

Zweite Generation der Ginzinger Embedded Linux Distribution. Basierend auf Mainline Linux Kernel 5.4. und 5.10 (i.MX8M)

1 Hardware Unterstützung

- NPTL (Native POSIX Thread Library)
- Compiler Optimierung: O2
- Linker Optimierung: hash=both, O1
- Konsole: automatisch (kernel argumente)

i.MX28:

- ARMv5TEJ
- EABI (embedded-application binary interface)
- softfloat

i.MX53:

- ARMv7-A
- EABI (embedded-application binary interface)
- hardfloat: vfpv3/neon (FPU Register)

i.MX6:

- ARMv7-A
- EABI (embedded-application binary interface)
- hardfloat: vfpv3/neon-fp16 (FPU Register)

i.MX6 UltraLite/ULL:

- ARMv7-VE
- EABI (embedded-application binary interface)
- hardfloat: vfpv4/neon (FPU Register)

i.MX8M:

- ARMv8-A
- AArch64 ABI

i586:

- x86 i586

2 Qt Creator

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- Qt*

- Kompatibel: Debian: 11, 12, Ubuntu: 24.04 (LTS), 24.10 (latest)

3 GINZINGER UPDATE MECHANISMUS

- ge_update_*
- Einfache Erzeugung von Update-Images
- Automatische Erkennung der System-Konfiguration (system-type, ...)
- Patch- oder Full-Updates für Patch-Versions-Nummer
- Konfigurierbare Update-Regeln (down-date, re-date, up-date)

- Zusätzliche Checks
- Automatische Display-Rotation
- Unterstützung für Update von MMC/SD-Karten
- Unterstützung Kernel-Parameter für rootfs-, data- und flag-partition
- Unterstützung rootfs-Filesysteme: squashfs, ubifs, jffs2 auf ubi

- Unterstützung data-Filesysteme: jffs2 und ubifs
- Unterstützung für Update vom internen Flash (Daten Partition)
- Verwendung von squashfs statt cramfs für Update Images auf i.MX6, i.MX6UL und i.MX8
- Unterstützung für Headless Devices (ohne Framebuffer)

4 KERNEL SOURCE

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5 PROJECT TEMPLATES

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| <ul style="list-style-type: none"> • EMPTY ⁶ • c ⁶ • cpp ⁶ | <ul style="list-style-type: none"> • nodejs ⁶ • qtcore ⁶ • qtgui ⁶ | <ul style="list-style-type: none"> • qtquick ⁶ • rust ⁶ • tflite-label-image ⁶ | <ul style="list-style-type: none"> • tflite-python-label-wav ⁶ |
|--|--|--|--|

