



USB Serial and USB Net Sierra Linux Drivers Engineering Release Notes

The contents of this file should not be distributed outside Sierra Wireless.

Fixes by Release:

All fixes are cumulative (except as otherwise noted).

[sierra Releases](#)

[sierra_net Releases](#)

USB Serial Driver sierra Releases

Sierra.c version	Changes
1.3.5	<ul style="list-style-type: none">• Remove potential kernel oops from <code>sierra_calc_num_ports()</code> function. Calling this function twice would likely have caused an oops because the function releases allocated memory after the first call• Remove “no_dynamic_id=1” setting. Removing this setting will allow customers to add support for new modems via a system call (i.e. adding unrecognized PIDs) instead of having to download and build/install the driver for the new modem• Fix a problem in function <code>sierra_indat_callback()</code> which would stop receiving traffic from a modem if a number of URB failures occur. Failed URBs are not resubmitted for the next read and there is only a limited number of URBs allocated for the IN path. After this number of failures, the receive path stops working on a particular interface.• Move allocation of memory-based items to <code>Open</code> function from the <code>Startup</code> function to conserve memory. This way, only interfaces that are active will allocate and use the memory instead of all the memory being allocated up front whether it would be needed or not• Fix a problem in <code>sierra_send_setup()</code> for composite modems. Should not be sending ACM commands to interfaces that are OBEX. Doing this causes an apparent failure as the ACM command has to time out before the interface can start being used• Add a <code>MAX_TRANSFER</code> constant following GKH’s recommended setting of <code>PAGE_SIZE-512</code> for USB transfer buffers
1.6.0	<ul style="list-style-type: none">• Updated list of authors from Kevin, adding Elina, Matthew, Rory• Changed <code>N_IN_URB</code> and <code>N_OUT_URB</code> to 8, 64, respectively• Change enum <code>devicetype</code> replacing <code>DEVICE_3_PORT</code> and <code>DEVICE_1_PORT</code> with <code>DEVICE_MODEM</code>• Added blacklist checking in support of direct IP• Updated probe function to check blacklist and other

	<p>information</p> <ul style="list-style-type: none"> • Added support for devices 0x683C and 0x683D • Added newline to several debug strings
1.6.1	<ul style="list-style-type: none"> • Added setting urb transfer flags to URB_ZERO_PACKET – fixes bug we saw with firmware download where 2048 byte (and 1536 and 1024, etc) packets were not being sent to modem over USB
1.6.2	<ul style="list-style-type: none"> • Added interfaces 10 and 11 to blacklisted interfaces
1.7.0	<ul style="list-style-type: none"> • Added suspend/resume support, kernel versions 2.6.23 and up • Created function to stop Rx URBs and rearranged the open and close functions • Moved struct sierra_driver to near end of file
1.7.4	<ul style="list-style-type: none"> • Removed redundant call to get private data pointer from sierra_write and removed the support_autopm module parameter
1.7.8	<ul style="list-style-type: none"> • Memory Footprint Reduction
1.7.10	<ul style="list-style-type: none"> • Merged Oliver Neukum’s patch with the fix for race condition in sierra_resume()
1.7.12	<ul style="list-style-type: none"> • Merged Oliver Neukum’s fix for multiple devices online
1.7.14	<ul style="list-style-type: none"> • Kernel-2.6.27 only: Fixed warning during compilation (to prevent unnecessary customer calls)
1.7.16 Released date: March 10, 2010	<ul style="list-style-type: none"> • Race condition fixed in Send_Setup when Selective Suspend operation is in use. Use Get and Put to ensure the modem can’t be put to sleep while waiting for control message completion • Balancing of Get/Put calls in open/close functions for when autopm is in use <p>NOTE: Affected driver for kernel 2.6.31 only</p>
1.7.18	<ul style="list-style-type: none"> • Implemented “aggressive” autosuspend for kernels 2.6.27 through 2.6.31 • Bug fixes not related to autosuspend ported back to 2.6.20: change to algorithm in “sierra_write_room”, fixes in callback for interrupts and allocation and release of memory in sierra_startup and sierra_shutdown • Statistics gathering added to driver
1.7.20	<ul style="list-style-type: none"> • Make id_table entry for direct IP modems, PID 0x68A3

