Product name	Confidentiality level
E3372h-607	CONFIDENTIAL
Product version	Total 15 pages
V20.0	Total 15 pages

HUAWEI E3372hTCPU-22.333.01.00.00 Release Notes V20.0

Prepared by	E3372h Team	Date	2018/10/10
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Huawei Technologies Co., Ltd.



Revision Record

Date	Revision version	FW-WebUI/HiLink Version	Change Description	Author
2014-9-30	1.0	FW 22.180.03.00.00	First version	E3372h Team
2014-10-11	2.0	FW 22.180.05.00.00	Second version	E3372h Team
2014-11-11	3.0	FW 22.180.09.00.00	Third version	E3372h Team
2014-12-18	4.0	FW 22.200.01.00.00	Fourth version	E3372h Team
2014-12-28	5.0	FW 22.200.03.00.00	Fifth version	E3372h Team
2015-1-22	6.0	FW 22.200.05.00.00	Sixth version	E3372h Team
2015-4-8	7.0	FW 22.200.07.00.00	Seventh version	E3372h Team
2015-4-18	8.0	FW 22.200.09.00.00	Eighth version	E3372h Team
2015-6-19	9.0	FW 22.200.13.00.00	nineth version	E3372h Team
2015-8-29	10.0	FW 22.200.15.00.00	Tenth version	E3372h Team
2015-11-24	11.0	FW 22.315.01.00.00	Eleventh version	E3372h Team
2016-4-13	12.0	FW 22.317.01.00.00	Twelfth version	E3372h Team
2016-10-31	13.0	FW 22.321.01.00.00	Thirteenth version	E3372h Team
2016-12-26	14.0	FW22.323.01.00.00	Fourteenth version	E3372h Team
2017-3-16	15.0	FW22.323.03.00.00	Fifteenth version	E3372h Team
2017-11-02	16.0	FW22.328.01.00.00	Sixteenth version	E3372h Team
2018-1-04	17.0	FW22.329.03.00.00	Seventeenth version	E3372h Team
2018-1-11	18.0	FW22.329.05.00.00	Eighteenth version	E3372h Team
2018-1-19	19.0	FW22.329.07.00.00	Nineteenth version	E3372h Team
2018-10-10	20.0	FW22.333.01.00.00	Twentieth version	E3372h Team

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HUAWEI E3372h TCPU-V200R002B333D01SP00C00 Release Notes V20.0

1 Main Features

The E3372h supports the following standards:

- LTE cat4 data service up to 150Mbit/s (Downlink) and 50Mbit/s(Uplink)
- DC-HSPA+ data service up to 43.2 Mbit/s
- HSPA+ data service up to 21.6 Mbit/s
- HSDPA packet data service of up to 14.4 Mbit/s
- HSUPA data service up to 5.76 Mbit/s
- WCDMA PS domain data service of up to 384 Kbit/s
- Equalizer and receive diversity
- microSD Card Slot (Up to 32G)
- Data and SMS Service
- Plug and play
- Standard USB interface
- CSFB

2 Hardware

2.1 Version Description

Hardware Version:

CL2E3372HM Ver.A (old PA)
CL3E3372HM Ver.A(new PA)
Platform & Chipset:

Balong Hi6921 V7R11M,

2.2 Hardware Specifications

Item	Specifications
Hardware Version	CL2E3372HM Ver.A (old PA)
Haluwale Version	CL3E3372HM Ver.A(new PA)
Technical standard	LTE 3GPP R9HSPA+/UMTS: 3GPP R99/R5/R6/R7/R8GSM/GPRS/EDGE: 3GPP R99
	USB: Type A with standard USB 2.0 High speed interface
	LED: indicating the status of the Data Card
External interfaces	SD card: standard TF card interface
	SIM/USIM card: standard 6-pin SIM card interface
	RF interface: external RF interface



Item	Specifications
Maximum power consumption	≤ 3.5 W
Power supply	5V
Dimensions (D × W × H)	About 88mm(D) × 28mm(W) × 11.5mm (H)
Weight	≤ 25 g
Temperature	 Operating: -10℃ to +40℃ Storage: -20℃ to +70℃
Humidity	5% to 95%
Base Information	Plug and play (PnP)
Dase information	Standard USB 2.0 High Speed interface, auto installation, convenient for use