6 SOFTWARE PAKETE FÜR GELIN-PROJEKTE

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|---|---|---|---|
| <ul style="list-style-type: none"> • audio_base ⁶ • audio_tools ⁶ • busybox ⁶ • ca_certs ⁶ • can_utils ⁶ • datafs_async ⁶ • datafs_ext4_data_mode_orde ⁶ • display_eglfskms ⁶ • dosfstools ⁶ • e2fsprogs ⁶ • firmware_pan9019 ⁶ • firmware_pan9028 ⁶ • firmware_rtl8192cu ⁶ • firmware_tiwli18xx ⁶ • fonts_X11 ⁶ • fonts_base ⁶ • fonts_dejavu ⁶ • fonts_liberation ⁶ • gdbserver ⁶ • ge_ethmgr ⁶ • ge_update ⁶ | <ul style="list-style-type: none"> • ge_wlanmgr ⁶ • gpg2 ⁶ • gpio_tools ⁶ • gstreamer ⁶ • gstreamer_v4l2 ⁶ • hotplugd ⁶ • i2c_tools ⁶ • libgecan_tools ⁶ • libopenssl ⁶ • linrpcd2 ⁶ • mariadb ⁶ • mtdutils ⁶ • mtdutils_test ⁶ • nodejs ⁶ • packages_common_helper.sh ⁶ • python3 ⁶ • qt_common ⁶ • qt_display_auto ⁶ • qt_display_common ⁶ • qt_display_eglfskms ⁶ • qt_display_linuxfb ⁶ | <ul style="list-style-type: none"> • qt_misc ⁶ • qt_plugins_3d ⁶ • qt_plugins_bearer ⁶ • qt_plugins_canbus ⁶ • qt_plugins_imageformats ⁶ • qt_plugins_input_misc ⁶ • qt_plugins_location ⁶ • qt_plugins_multimedia ⁶ • qt_plugins_qmldebug ⁶ • qt_plugins_sensors ⁶ • qt_plugins_sql ⁶ • qt_plugins_webview ⁶ • qt_qmlmodules_3d ⁶ • qt_qmlmodules_bluetooth ⁶ • qt_qmlmodules_charts ⁶ • qt_qmlmodules_common ⁶ • qt_qmlmodules_graphicaleffec ⁶ • qt_qmlmodules_location ⁶ • qt_qmlmodules_multimedia ⁶ • qt_qmlmodules_nfc ⁶ • qt_qmlmodules_qml ⁶ | <ul style="list-style-type: none"> • qt_qmlmodules_qt_labs ⁶ • qt_qmlmodules_quick2 ⁶ • qt_qmlmodules_sensors ⁶ • qt_qmlmodules_test ⁶ • qt_qmlmodules_webchannel ⁶ • qt_qmlmodules_webengine ⁶ • qt_qmlmodules_webkit ⁶ • qt_qmlmodules_websockets ⁶ • qt_qmlmodules_webview ⁶ • qt_quick ⁶ • qt_touchscreen ⁶ • qt_webengine ⁶ • rng ⁶ • rootfs_base ⁶ • splashscreen ⁶ • splashscreen_logo ⁶ • ssh_client ⁶ • ssh_server ⁶ • telnet_server ⁶ • tensorflow_lite ⁶ • tensorflow_lite_cpu ⁶ |
|---|---|---|---|

- terminfo ⁶
- tpmtools ⁶
- tslib ⁶

- tslib_tools ⁶
- tslib_uinput ⁶
- ubiutils ⁶

- valgrind_callgrind ⁶
- valgrind_common ⁶
- valgrind_full ⁶

- valgrind_memcheck ⁶
- wlan ⁶
- zoneinfo ⁶

7 QUELLEN PAKETE

7.1 TOOLCHAIN

- binutils-*
- gcc-*
- gettext-tiny-*

- glibc-*
- gmp-*
- isl-*

- linux-
- mpc-*
- mpfr-*

- ncurses-*

7.2 BUILDROOT

- acl-2.3.2 ⁶
- alsa-lib-1.2.13 ⁶
- alsa-utils-1.2.13 ⁶
- at-3.2.5 ⁶
- attr-2.5.2 ⁶
- aubio-152d6819b360c2e7b379ee3f ⁶
- aumix-2.9.1 ⁶
- autoconf-2.72 ⁶
- autoconf-archive-2023.02.20 ⁶
- automake-1.16.5 ⁶
- avahi-0.8 ⁶
- bayer2rgb-neon-bc950b3398ba034 ⁶
- berkeleydb-5.3.28 ⁶
- binutils-2.43.1 ⁶
- bison-3.8.2 ⁶
- bluez5_utils-5.79 ⁶
- bluez5_utils-headers-5.79 ⁶
- boost-1.83.0 ⁶

- brotli-1.1.0 ⁶
- bubblewrap-0.11.0 ⁶
- busybox-1.37.0 ⁶
- bzip2-1.0.8 ⁶
- c-ares-1.34.2 ⁶
- ca-certificates-20230311 ⁶
- cairo-1.18.2 ⁶
- can-utils-2023.03 ⁶
- cifs-utils-7.1 ⁶
- cmake-3.31.5 ⁶
- cpuinfo-8a1772a0c5c447df2d18ed ⁶
- cramfs-2.1 ⁶
- crda-4.15 ⁶
- cryptsetup-2.7.5 ⁶
- cups-2.4.11 ⁶
- cups-filters-1.28.17 ⁶
- cyrus-sasl-2.1.28 ⁶
- dbus-1.14.10 ⁶
- dbus-glib-0.112 ⁶

