

LAN867x 10BASE-T1S PHY Linux Driver

This document describes the procedure for compiling and configuring the LAN867x driver. This driver is updated for supporting **Linux kernel version 5.19**. If you are using different versions of the Linux kernel then please contact Microchip support team for the backport patches supported for that corresponding version.

Prepare Driver

- Extract the downloaded software package into your local directory using the below command,

```
$ unzip evb-lan8670-usb-linux-5.19.zip
$ cd evb-lan8670-usb-linux-5.19/
$ make
$ sudo insmod microchip_t1s.ko
$ sudo insmod smsc95xx_t1s.ko
```

Note: Loading microchip_t1s.ko module without any module parameters will configure the default PLCA settings mentioned below. Please refer the below **Configure Driver** section for more details.

Configure Driver

- Driver can take the following module parameters for configuring the PLCA settings,
 - enable (1-enable plca and 0-disable plca)
 - node_id (0-255 plca node id)
 - node_count (0-255 plca node count)
 - max_bc (0-255 max burst count)
 - burst_timer (0-255 burst timer)
 - to_timer (0-255 to timer)
- Default PLCA settings if they are not configured through module parameters,
 - enable=1
 - node_id=0
 - node_count=8
 - max_bc=0
 - burst_timer=128
 - to_timer=32
- Example configuration,

```
$ sudo insmod microchip_t1s.ko enable=1 node_id=0 node_count=8 max_bc=0 burst_timer=128 to_timer=32
```

- Example ethernet configuration,

```
$ sudo ip addr add dev eth1 192.168.1.100/24
```

Note: A sample load.sh file is included in the software package for your reference.