Note:

3GPP = The 3rd Generation Partnership Project

TS = Technical Specification

LED = Light-Emitting Diode

SIM = Subscriber Identity Module

USIM = UMTS Subscriber Identity Module

2.3 Improvements in the Previous Version

Index	Case ID	Issue Description
Hardwar	e Version	CL2E3372HM Ver.A (old PA) CL3E3372HM Ver.A(new PA)
Previous Version	Hardware	NA
NA	NA	NA

2.4 Known Limitations and Issues

Index	Case ID	Issue Description
NA	NA	NA

3 Firmware

3.1 Version Description

Firmware Version: 22.333.01.00.00

Baseline information Hi6921 V7R11M



3.2 Firmware Specifications

Item	Specifications
NA	NA

3.3 Improvement in the Previous Version

Inde	x Case ID	Issue Description
Firm	ware Version	22.333.01.00.00
Prev Vers		22.329.07.00.00
1	NA	NA

3.4 Known Limitations and Issues

Index	Case ID	Issue Description
1	NA	NA

4 WebUI/HiLink

4.1 Version Description

WebUI/HiLink Version: 17.100.20.03.03

4.2 WebUI/HiLink Specifications

Item	Specifications
NA	NA

4.3 Improvement in the Previous Version

Index	Case ID	Issue Description
WebUI	Version	17.100.20.03.03
Previou Version		17.100.20.00.03
1	NA	NA

4.4 Known Limitations and Issues

Index	Case ID	Issue Description
1	NA	NA



5 Software Vulnerabilities Fixes

[Software Vulnerabilities include Android Vulnerability, Third-party software Vulnerability, and Huawei Vulnerability]

[Android Vulnerability is from Google, which reported publicly.]

[Third-party software is a type of computer software that is sold together with or provided for free in Huawei products or solutions with the ownership of intellectual property rights (IPR) held by the original contributors. Third-party software can be but is not limited to: Purchased software, Software that is built in or attached to purchased hardware, Software in products of the original equipment manufacturer (OEM) or original design manufacturer (ODM), Software that is developed with technical contribution from partners (ownership of IPR all or partially held by the partners), Software that is legally obtained free of charge. The data of third-party software vulnerabilities fixes can be exported from PDM.

If the table is excessively long, you can divide it into multiple ones by product version, or deliver it in an excel file with patch release notes and provide reference information in this section.]

[Huawei Vulnerability is Huawei own software' Vulnerability, which found by outside]

Vulnerabilities information is available through CVE IDs in NVD (National Vulnerability Database) website: http://web.nvd.nist.gov/view/vuln/search

Software/M odule name	Version	CVE ID	Vulnerability Description	Solution
Openssl	1.0.1p	CVE-2016-7056	An information disclosure vulnerability in OpenSSL & BoringSSL could enable a remote attacker to gain access to sensitive information. This issue is rated as Moderate due to details specific to the vulnerability.	Google 2017 5#
linux_kernel	3.4.5	CVE-2017-7184	The xfrm_replay_verify_len function in net/xfrm/xfrm_user.c in the Linux kernel through 4.10.6 does not validate certain size data after an XFRM_MSG_NEWAE update, which allows local users to obtain root privileges or cause a denial of service (heap-based out-of-bounds access) by leveraging the CAP_NET_ADMIN capability, as demonstrated during a Pwn2Own competition at CanSecWest 2017 for the Ubuntu 16.10 linux-image-* package 4.8.0.41.52.	Google 2017 5# https://github.com/ torvalds/linux/com mit/f843ee6dd019 bcece3e74e76ad 9df0155655d0df