- dbus-triggerd-ba3dbec805cb707c ⁶
- dejavu-2.37 ⁶
- dhrystone-2 ⁶
- dnsmasq-2.90 ⁶
- dosfstools-4.2 ⁶
- dtc-1.7.2 ⁶
- e2fsprogs-1.47.2 ⁶
- eigen-3.4.0 ⁶
- elfutils-0.192 ⁶
- ethtool-6.11 ⁶
- evemu-2.7.0 ⁶
- evtest-1.35 ⁶
- expat-2.7.0 ⁶
- faad2-2.11.1 ⁶
- fakeroot-1.36 ⁶
- farmhash-0d859a811870d10f53a59 ⁶
- fbdump-0.4.2 ⁶
- fbggrab-1.5 ⁶

- fcgiwrap-99c942c90063c73734e56 ⁶
- ffmpeg-6.1.2 ⁶
- fft2d-2006.12.28 ⁶
- fftw-double-3.3.10 ⁶
- firmware-imx-8.24 ⁶
- flac-1.4.3 ⁶
- flatbuffers-2.0.0 ⁶
- flex-2.6.4 ⁶
- fmt-11.0.2 ⁶
- fontconfig-2.16.0 ⁶
- freetype-2.13.3 ⁶
- gawk-5.3.1 ⁶
- gcc-final-13.3.0 ⁶
- gcc-initial-13.3.0 ⁶
- gdb-15.1 ⁶
- ge-mx+app-15949 ⁶
- ge-tensorflow-lite-v2.8.0 ⁶
- gemmlowp-16e8662c34917be006511 ⁶