	<p>more specific to filter out ECM-interfaces by changing USB_DEVICE macro to USB_DEVICE_AND_INTERFACE_INFO</p>
1.7.22	<ul style="list-style-type: none"> • Add handling of CTS bit from modem. The state of the CTS bit reported by the modem is correctly stored in the driver, but at the moment it is not tied to Flow Control; host applications sending to the modem will ignore the state of CTS for now.
1.7.24	<ul style="list-style-type: none"> • Drivers for kernel 2.6.27 to .31. Bug fix to read the correct autopm bit from the modem's firmware attribute message • Bugfix so outstanding URB counter can't get out of sync. Solution affects sierra_resume() function • Added new function for auto-pm support – reset_resume • Removed "alternate" variable from private data structure as it was not required • Added additional statistics gathering, adding write_err and delayed_write_err
1.7.26	<ul style="list-style-type: none"> • Change driver so that "Needs remote wakeup" flag is handled once in sierra_startup() and removed from sierra_open and sierra_close • Change sierra_get_fw_attr function to allocate buffer from heap instead of using a local variable
1.7.28	<ul style="list-style-type: none"> • Bugfix – TRU-INSTALL was not being disabled for C888 and USB306 (and others). Affects kernels 2.6.23, 24, 25 and 26
1.7.30	<ul style="list-style-type: none"> • Fix driver to properly compile on 64-bit platforms • Bugfix – sierra_indat callback needed to check tty variable for NULL before use <p>All kernels affected by first bullet.</p>
1.7.32 Release date: May 09, 2010	<ul style="list-style-type: none"> • Added 2010 to the Copyright notice. • Additions to sierra driver id_table: Q26 device (BZ 21668), Dell WWAN card (BZ 21256). • Implemented patches from kernel.org as applicable to the kernel versions we support (BZ 21286).
1.7.34	<ul style="list-style-type: none"> • Retracted workaround solution which was setting the interface twice (BZ 23923). • Added to id_table MC 5725 device – HP ev2210 with VID 0x3F0, PID= 0x211D (BZ 23504).

	<ul style="list-style-type: none"> • Added to id_table MC 5728 device –VID 0x1199, PID= 0x400 (BZ23633). • Added to id_table 250U device/3G only –VID 0x1199, PID= 0x301 (BZ23642). <p>Note: All sierra driver versions for kernels below 2.6.20 have suffix “b” attached to the last version number, e.g. “v.1.3.6b”</p>
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Sierra.c version	Changes
1.7.36 Release date: December, 2010	<ul style="list-style-type: none"> • Add USB 308 for ATT VID in sierra id_table (BZ 24092) • Serial port deadlock with Linux kernels 2.6.32 and up BZ 24714) • Delete PID 0x0029 (eagle) from sierra serial driver (BZ 25279)
1.7.38	<ul style="list-style-type: none"> • BZ 29624: Add support for PID 68AA
1.7.40 Release date: May 11, 2011	<ul style="list-style-type: none"> • BZ 32397: AC313 [VID: 0F3D] [PID: 68AA] is not supported.
1.7.42 Release date: Dec. 2011	<ul style="list-style-type: none"> • Android Branch (rsvd)
1.7.44 Release date: March 23, 2012 for Aleos, kernel- 2.6.39 Only	<ul style="list-style-type: none"> • BZ 41783: Add sierra drivers support for kernel 2.6.39
1.7.46 Release date: February 6, 2013 kernel-3.4 Only	<ul style="list-style-type: none"> • BZ 46656: Add sierra drivers support for kernel 3.4+
1.7.48 Release date: July 19, 2013 kernel-3.0 Only	<ul style="list-style-type: none"> • BZ 48099: Sierra Drivers - add PID to support SL501x for kernel 3.0
1.7.50	<ul style="list-style-type: none"> • BZ 48399: No NMEA data on endpoint in DIP

