



## Real TTY Linux driver v5.2 (kernel 5.x) Release Notes

<b>Version: v5.2</b>	<b>Build: 22121414</b>
<b>Release Date: Jan 17, 2023</b>	

### Applicable Products

MiiNePort E1 Series, MiiNePort E2 Series, MiiNePort E3 Series, NE-4100 Series, NE-4100-ST Series, NPort 5000AI-M12 Series, NPort 5100 Series, NPort 5100A Series, NPort 5200 Series, NPort 5200A Series, NPort 5400 Series, NPort 5600 Series, NPort 5600-DT Series, NPort 6100/6200 Series, NPort 6400/6600 Series, NPort Express Series, NPort IA5000 Series, NPort IA5000A Series, NPort IA5000A-I/O Series, NPort IAW5000A-I/O Series, NPort P5150A Series, NPort S8000 Series, NPort S9450I Series, NPort S9650I Series, NPort W2150A-W4/W2250A-W4 Series, NPort W2150A/W2250A Series

### Supported Operating Systems

Linux Kernel 5.x

### New Features

N/A

### Enhancements

- Adds the `cmd_timeout` parameter to `mxinst` to specify a custom network timeout.

### Bugs Fixed

- A compile error in `put_tty_driver`, `alloc_tty_driver` in Ubuntu 22.04 kernel 5.15.
- A compiler error in `struct tty_struct` in Fedora 35 kernel 5.14.

### Changes

- Downgraded the software license from GPLv3 to GPLv2.
- Revised the `ARM_PORTING_GUIDE.txt` to include information regarding the license change.

### Notes

N/A



<b>Version: v5.1</b>	<b>Build: 21080410</b>
<b>Release Date: Aug 04, 2021</b>	

### Applicable Products

NPort 5400 Series, NPort IAW5000A-I/O Series, NPort IA5000 Series, MiiNePort E1 Series, NPort W2150A/W2250A Series, MiiNePort E2 Series, NE-4100-ST Series, NPort IA5000A-I/O Series, NPort IA5000A Series, NPort S8000 Series, NPort S9450I Series, NPort 5200A Series, NPort 6400/6600 Series, NPort 5600-DT Series, CN2510 Series, NPort 5600-DTL Series, NPort 5000AI-M12 Series, NPort 6100/6200 Series, NPort 5100A Series, NPort IAW5000A-I/O Series, NPort S9650I Series, NPort 5600 Series, NPort 5100 Series, NPort 5200 Series, MiiNePort E3 Series, CN2600 Series, NE-4100 Series

### Supported Operating Systems

Linux Kernel 5.x

### New Features

N/A

### Enhancements

- Added an optional udev rule to keep redundant ttys.

### Bugs Fixed

- Slow startup and shutdown issues while mapping ports.
- Slow response when reading serial data from CN2650 in redundant mode.
- An error when mxmknod is run from a different directory than its original directory.
- An error with the polling parameter in mxinst.
- 5, An issue of the driver experiencing network timeout randomly.
- An issue of the driver causing the OS to freeze/slow down/be blocked during system reboot or shutdown.
- A compile error due to the "file\_operations" structure not supporting start from kernel 5.6.

### Changes

- The legacy init startup service system V will not be supported starting with this version.

### Notes

N/A



<b>Version: v5.0</b>	<b>Build: Build 19101814</b>
<b>Release Date: Oct 24, 2019</b>	

### Applicable Products

NPort 5100A Series, NPort 5100 Series, NPort P5150A Series, NPort 5200A Series, NPort 5200 Series, NPort 5400 Series, NPort 5600 Series, NPort 5600-DT Series, NPort 5600-DTL Series, NPort Express Series, NPort IA5000A-I/O Series, NPort IAW5000A-I/O Series, NPort S8000 Series, NPort S9450I Series, NPort S9650I Series, NPort W2150A/W2250A Series, NPort IA5000A Series, NPort IA5000 Series, NPort 5000AI-M12 Series, NPort 6100/6200 Series, NPort 6400/6600 Series, CN2510 Series, CN2600 Series, MiiNePort E1 Series, MiiNePort E2 Series, MiiNePort E3 Series, MiiNePort W1 Series, NE-4100 Series

### Supported Operating Systems

Linux Kernel 5.x

### New Features

- Support the systemd process to load the Real TTY driver on the Linux platform.

### Enhancements

- The connections of the opened TTY ports will not be disconnected and reconnected when adding or removing servers. The related descriptions are also removed in README.txt due to this change.
- Supports Virtual Machine. The virtual machine ESXi v6.7.0 is tested with guest OS Ubuntu 18.10 x64 and Ubuntu 19.04 x64.
- Supports ARM-based Linux. The Raspbian operating system with Raspberry Pi 2 and 3 are tested.

### Bugs Fixed

- The driver may not set the nonstandard baudrate correctly.
- The driver may have a compiling error with message "malloc.c2401: sysmalloc: Assertion" on the distribution Fedora release 28.
- On the distribution Fedora release 24/26, the service daemon may not start NPort service properly after restarting OS.
- Fixing the driver may not determine the init process correctly when deleting the NPort server.

### Changes

- Divided an independent driver version 4.0 to support only Linux kernel 4.x.

### Notes

N/A



<b>Version: v1.19</b>	<b>Build: N/A</b>
<b>Release Date: Nov 15, 2017</b>	

## Applicable Products

N/A

## Supported Operating Systems

Linux 3.x, Linux 4.x

## New Features

- Supports Raspbian Jessie and later for Raspberry Pi 2/3.
- Added driver background polling feature to eliminate the waiting time when an NPort is not present in Slackware 14.0.

## Enhancements

- Supports kernel 4.13.
- Compiling errors with error message "error: expected expression before '{' token" in specific platforms.
- When using a domain name as the mapping address for NPort, it will be translated every time when Real TTY is opening the port.
- Compiling errors when using secured Real COM mode.
- Shutdown hanging might happen in Red Hat Enterprise Linux 7.2 (3.10.0-123.el7).

## Bugs Fixed

- Real TTY can't start up TTY ports with the domain name mapped after the system is rebooted.
- Kernel panic with error message "unable to handle kernel paging request" on specific platforms.
- Driver doesn't load properly after system reboot on Ubuntu 16.04.
- Driver may cause a kernel crash with the error message "soft lockup" with specific network interface cards.
- The command stty may output an error if there is no loopback connector on NPort in Redundant mode.
- Network reconnection problems when using redundant mode.
- The Real TTY service may not start automatically in Debian 6.0 and later versions.
- There may be communication loss when using IPv6.
- Data can't be read due to abnormal flow control in Linux kernel 3.8 and later.
- When security mode is enabled, the driver may crash if it connects to an offline NPort.
- Port mapping is incorrect after rebooting in Kernel 3.2.48.
- When NPort is offline, the current serial parameters are not saved for reconnection.
- While executing mxsetsec, the configuration of the driver will be cleared.
- When opening node /dev/ttyr10, port 16 should be opened, but port 10 is opened instead.
- The driver reference count becomes negative after a port open fails.

## Changes

- No longer supports kernel 2.x.
- Log file increasing without limit causes a file system crash.

## Notes

N/A