			T	
linux_kernel	3.4.5	CVE-2012-2663	extensions/libxt_tcp.c in iptables through 1.4.21 does not match TCP SYN+FIN packets insyn rules, which might allow remote attackers to bypass intended firewall restrictions via crafted packets. NOTE: the CVE-2012-6638 fix makes this issue less relevant.	http://www.spinics.n et/lists/netfilter-devel /msg21248.html
linux_kernel	3.4.5	CVE-2017-8890	The inet_csk_clone_lock function in net/ipv4/inet_connection _sock.c in the Linux kernel through 4.10.15 allows attackers to cause a denial of service (double free) or possibly have unspecified other impact by leveraging use of the accept system call.	http://git.kernel.or g/cgit/linux/kernel/ git/torvalds/linux.g it/commit/?id=657 831ffc38e30092a 2d5f03d385d710e b88b09a
linux_kernel	3.4.5	CVE-2017-9074	The IPv6 fragmentation implementation in the Linux kernel through 4.11.1 does not consider that the nexthdr field may be associated with an invalid option, which allows local users to cause a denial of service (out-of-bounds read and BUG) or possibly have unspecified other impact via crafted socket and send system calls.	http://git.kernel.or g/cgit/linux/kernel/ git/torvalds/linux.g it/commit/?id=242 3496af35d94a871 56b063ea5cedffc 10a70a1
linux_kernel	3.4.5	CVE-2017-7487	The ipxitf_ioctl function in net/ipx/af_ipx.c in the Linux kernel through 4.11.1 mishandles reference counts, which allows local users to cause a denial of service (use-after-free) or possibly have unspecified other impact via a failed SIOCGIFADDR ioctl call for an IPX interface.	http://git.kernel.or g/cgit/linux/kernel/ git/torvalds/linux.g it/commit/?id=ee0 d8d8482345ff97a 75a7d747efc309f 13b0d80
linux_kernel	3.4.5	CVE-2017-9242	Theip6_append_data function in net/ipv6/ip6_output.c in the Linux kernel through 4.11.3 is too late in checking whether an	http://git.kernel.or g/cgit/linux/kernel/ git/torvalds/linux.g it/commit/?id=232 cd35d0804cc241e b887bb8d4d9b3b



			overwrite of an skb data	9881c64a
			structure may occur,	00010010
			which allows local users	
			to cause a denial of	
			service (system crash)	
limana kamad	2.4.5	CVE-2016-4913	via crafted system calls.	http://wit.lcompol.or
linux_kernel	3.4.5	CVE-2016-4913	The get_rock_ridge_filename	http://git.kernel.or g/cgit/linux/kernel/
			function in fs/isofs/rock.c	git/torvalds/linux.g
			in the Linux kernel	it/commit/?id=99d
			before 4.5.5 mishandles	825822eade8d82
			NM (aka alternate name)	7a1817357cbf3f8
			entries containing \0	89a552d6
			characters, which allows local users to obtain	
			sensitive information	
			from kernel memory or	
			possibly have	
			unspecified other impact	
			via a crafted isofs	
		<u> </u>	filesystem.	
linux_kernel	3.4.5	CVE-2017-7472	The KEYS subsystem in the Linux kernel before	http://git.kernel.or
			4.10.13 allows local	g/cgit/linux/kernel/ git/torvalds/linux.g
			users to cause a denial	it/commit/?id=c9f8
			of service (memory	38d104fed6f2f61d
			consumption) via a	68164712e3204bf
			series of	5271b
			KEY_REQKEY_DEFL_T	
			HREAD_KEYRING keyctl_set_reqkey_keyri	
			ng calls.	
linux_kernel	3.4.5	CVE-2016-7117	Use-after-free	https://git.kernel.o
			vulnerability in the	rg/pub/scm/linux/k
			sys_recvmmsg	ernel/git/stable/lin
			function in net/socket.c	ux-stable.git/com
			before 4.5.2 allows	mit/?id=34b88a68 f26a75e4fded796f
			remote attackers to	1a49c40f82234b7
			execute arbitrary code	d
			via vectors involving a	
			recvmmsg system call	
			that is mishandled during	
linux_kernel	3.4.5	CVE-2015-8966	error processing. arch/arm/kernel/sys_oab	https://git.kernel.o
IIIIUA_REITIEI	J. 4 .J	5 v L-2015-0900	i-compat.c in the Linux	rg/pub/scm/linux/k
			kernel before 4.4 allows	ernel/git/torvalds/li
			local users to gain	nux.git/commit/
			privileges via a crafted	
			(1) F_OFD_GETLK, (2)	
			F_OFD_SETLK, or (3) F_OFD_SETLKW	
			command in an fcntl64	
			system call.	
L			2,010 0	