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|--|--|--|---|
| <ul style="list-style-type: none"> • genext2fs-1.5.0 ⁶ • gengetopt-2.23 ⁶ • gettext-tiny-0.3.2 ⁶ • ghostscript-10.04.0 ⁶ • ghostscript-fonts-8.11 ⁶ • glib-networking-2.76.0 ⁶ • glibc-2.41-5-gcb7f20653724029b ⁶ • glibmm-2.76.0 ⁶ • glmark2-2023.01 ⁶ • gmp-6.3.0 ⁶ • gnupg-2.4.7 ⁶ • gnutls-3.8.9 ⁶ • gperf-3.1 ⁶ • gst1-libav-1.22.12 ⁶ • gst1-plugins-bad-1.22.12 ⁶ • gst1-plugins-base-1.22.12 ⁶ • gst1-plugins-bayer2rgb-neon-b6 ⁶ • gst1-plugins-good-1.22.12 ⁶ • gst1-plugins-ugly-1.22.12 ⁶ • gstreamer1-1.22.12 ⁶ • gutenprint-5.3.5 ⁶ • gzip-1.13 ⁶ • harfbuzz-10.3.0 ⁶ • hostapd-2.11 ⁶ • hotplugd-14993 ⁶ • htop-3.3.0 ⁶ • i2c-tools-4.4 ⁶ • icu-73-2 ⁶ • ifplugd-0.28 ⁶ • imagemagick-7.1.1-43 ⁶ • imx-gpu-viv-6.4.3.p2.4-aarch64 ⁶ | <ul style="list-style-type: none"> • imx-mkimage-lf-6.6.23-2.0.0 ⁶ • inotify-tools-3.20.2.2 ⁶ • input-event-daemon-0.1.3 ⁶ • intltool-0.51.0 ⁶ • iperf3-3.18 ⁶ • iproute2-6.13.0 ⁶ • iptables-1.8.11 ⁶ • isl-0.26 ⁶ • iw-6.9 ⁶ • jasper-2.0.33 ⁶ • jbig2dec-0.20 ⁶ • jimtcl-0.81 ⁶ • jitterentropy-library-3.6.1 ⁶ • jpeg-turbo-2.1.5 ⁶ • jq-1.7.1 ⁶ • json-c-0.18 ⁶ • kbd-2.6.4 ⁶ • kmod-33 ⁶ • lame-3.100 ⁶ • lapack-3.10.1 ⁶ • lcms2-2.16 ⁶ • ldd-crostool-ng-1.24.0 ⁶ • leveldb-1.23 ⁶ • libabseil-cpp-20250127.0 ⁶ • libaio-0.3.113 ⁶ • libao-1.2.0 ⁶ • libargon2-20190702 ⁶ • libassuan-2.5.7 ⁶ • libatomic_ops-7.8.2 ⁶ • libbacktrace-9b7f216e867916594 ⁶ • libbsd-0.11.7 ⁶ | <ul style="list-style-type: none"> • libcap-2.73 ⁶ • libcap-ng-0.8.5 ⁶ • libcurl-8.12.1 ⁶ • libdaemon-0.14 ⁶ • libdrm-2.4.124 ⁶ • libepoxy-1.5.10 ⁶ • liberation-2.1.5 ⁶ • libestr-0.1.11 ⁶ • libevdev-1.13.1 ⁶ • libevent-2.1.12 ⁶ • libfastjson-0.99.9.1 ⁶ • libfcgi-2.4.2 ⁶ • libffi-3.4.6 ⁶ • libftdi-0.20 ⁶ • libgcrypt-1.11.0 ⁶ • libgecan-1.529 ⁶ • libglib2-2.82.5 ⁶ • libgpg-error-1.51 ⁶ • libgpiod-1.6.5 ⁶ • libhttpparser-2.9.4 ⁶ • libical-1.0.1 ⁶ • libjpeg-9f ⁶ • libkrb5-1.21.3 ⁶ • libksba-1.6.7 ⁶ • liblog4c-localtime-1.0 ⁶ • liblogging-1.0.6 ⁶ • libmd-1.1.0 ⁶ • libmicrohttpd-1.0.1 ⁶ • libmms-0.6.4 ⁶ • libmnl-1.0.5 ⁶ • libmodbus-3.1.11 ⁶ | <ul style="list-style-type: none"> • libmpeg2-0.5.1 ⁶ • libnftnl-1.2.7 ⁶ • libnl-3.11.0 ⁶ • libnptl-1.8 ⁶ • libnspr-4.36 ⁶ • libnss-3.108 ⁶ • libogg-1.3.5 ⁶ • libopenh264-2.4.1 ⁶ • libopenssl-3.4.1 ⁶ • libpcap-1.10.5 ⁶ • libpng-1.6.46 ⁶ • libpsl-0.21.5 ⁶ • libpthread-stubs-0.5 ⁶ • libqrencode-4.1.1 ⁶ • libseccomp-2.5.5 ⁶ • libsigc-3.4.0 ⁶ • libsndfile-1.2.2 ⁶ • libsocketcan-0.0.12 ⁶ • libsoup-2.74.3 ⁶ • libsoup3-3.6.1 ⁶ • libssh2-1.11.0 ⁶ • libsysfs-2.1.1 ⁶ • libtalloc-2.4.2 ⁶ • libtasn1-4.20.0 ⁶ • libtheora-1.1.1 ⁶ • libtirpc-1.3.6 ⁶ • libtool-2.4.6 ⁶ • libtraceevent-1.8.4 ⁶ • libtracefs-1.8.1 ⁶ • libuboot-ge-env-1.5951 ⁶ • libunistring-1.3 ⁶ |
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- liburcu-0.14.0 ⁶
- liburiparser-0.9.8 ⁶
- libusb-1.0.27 ⁶
- libusb-compat-0.1.8 ⁶
- libuv-1.50.0 ⁶
- libv4l-1.28.1 ⁶
- libvncserver-0.9.14 ⁶
- libvorbis-1.3.7 ⁶
- libvpx-1.15.0 ⁶
- libwebsockets-4.3.3 ⁶
- libwpe-1.16.2 ⁶
- libxcb-1.15 ⁶
- libxcrypt-4.4.38 ⁶
- libxkbcommon-1.7.0 ⁶
- libxml-parser-perl-2.47 ⁶
- libxml2-2.13.6 ⁶
- libxslt-1.1.42 ⁶
- libyaml-0.2.5 ⁶
- libzip-1.10.1 ⁶
- libzlib-1.3.1 ⁶
- linrpcd-2.16699 ⁶
- linux-headers-5.10.235 ⁶
- linux-zigbee-0.3.1 ⁶
- linuxconsoletools-1.8.1 ⁶
- live555-2021.05.03 ⁶
- log4cplus-2.1.0 ⁶
- logrotate-3.22.0 ⁶
- lrzsz-0.12.21rc ⁶
- ltrace-82c66409c7a93ca6ad2e456 ⁶
- lttng-libust-2.13.1 ⁶
- lvm2-2.03.27 ⁶

