flag */
/* reuse this SKB */
- ULI526X_DEBUG(0, "Reuse SK buffer, rdes0", rdes0);
+ //ULI526X_DEBUG(0, "Reuse SK buffer, rdes0", rdes0);
uli526x_reuse_skb(db, rxptr->rx_skb_ptr);
} else {
/* A packet with First/Last flag */
@@ -808,7 +862,7 @@ static void uli526x_rx_packet(struct net
/* error summary bit check */
if (rdes0 & 0x8000) {
/* This is a error packet */
- //printk(DRV_NAME ": rdes0: %lx\n", rdes0);
+ printk(DRV_NAME ": rdes0: %x\n", rdes0);
db->stats.rx_errors++;
if (rdes0 & 1)
```

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```
db->stats.rx_fifo_errors++;
@@ -844,7 +898,7 @@ static void uli526x_rx_packet(struct net

} else {
/* Reuse SKB buffer when the packet is error */
- ULI526X_DEBUG(0, "Reuse SK buffer, rdes0", rdes0);
+ //ULI526X_DEBUG(0, "Reuse SK buffer, rdes0", rdes0);
uli526x_reuse_skb(db, rxptr->rx_skb_ptr);
}
}
@@ -864,7 +918,7 @@ static struct net_device_stats * uli526x
{
struct uli526x_board_info *db = netdev_priv(dev);

- ULI526X_DEBUG(0, "uli526x_get_stats", 0);
+ //ULI526X_DEBUG(0, "uli526x_get_stats", 0);
return &db->stats;
}

@@ -878,11 +932,11 @@ static void uli526x_set_filter_mode(stru
struct uli526x_board_info *db = dev->priv;
unsigned long flags;

- ULI526X_DEBUG(0, "uli526x_set_filter_mode()", 0);
+ //ULI526X_DEBUG(0, "uli526x_set_filter_mode()", 0);
spin_lock_irqsave(&db->lock, flags);

if (dev->flags & IFF_PROMISC) {
- ULI526X_DEBUG(0, "Enable PROM Mode", 0);
+ //ULI526X_DEBUG(0, "Enable PROM Mode", 0);
db->cr6_data |= CR6_PM | CR6_PBF;
update_cr6(db->cr6_data, db->ioaddr);
spin_unlock_irqrestore(&db->lock, flags);
@@ -890,14 +944,14 @@ static void uli526x_set_filter_mode(stru
}

if (dev->flags & IFF_ALLMULTI || dev->mc_count > ULI5261_MAX_MULTICAST) {
- ULI526X_DEBUG(0, "Pass all multicast address", dev->mc_count);
+ //ULI526X_DEBUG(0, "Pass all multicast address", dev->mc_count);
db->cr6_data &= ~(CR6_PM | CR6_PBF);
db->cr6_data |= CR6_PAM;
spin_unlock_irqrestore(&db->lock, flags);
return;
}

- ULI526X_DEBUG(0, "Set multicast address", dev->mc_count);
+ //ULI526X_DEBUG(0, "Set multicast address", dev->mc_count);
send_filter_frame(dev, dev->mc_count); /* M5261/M5263 */
spin_unlock_irqrestore(&db->lock, flags);
}
@@ -1005,6 +1059,7 @@ static void uli526x_timer(unsigned long
```

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```
struct uli526x_board_info *db = netdev_priv(dev);
unsigned long flags;
u8 TmpSpeed=10;
+ int link_status = 0;

//ULI526X_DEBUG(0, "uli526x_timer()", 0);
spin_lock_irqsave(&db->lock, flags);
@@ -1023,6 +1078,7 @@ static void uli526x_timer(unsigned long
time_after(jiffies, dev->trans_start + ULI526X_TX_KICK) ) {
outl(0x1, dev->base_addr + DCR1); // Tx polling again

+ //ULI526X_DEBUG(0, "db->tx_packet_cnt = %d.", db->tx_packet_cnt);
// TX Timeout
if ( time_after(jiffies, dev->trans_start + ULI526X_TX_TIMEOUT) ) {
db->reset_TXtimeout++;
@@ -1043,7 +1099,9 @@ static void uli526x_timer(unsigned long
}

/* Link status check, Dynamic media type change */
- if((phy_read(db->ioaddr, db->phy_addr, 5, db->chip_id) & 0x01e0)!=0)
+ link_status = phy_read(db->ioaddr, db->phy_addr, 5, db->chip_id);
+ //ULI526X_DEBUG(0, "Link status is ", link_status);
+ if (link_status & 0x1e0)
tmp_cr12 = 3;

if ( !(tmp_cr12 & 0x3) && !db->link_failed ) {
@@ -1065,7 +1123,7 @@ static void uli526x_timer(unsigned long
}
} else
if ((tmp_cr12 & 0x3) && db->link_failed) {
- ULI526X_DEBUG(0, "Link link OK", tmp_cr12);
+ //ULI526X_DEBUG(0, "Link link OK", tmp_cr12);
db->link_failed = 0;

/* Auto Sense Speed */
@@ -1137,6 +1195,7 @@ static void uli526x_dynamic_reset(struct

/* system variable init */
db->tx_packet_cnt = 0;
+ ULI526X_DEBUG(0, "db->tx_packet_cnt reset to ", db->tx_packet_cnt);
db->rx_avail_cnt = 0;
db->link_failed = 1;
db->init=1;
@@ -1156,11 +1215,12 @@ static void uli526x_dynamic_reset(struct

static void uli526x_free_rxbuffer(struct uli526x_board_info * db)
{
- ULI526X_DEBUG(0, "uli526x_free_rxbuffer()", 0);
+ //ULI526X_DEBUG(0, "uli526x_free_rxbuffer()", 0);