linux Izamal	3.4.5	CVE-2017-9075	The	https://git.lzamal.ams/
linux_kernel	3.4.3	CVE-2017-9075	sctp_v6_create_accept_sk	https://git.kernel.org/ pub/scm/linux/kernel
			function in net/sctp/ipv6.c in	/git/torvalds/linux.git
			the Linux kernel through	/commit/?id=fdcee2c
			4.11.1 mishandles	bb8438702ea1b328f
			inheritance, which allows	b6e0ac5e9a40c7f8
			local users to cause a denial	
			of service or possibly have	
			unspecified other impact via	
			crafted system calls, a	
			related issue to CVE-2017-8890.	
linux_kernel	3.4.5	CVE-2017-9076	The	https://git.kernel.org/
IIIux_kerner	3.4.3	CVE-2017-9070	dccp_v6_request_recv_sock	pub/scm/linux/kernel
			function in net/dccp/ipv6.c	/git/torvalds/linux.git
			in the Linux kernel through	/commit/?id=83eadd
			4.11.1 mishandles	ab4378db256d00d29
			inheritance, which allows	5bda6ca997cd13a52
			local users to cause a denial	
			of service or possibly have	
			unspecified other impact via	
			crafted system calls, a	
			related issue to CVE-2017-8890.	
linux_kernel	3.4.5	CVE-2017-9077	The tcp_v6_syn_recv_sock	https://git.kernel.org/
mux_kerner	3.1.5	CVE 2017 7077	function in	pub/scm/linux/kernel
			net/ipv6/tcp_ipv6.c in the	/git/torvalds/linux.git
			Linux kernel through 4.11.1	/commit/?id=83eadd
			mishandles inheritance,	ab4378db256d00d29
			which allows local users to	5bda6ca997cd13a52
			cause a denial of service or	
			possibly have unspecified	
			other impact via crafted system calls, a related issue	
			to CVE-2017-8890.	
linux_kernel	3.4.5	CVE-2016-9843	The crc32_big function in	https://github.com/m
			crc32.c in zlib 1.2.8 might	adler/zlib/commit/d1
			allow context-dependent	d577490c15a0c6862
			attackers to have unspecified	473d7576352a9f18ef
			impact via vectors involving	811
linum learnes	2 1 5	CVE 2015 5264	big-endian CRC calculation.	https://cit.lrams=1 === /
linux_kernel	3.4.5	CVE-2015-5364	The (1) udp_recvmsg and (2) udpv6_recvmsg	https://git.kernel.org/ pub/scm/linux/kernel
			functions in the Linux kernel	/git/torvalds/linux.git
			before 4.0.6 do not properly	/commit/?id=beb39d
			consider yielding a	b59d14990e401e235
			processor, which allows	faf66a6b9b31240b0
			remote attackers to cause a	
			denial of service (system	
			hang) via incorrect	
			checksums within a UDP	
linux_kernel	3.4.5	CVE-2016-9555	packet flood. The sctp_sf_ootb function in	https://git.kernel.org/
IIIIUA_KCIIICI	ی.⊤.ی	3.2.2010.0000	net/sctp/sm_statefuns.c in	pub/scm/linux/kernel
			the Linux kernel before 4.8.8	/git/torvalds/linux.git
			lacks chunk-length checking	/commit/?id=bf911e
			for the first chunk, which	985d6bbaa328c20c3
			allows remote attackers to	e05f4eb03de11fdd6
			cause a denial of service	
			(out-of-bounds slab access)	