- lz4-1.10.0 ⁶
- lzip-1.25 ⁶
- lzo-2.10 ⁶
- lzop-1.04 ⁶
- m4-1.4.19 ⁶
- mariadb-10.11.6 ⁶
- mdadm-4.3 ⁶
- memstat-1.0 ⁶
- memtester-4.5.1 ⁶
- meson-1.7.0 ⁶
- minizip-4.0.3 ⁶
- mmc-utils-523d8f3cfb219d800f45 ⁶
- mosquito-2.0.20 ⁶
- mpc-1.3.1 ⁶
- mpfr-4.1.1 ⁶
- mpg123-1.32.8 ⁶
- mtd-2.2.1 ⁶
- mtddev-1.1.6 ⁶
- nano-8.2 ⁶
- ncurses-6.4-20230603 ⁶
- neard-0.19 ⁶
- neon-2-sse-097a5ecacd527d5b5c3 ⁶
- netcat-openbsd-1.218 ⁶
- netsnmp-5.9.3 ⁶
- nettle-3.10.1 ⁶
- nfs-utils-2.8.2 ⁶
- nftables-1.1.0 ⁶
- nftables-python-1.1.0 ⁶
- nghttp2-1.64.0 ⁶
- nginx-1.26.3 ⁶
- ninja-1.11.1.g95dee.kitware.jo ⁶

- nodejs-bin-22.13.1 ⁶
- nodejs-src-22.13.1 ⁶
- ntp-4.2.8p18 ⁶
- numactl-2.0.19 ⁶
- oniguruma-6.9.9 ⁶
- openblas-0.3.29 ⁶
- opencv4-4.10.0 ⁶
- opencv4-contrib-4.10.0 ⁶
- openjpeg-2.5.3 ⁶
- openldap-2.5.19 ⁶
- openobex-1.7.2 ⁶
- openssh-9.9p2 ⁶
- openvpn-2.6.13 ⁶
- oprofile-1.4.0 ⁶
- opus-1.4 ⁶
- p11-kit-0.25.3 ⁶
- patchelf-0.13 ⁶
- pcre-8.45 ⁶
- pcre2-10.44 ⁶
- php-8.3.19 ⁶
- pixman-0.44.2 ⁶
- pkgconf-2.3.0 ⁶
- popt-1.19 ⁶
- pppd-2.5.2 ⁶
- pptp-linux-1.10.0 ⁶
- protobuf-29.3 ⁶
- pwgen-2.08 ⁶
- python-attrs-25.1.0 ⁶
- python-calver-2022.6.26 ⁶
- python-cython-3.0.11 ⁶
- python-dateutil-2.9.0 ⁶

- python-distlib-0.3.9 ⁶
- python-flit-core-3.10.1 ⁶
- python-hatch-fancy-pypi-readme ⁶
- python-hatch-vcs-0.4.0 ⁶
- python-hatchling-1.27.0 ⁶
- python-iniconfig-2.0.0 ⁶
- python-installer-0.7.0 ⁶
- python-numpy-1.26.4 ⁶
- python-packaging-24.2 ⁶
- python-paths-spec-0.12.1 ⁶
- python-pillow-11.1.0 ⁶
- python-pip-25.0 ⁶
- python-pluggy-1.5.0 ⁶
- python-protobuf-29.3 ⁶
- python-py-1.11.0 ⁶
- python-pybind-2.13.6 ⁶
- python-pycryptodomex-3.21.0 ⁶
- python-pypa-build-1.2.2 ⁶
- python-pyparsing-3.2.1 ⁶
- python-pyproject-hooks-1.2.0 ⁶
- python-pytest-8.3.4 ⁶
- python-pytz-2024.2 ⁶
- python-pyzmq-25.1.2 ⁶
- python-setuptools-75.8.0 ⁶
- python-setuptools-scm-8.1.0 ⁶
- python-six-1.17.0 ⁶
- python-toml-0.10.2 ⁶
- python-trove-classifiers-2025. ⁶
- python-typing-extensions-4.12. ⁶
- python-wheel-0.45.1 ⁶
- python3-3.12.9 ⁶

