

**Software Name:** Driver for MiiNePort E3 Series (Real TTY for Linux 3.x.x, 4.x.x)

Version No.	Build Date No./ Release Date	Supported OS	Apply to Models	New Features/ Enhancements	Bugs Fixed/Changes	Note
1.19	N/A	Linux_3.x, Linux_4.x	N/A	<p><b>New Features:</b></p> <ol style="list-style-type: none"> <li>1. Supports Raspbian Jessie and later for Raspberry Pi 2/3.</li> <li>2. Added driver background polling feature to eliminate the waiting time when an NPort is not present in Slackware 14.0.</li> </ol> <p><b>Enhancements:</b></p> <ol style="list-style-type: none"> <li>1. Supports kernel 4.13.</li> <li>2. Compiling errors with error message "error: expected expression before '{' token" in specific platforms.</li> <li>3. When using a domain name as the mapping address for NPort, it will be translated every time when Real TTY is opening the port.</li> <li>4. Compiling errors when using secured Real COM mode.</li> <li>5. Shutdown hanging might happen in Red Hat Enterprise Linux 7.2 (3.10.0-123.el7).</li> </ol>	<p><b>Bugs Fixed:</b></p> <ol style="list-style-type: none"> <li>1. Real TTY can't start up TTY ports with the domain name mapped after the system is rebooted.</li> <li>2. Kernel panic with error message "unable to handle kernel paging request" on specific platforms.</li> <li>3. Driver doesn't load properly after system reboot on Ubuntu 16.04.</li> <li>4. Driver may cause a kernel crash with the error message "soft lockup" with specific network interface cards.</li> <li>5. The command stty may output an error if there is no loopback connector on NPort in Redundant mode.</li> <li>6. Network reconnection problems when using redundant mode.</li> <li>7. The Real TTY service may not start automatically in Debian 6.0 and later versions.</li> <li>8. There may be communication loss when using IPv6.</li> <li>9. Data can't be read due to abnormal flow control in Linux kernel 3.8 and later.</li> <li>10. When security mode is enabled, the driver may crash if it connects to an offline NPort.</li> <li>11. Port mapping is incorrect after rebooting in Kernel 3.2.48.</li> <li>12. When NPort is offline, the current serial parameters are not saved for reconnection.</li> <li>13. While executing mxsetsec, the configuration of the driver will be cleared.</li> <li>14. When opening node /dev/ttyr10, port 16 should be opened, but port 10 is opened instead.</li> <li>15. The driver reference count becomes negative after a port open fails.</li> </ol> <p><b>Changes:</b></p> <ol style="list-style-type: none"> <li>1. No longer supports kernel 2.x.</li> <li>2. Log file increasing without limit causes a file system crash.</li> </ol>	N/A