			or possibly have unspecified other impact via crafted SCTP data.	
linux_kernel	3.4.5	CVE-2017-10661	Race condition in	https://git.kernel.org/
			fs/timerfd.c in the Linux kernel before 4.10.15 allows local users to gain privileges or cause a denial of service (list corruption or use-after-free) via simultaneous file-descriptor operations that leverage improper might_cancel queueing.	pub/scm/linux/kernel /git/torvalds/linux.git /commit/?id=1e38da 300e1e395a15048b0 af1e5305bd91402f6
linux_kernel	3.4.5	CVE-2017-0427	An elevation of privilege vulnerability in the kernel file system could enable a local malicious application to execute arbitrary code within the context of the kernel. This issue is rated as Critical due to the possibility of a local permanent device compromise, which may require reflashing the operating system to repair the device. Product: Android. Versions: Kernel-3.10, Kernel-3.18. Android ID: A-31495866.	Google 2017 11# patch
linux_kernel	3.6.5	CVE-2017-17712	The raw_sendmsg() function in net/ipv4/raw.c in the Linux kernel through 4.14.6 has a race condition in inet->hdrincl that leads to uninitialized stack pointer usage; this allows a local user to execute code and gain privileges.	https://git.kernel.org/ pub/scm/linux/kernel /git/torvalds/linux.git /commit/?id=8f659a 03a0ba9289b9aeb9b 4470e6fb263d6f483
linux_kernel	3.6.5	CVE-2017-16535	The usb_get_bos_descriptor function in drivers/usb/core/config.c in the Linux kernel before 4.13.10 allows local users to cause a denial of service (out-of-bounds read and system crash) or possibly have unspecified other impact via a crafted USB device.	https://github.com/to rvalds/linux/commit/ 1c0edc3633b56000e 18d82fc241e3995ca1 8a69e
linux_kernel	3.6.5	CVE-2017-16531	drivers/usb/core/config.c in the Linux kernel before 4.13.6 allows local users to cause a denial of service (out-of-bounds read and system crash) or possibly have unspecified other impact via a crafted USB device, related to the	https://github.com/to rvalds/linux/commit/ bd7a3fe770ebd8391 d1c7d072ff88e9e76d 063eb



			T	
			USB_DT_INTERFACE_AS	
			SOCIATION descriptor.	
linux_kernel	3.6.5	CVE-2017-1000111	Linux kernel: heap out-of-bounds in AF_PACKET sockets. This new issue is analogous to previously disclosed CVE-2016-8655. In both cases, a socket option that changes socket state may race with safety checks in packet_set_ring. Previously with PACKET_VERSION. This time with PACKET_RESERVE. The solution is similar: lock the socket for the update. This issue may be exploitable, we did not investigate further. As this issue affects PF_PACKET sockets, it requires CAP_NET_RAW in the process namespace. But note that with user namespaces enabled, any process can create a	https://git.kernel.org/ pub/scm/linux/kernel /git/torvalds/linux.git /commit/?id=c27927 e372f0785f3303e8fa d94b85945e2c97b7
			namespace in which it has	
linux_kernel	3.6.5	CVE-2016-10088	CAP_NET_RAW. Both damn things interpret userland pointers embedded into the payload; worse, they are actually traversing those. Leaving aside the bad API design, this is very much _not_ safe to call with KERNEL_DS. Bail out early if that happens.	https://git.kernel.org/ pub/scm/linux/kernel /git/torvalds/linux.git /commit/?id=128394 eff343fc6d2f32172f0 3e24829539c5835
linux_kernel	3.6.5	CVE-2014-2523	net/netfilter/nf_conntrack_pr oto_dccp.c in the Linux kernel through 3.13.6 uses a DCCP header pointer incorrectly, which allows remote attackers to cause a denial of service (system crash) or possibly execute arbitrary code via a DCCP packet that triggers a call to the (1) dccp_new, (2) dccp_packet, or (3) dccp_error function.	https://git.kernel.org/ pub/scm/linux/kernel /git/torvalds/linux.git /commit/?id=b22f51 26a24b3b2f15448c3f 2a254fc10cbc2b92