- qemu-9.2.0 ⁶
- qjson-0.9.0 ⁶
- qpdf-10.5.0 ⁶
- qt53d-9bf4d03e2515f7c454647d54 ⁶
- qt5base-2b9835f5c9bcfe3105b60a ⁶
- qt5charts-7315c48bcec88014e781 ⁶
- qt5connectivity-99f30db37c6344 ⁶
- qt5declarative-50c8def85480648 ⁶
- qt5graphicaleffects-2c39e673d6 ⁶
- qt5imageformats-4e4f5fc6bdac96 ⁶
- qt5location-3beb9c810611337fde ⁶
- qt5multimedia-53069c9c6eb52b74 ⁶
- qt5quickcontrols-9325659ec390e ⁶
- qt5quickcontrols2-69fea340f8f4 ⁶
- qt5script-572daa83e990ce88cca2 ⁶
- qt5sensors-bf0b718cd0b6c7823e9 ⁶
- qt5serialbus-616bc5b962cdcacab1 ⁶
- qt5serialport-34c19c6441cd440d ⁶
- qt5svg-690128b2b8fb6d6fbdc43b2 ⁶
- qt5tools-f82ed367d1b80b69d738c ⁶
- qt5webchannel-fca83088ef430f96 ⁶
- qt5webengine-5.15.14 ⁶
- qt5webengine-chromium-18c9261d ⁶
- qt5webengine-chromium-catapult ⁶
- qt5webkit-5.212.0-alpha4 ⁶
- qt5websockets-dbbdc64b804f7c4d ⁶
- qt5webview-bbb1891595aba23ff3c ⁶
- qt5xmlpatterns-087f6f35bd027f9 ⁶
- quazip-1.4 ⁶
- qwt-6.1.6 ⁶
- readline-8.2 ⁶
- rng-tools-6.17 ⁶
- rppppoe-4.0 ⁶
- rpcbind-1.2.7 ⁶
- rsync-3.4.1 ⁶
- rsyslog-8.2412.0 ⁶
- rtttests-2.8 ⁶
- ruby-3.4.1 ⁶
- ruy-83fd40d730feb0804fafbc2d88 ⁶
- sdl-1.2.15 ⁶
- sdl2-2.30.12 ⁶
- sdl_mixer-d1725fcb7c4e987aeb7 ⁶
- sdl_net-620b0ba7dd84a0fdbd4cc ⁶
- slirp-4.8.0 ⁶
- snappy-1.2.1 ⁶
- socat-1.8.0.2 ⁶
- softether-4.30-9700-beta ⁶
- sox-7524160b29a476f7e87bc14fdd ⁶
- spawn-fcgi-1.6.4 ⁶
- spidev_test-5.8 ⁶
- splashscreen-splashscreen_V2. ⁶
- sqlite-3.48.0 ⁶
- squashfs-4.6.1 ⁶
- sshpass-1.10 ⁶
- strace-6.13 ⁶
- stress-1.0.7 ⁶
- sudo-1.9.15p5 ⁶
- swig-4.1.1 ⁶
- sysstat-12.7.5 ⁶
- tar-1.35 ⁶
- tcpdump-4.99.5 ⁶
- tflite-abseil-cpp-997aaf3a2830 ⁶
- tflite-clog-d5e37adf1406 ⁶
- tflite-cpuinfo-5916273f79a2 ⁶
- tflite-eigen-085c2fc5d53f ⁶
- tflite-farmhash-0d859a811870 ⁶
- tflite-fft2d-1.0 ⁶
- tflite-flatbuffers-v1.12.0 ⁶
- tflite-gemmlowp-fda83bdc38b1 ⁶
- tflite-ruy-e6c1b8dc8a8b ⁶
- tiff-4.7.0 ⁶
- tim-vx-19e4e86651109966d519187 ⁶
- tmux-3.3a ⁶
- tpm2-abrmd-2.3.3 ⁶
- tpm2-openssl-1.2.0 ⁶
- tpm2-tools-5.7 ⁶
- tpm2-tss-3.2.2 ⁶
- tpm2-tss-engine-1.2.0 ⁶
- trace-cmd-3.3.1 ⁶
- tremor-7c30a66346199f3f09017a0 ⁶
- tslib-1.23 ⁶
- tzdata-2025a ⁶
- ubiexecdump-13895 ⁶
- uboot-tools-2021.07 ⁶
- unifdef-2.12 ⁶
- unzip-6.0 ⁶
- usb_modeswitch-2.6.1 ⁶
- util-linux-2.40.2 ⁶
- valgrind-3.24.0 ⁶
- vorbis-tools-1.4.2 ⁶
- vx-delegate-07bb4353ba6b0275c5 ⁶
- waf-2.1.1 ⁶
- wavpack-5.7.0 ⁶
- wayland-1.23.1 ⁶
- wayland-protocols-1.39 ⁶
- webp-1.5.0 ⁶
- wget-1.25.0 ⁶
- whetstone-1.2 ⁶
- wireless-regdb-2024.10.07 ⁶
- wireless_tools-30.pre9 ⁶
- wlansimplescan-r274 ⁶
- woff2-1.0.2 ⁶
- wpa_supplicant-2.11 ⁶
- wpbackend-fdo-1.14.3 ⁶
- wpewebkit-2.44.4 ⁶
- x11vnc-0.9.16 ⁶
- xapp_bdfopcf-1.1.1 ⁶
- xapp_mkfontscale-1.2.2 ⁶
- xapp_xauth-1.1.2 ⁶
- xapp_xbacklight-1.2.3 ⁶
- xapp_xev-1.2.5 ⁶
- xapp_xeyes-1.2.0 ⁶
- xapp_xhost-1.0.9 ⁶
- xapp_xinput-1.6.4 ⁶
- xapp_xkbcomp-1.4.6 ⁶
- xapp_xkbdevd-1.1.5 ⁶
- xapp_xkbprint-1.0.6 ⁶
- xapp_xlogo-1.0.6 ⁶
- xapp_xmessage-1.0.6 ⁶
- xapp_xmodmap-1.0.11 ⁶
- xapp_xset-1.2.5 ⁶