/* free allocated rx buffer */
```

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```
while (db->rx_avail_cnt) {
- dev_kfree_skb(db->rx_ready_ptr->rx_skb_ptr);
+ if (db->rx_ready_ptr->rx_skb_ptr)
+ dev_kfree_skb(db->rx_ready_ptr->rx_skb_ptr);
db->rx_ready_ptr = db->rx_ready_ptr->next_rx_desc;
db->rx_avail_cnt--;
}
@@ -1277,7 +1337,7 @@ static void send_filter_frame(struct net
u32 * suptr;
int i;

- ULI526X_DEBUG(0, "send_filter_frame()", 0);
+ //ULI526X_DEBUG(0, "send_filter_frame()", 0);

txptr = db->tx_insert_ptr;
suptr = (u32 *) txptr->tx_buf_ptr;
@@ -1669,6 +1729,117 @@ static u16 phy_read_1bit(unsigned long i
return phy_data;
}

+#ifdef CONFIG_PM
+
+#if 0
+static void uli526x_set_power_state (
+ struct uli526x_board_info *deb,
+ int sleep, int snooze)
+{
+ if (tp->flags & HAS_ACPI) {
+ u32 tmp, newtmp;
+ pci_read_config_dword (tp->pdev, CFDD, &tmp);
+ newtmp = tmp & ~(CFDD_Sleep | CFDD_Snooze);
+ if (sleep)
+ newtmp |= CFDD_Sleep;
+ else if (snooze)
+ newtmp |= CFDD_Snooze;
+ if (tmp != newtmp)
+ pci_write_config_dword (tp->pdev, CFDD, newtmp);
+ }
+
+ }
+
+#endif
+
+static u32 *dcr_save;
+
+static int uli526x_suspend (struct pci_dev *pdev, pm_message_t state)
+{
+ struct net_device *dev = pci_get_drvdata (pdev);
+ struct uli526x_board_info *db = netdev_priv(dev);
+ unsigned long ioaddr = db->ioaddr;
+ unsigned long flags;
+ int i;
```

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```
+
+ if (!dev)
+ return -EINVAL;
+
+ if (netif_running(dev))
+ netif_stop_queue(dev);
+
+ netif_device_detach(dev);
+
+ spin_lock_irqsave(&db->lock, flags);
+
+ /* Disable interrupts, stop Tx and Rx. */
+ outl(0, ioaddr + DCR7);
+ db->cr6_data &= ~(CR6_RXSC | CR6_TXSC);
+ update_cr6(db->cr6_data, ioaddr);
+
+ dcr_save = kmalloc(sizeof(u32) * 16, GFP_ATOMIC);
+ for (i=0; i<16; i++)
+ dcr_save[i] = inl(ioaddr + i);
+
+ //phy_write_1bit(ioaddr, PHY_POWER_DOWN, chip_id);
+
+ spin_unlock_irqrestore(&db->lock, flags);
+
+ pci_save_state(pdev);
+
+ pci_disable_device(pdev);
+ pci_set_power_state(pdev,
+ pci_choose_state(pdev, state));
+
+ return 0;
+}
+
+static int uli526x_resume (struct pci_dev *pdev)
+{
+ struct net_device *dev = pci_get_drvdata (pdev);
+ struct uli526x_board_info *db = netdev_priv(dev);
+ unsigned long ioaddr = db->ioaddr;
+ u32 val;
+ int i;
+
+ pci_set_power_state(pdev, PCI_D0);
+ pci_restore_state(pdev);
+ pci_enable_device(pdev);
+
+ netif_device_attach(dev);
+
+ if (!netif_running(dev))
+ return 0;
+
+}
```

Re: Issues with uli526x networking module

```
+ pci_set_master(pdev);
+
+ pci_read_config_dword(pdev, 0x40, &val);
+ if ((val & 0x0000ff00) != 0)
+ pci_write_config_dword(pdev, 0x40, val & 0xffff00ff);
+
+ for (i=0; i<16; i++)
+ outl(ioaddr+i, dcr_save[i]);
+
+ kfree(dcr_save);
+ dcr_save = NULL;
+
+ db->tx_packet_cnt = 0;
+ db->first_tx_desc = (struct tx_desc *) db->desc_pool_ptr;
+ db->first_tx_desc_dma = db->desc_pool_dma_ptr;
+ db->buf_pool_start = db->buf_pool_ptr;
+ db->buf_pool_dma_start = db->buf_pool_dma_ptr;
+
+ do_reset(dev);
+
+ uli526x_get_resources(db);
+
+ uli526x_init(dev);
+
+ return 0;
+}
+
+ #endif /* CONFIG_PM */
+
static struct pci_device_id uli526x_pci_tbl[] = {
{ 0x10B9, 0x5261, PCI_ANY_ID, PCI_ANY_ID, 0, 0, PCI_ULI5261_ID },
@@ -1683,6 +1854,10 @@ static struct pci_driver uli526x_driver
.id_table = uli526x_pci_tbl,
.probe = uli526x_init_one,
.remove = __devexit_p(uli526x_remove_one),
+ #ifdef CONFIG_PM
+ .suspend = uli526x_suspend,
+ .resume = uli526x_resume,
+ #endif /* CONFIG_PM */
};
```

```
MODULE_AUTHOR("Peer Chen, peer.chen@xxxxxxxxxxx");
```

Attachment: [pgpPTMP9DCeNJ.pgp](#)

Description: PGP signature