1: 1 . 1	275	CVE 2047 47740	Th	1.44
linux_kernel	3.6.5	CVE-2017-17712	The raw_sendmsg() function in net/ipv4/raw.c in the Linux kernel through 4.14.6 has a race condition in inet->hdrincl that leads to uninitialized stack pointer usage; this allows a local user to execute code and	https://git.kernel.org/ pub/scm/linux/kernel /git/torvalds/linux.git /commit/?id=8f659a 03a0ba9289b9aeb9b 4470e6fb263d6f483
			gain privileges.	
linux_kernel	3.4.5	CVE-2015-8966	arch/arm/kernel/sys_oabi-co mpat.c in the Linux kernel before 4.4 allows local users to gain privileges via a crafted (1) F_OFD_GETLK, (2) F_OFD_SETLK, or (3) F_OFD_SETLKW command in an fcntl64 system call.	https://git.kernel.org/ pub/scm/linux/kernel /git/torvalds/linux.git /commit/
linux_kernel	3.4.5	CVE-2016-7117	Use-after-free vulnerability in thesys_recvmmsg function in net/socket.c in the Linux kernel before 4.5.2 allows remote attackers to execute arbitrary code via vectors involving a recvmmsg system call that is mishandled during error processing.	https://git.kernel.org/ pub/scm/linux/kernel /git/stable/linux-stabl e.git/commit/?id=34 b88a68f26a75e4fded 796f1a49c40f82234b 7d
linux_kernel	3.4.5	CVE-2017-17806	The HMAC implementation (crypto/hmac.c) in the Linux kernel before 4.14.8 does not validate that the underlying cryptographic hash algorithm is unkeyed, allowing a local attacker able to use the AF_ALG-based hash interface (CONFIG_CRYPTO_USER_API_HASH) and the SHA-3 hash algorithm (CONFIG_CRYPTO_SHA3) to cause a kernel stack buffer overflow by executing a crafted sequence of system calls that encounter a missing SHA-3 initialization.	http://git.kernel.org/c git/linux/kernel/git/to rvalds/linux.git/com mit/?id=af3ff8045bb f3e32f1a448542e73a bb4c8ceb6f1
linux_kernel	3.4.5	CVE-2017-17558	The usb_destroy_configuration function in drivers/usb/core/config.c in the USB core subsystem in the Linux kernel through 4.14.5 does not consider the maximum number of configurations and interfaces before attempting to release resources, which allows local users to cause a denial	https://www.spinics. net/lists/linux-usb/ms g163644.html



			of service (out-of-bounds write access) or possibly have unspecified other impact via a crafted USB device.	
linux_kernel	3.4.5	CVE-2017-13246	In csum_partial_copy_fromiov ecend of iovec.c, an offset of zero can be specified even when there are no iovs on the stack, causing an out of bounds read from a kernel stack buffer. This could lead to information disclosure.	Google 2018 2# patch
linux_kernel	3.6.5	CVE-2018-6927	The futex_requeue function in kernel/futex.c in the Linux kernel before 4.14.15 might allow attackers to cause a denial of service (integer overflow) or possibly have unspecified other impact by triggering a negative wake or requeue value.	http://git.kernel.org/c git/linux/kernel/git/to rvalds/linux.git/com mit/?id=fbe0e839d1e 22d88810f3ee3e2f14 79be4c0aa4a
linux_kernel	3.4.5	CVE-2018-13053	The alarm_timer_nsleep function in kernel/time/alarmtimer.c in the Linux kernel through 4.17.3 has an integer overflow via a large relative timeout because ktime_add_safe is not used.	https://git.kernel.org/ pub/scm/linux/kernel /git/tip/tip.git/commi t/?id=5f936e19cc0ef 97dbe3a56e9498922 ad5ba1edef
linux_kernel	3.4.5	CVE-2018-1068	A flaw was found in the Linux 4.x kernel's implementation of 32-bit syscall interface for bridging. This allowed a privileged user to arbitrarily write to a limited range of kernel memory.	https://git.kernel.org/ pub/scm/linux/kernel /git/torvalds/linux.git /commit/?id=b71812 168571fa55e44cdd0 254471331b9c4c4c6

6 Accessory Product from other Vendor

Version Description

Accessory Product Version:



- 6.1 Known Limitations and Issues
- 7 Others
- 8 Reference