- xapp_xsetmode-1.0.0 ⁶
- xapp_xsetpointer-1.0.1 ⁶
- xapp_xsetroot-1.1.3 ⁶
- xcb-proto-1.15.2 ⁶
- xcb-util-0.4.1 ⁶
- xcb-util-image-0.4.1 ⁶
- xcb-util-wm-0.4.2 ⁶
- xdata_xbitmaps-1.1.3 ⁶
- xdg-dbus-proxy-0.1.6 ⁶
- xfont_encodings-1.0.7 ⁶
- xfont_fontalias-1.0.5 ⁶
- xfont_font-cursor-misc-1.0.4 ⁶
- xfont_font-misc-misc-1.1.3 ⁶
- xfont_font-util-1.4.0 ⁶

- xkeyboard-config-2.38 ⁶
- xlib_libICE-1.1.1 ⁶
- xlib_libSM-1.2.4 ⁶
- xlib_libX11-1.8.7 ⁶
- xlib_libXScrnSaver-1.2.4 ⁶
- xlib_libXau-1.0.11 ⁶
- xlib_libXaw-1.0.15 ⁶
- xlib_libXcomposite-0.4.6 ⁶
- xlib_libXcursor-1.2.1 ⁶
- xlib_libXdamage-1.1.6 ⁶
- xlib_libXdmcp-1.1.4 ⁶
- xlib_libXext-1.3.5 ⁶
- xlib_libXfixes-6.0.1 ⁶
- xlib_libXfont-1.5.4 ⁶

- xlib_libXfont2-2.0.6 ⁶
- xlib_libXft-2.3.8 ⁶
- xlib_libXi-1.8.1 ⁶
- xlib_libXinerama-1.1.5 ⁶
- xlib_libXmu-1.1.4 ⁶
- xlib_libXpm-3.5.17 ⁶
- xlib_libXrandr-1.5.3 ⁶
- xlib_libXrender-0.9.11 ⁶
- xlib_libXres-1.2.2 ⁶
- xlib_libXt-1.3.0 ⁶
- xlib_libXtst-1.2.4 ⁶
- xlib_libXv-1.0.12 ⁶
- xlib_libXxf86vm-1.1.5 ⁶
- xlib_libfontenc-1.1.7 ⁶

- xlib_libxkbfile-1.1.2 ⁶
- xlib_libxshmfence-1.3.3 ⁶
- xlib_xtrans-1.5.0 ⁶
- xmlstarlet-1.6.1 ⁶
- xorgproto-2024.1 ⁶
- xterm-389 ⁶
- xutil_util-macros-1.20.0 ⁶
- xvkbd-4.1 ⁶
- xz-5.6.4 ⁶
- zeromq-4.3.5 ⁶
- zic-2025a ⁶
- zip-3.0 ⁶
- zstd-1.5.7 ⁶