Release date: December 10, 2013 kernel-3.0 Only	mode
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USB NET Driver (aka DirectIP) sierra_net Releases

Sierra_net.c version	Changes
1.10	<ul style="list-style-type: none"> Released for in-house use only. This driver has DHCP support removed temporarily to assist the firmware group with testing
1.12	<ul style="list-style-type: none"> Bugfix. DNS1 is returned twice instead of DNS1 and DNS2
1.14	<ul style="list-style-type: none"> Contains changes in preparation for removing DHCP server code. Suppressed error log message when modem sends 0x64 HIP message, additional changes to the ethernet header
1.16	<ul style="list-style-type: none"> Changes so that the driver compiles on 64-bit platforms
1.18	<ul style="list-style-type: none"> This is a Test version (in-house only) without DHCP component and has been created for kernel-2.6.24 in order to qualify the firmware versions that have DHCP component. This version was used as a basis for sierra_net v.2.0 patch submitted to kernel.org (and in kernel-2.6.34 release, May 2010).
1.20 NOTE: Sierra_net v.2.0 that was submitted to kernel.org is based on this version but does not have DHCP component.	<ul style="list-style-type: none"> Contains DHCP component. Contains updates from kernel.org review to sierra_net v.2.0. ZLP fix: BZ 22095. Fixed the logs during sierra_net_bind(): BZ 21436. Modified reading of fw-attribute in sierra_net_bind() as for kernel-2.6.33 (i.e. eliminated the “empty if clause”). Replaced unsigned int with unsigned long for 64-bit compatibility (where applicable).

sierra_net (2011-07-05)

1.22	<ul style="list-style-type: none"> Added support for USB 308 with ATT VID in products list BZ 24092: Add USB 308 for ATT
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	<p>VID in sierra id_table</p> <ul style="list-style-type: none"> • BZ 27214: Add sierra_net_open and sierra_net_stop interfaces – sync is now issued only on sierra_net_open() instead of from sierra_net_bind; shutdown command is now send from within sierra_net_stop(). • BZ 24391: Decrease Rx Buffer size to 1540 bytes for optimal throughput • Modifications in sierra_net_parse_lsi() for BZ 27020: Fix sierra_net driver response "Link type unsupported: 0xff "
1.24	<ul style="list-style-type: none"> • BZ 29414: Android and Ubuntu(8.04) can't use MC7700 modem send • BZ 29755: Add support for PID 68AA
1.26 Release date: May 11, 2011	<ul style="list-style-type: none"> • BZ 32397: AC313 [VID: 0F3D] [PID: 68AA] is not supported.
3.0 Release date: July 05, 2011	<ul style="list-style-type: none"> • Version set to 3.0 • No DHCP component (removed any code related to DHCP handling in the driver) • Updated copyright notice to 2011 • Selective suspend support • Ported fixes from sierra_net (rx urb size and PID 68AA) <p>Note: By default autosuspend is disabled (i.e. does not set .../power/level to auto automatically) and enables it conditionally on POWER_LEVEL_AUTO definition in the driver. This is exactly the same approach as in sierra driver currently.</p>
3.2 Release date: September 22, 2011	<ul style="list-style-type: none"> • Version set to 3.2 • IPV6 support • BZ 35734 – starting kernel-2.6.38.
3.4 Release date : March 23, 2012 for Aleos, kernel- 2.6.39 only	<ul style="list-style-type: none"> • BZ 41738: Add sierra drivers support for kernel 2.6.39

<p>3.6 Release date : July 19, 2013 for kernel-3.0 only</p>	<ul style="list-style-type: none"><li data-bbox="516 197 1203 254">• BZ 48099: Sierra Drivers - add PID to support SL501x for kernel 3.0
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