DATENBLATT GELIN 20.04 – GINZINGER EMBEDDED LINUX PLATTFORM

Zweite Generation der Ginzinger Embedded Linux Distribution. Basierend auf dem Mainline Linux Kernel 5.4

1   HARDWARE-UNTERSTÜTZUNG

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

i.MX6:
- ARMv7-A
- EABI (embedded-application binary interface)
- hardfloat: vfpv3/neon-fp16 (FPU Register)

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

i586:
- x86 i586

2   QT CREATOR

- qt-creator-opensource-src-4.11.2
- qt-everywhere-opensource-src-5.12.7

3   GINZINGER UPDATE MECHANISMUS [1,2,3,4]

- ge_update_V7.9
- 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)
- Unterstützung für Update von MMC/SD-Karten
- Unterstützung Kernel-Parameter für rootfs-, data- und flag-partition

- Unterstützung rootfs-Filesysteme: squashfs, ubifs auf ubi
- Unterstützung data-Filesysteme: jffs2 und ubifs
- Unterstützung für Update vom internen Flash (Daten Partition)

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1 = I.MX28 | 2 = I.MX53 | 3 = I.MX6 | 4 = I.MX6UL | 5 = I586

4 KERNEL SOURCE

- linux-5.4.30-ge-20.04

5 PROJECT TEMPLATES

- EMPTY -- leeres Projekt
- c -- C Makefile-Projekt
- cpp -- C++ Makefile Projekt
- nodejs -- Node.js Projekt [2,3,4]
- qt-core -- Qt5-Core Projekt
- qt-gui -- Qt5-GUI Projekt
- qt-quick -- Qt5-Quick Projekt [3,4]

6 SOFTWARE PAKETE FÜR GELIN-PROJEKTE

- busybox
- ca_certs
- datafs_async
- dosfstools
- e2fsprogs
- fonts_base
- fonts_dejavu
- fonts_liberation
- fonts_X11
- gdbserver
- ge_update [1,2,3,4]
- gstreamer
- gstreamer_v4l2
- hotplugd
- libgecan_tools
- linrpcd2
- matchbox
- mtdutils
- mtdutils_test
- nodejs [2,3,4]
- qt_common

- qt_display_auto
- qt_display_common
- qt_display_eglfskms [3]
- qt_display_linuxfb
- qt_misc
- qt_plugins_3d [3]
- qt_plugins_bearer
- qt_plugins_canbus
- qt_plugins_imageformats
- qt_plugins_input_misc
- qt_plugins_location
- qt_plugins_multimedia
- qt_plugins_qmldebug [3,4]
- qt_plugins_sensors
- qt_plugins_sql
- qt_qmlmodules_3d [3]
- qt_qmlmodules_bluetooth [3,4]
- qt_qmlmodules_canvas3d [3]
- qt_qmlmodules_charts [3,4]
- qt_qmlmodules_common [3,4]
- qt_qmlmodules_graphicaleffects [3]

- qt_qmlmodules_location [3,4]
- qt_qmlmodules_multimedia [3]
- qt_qmlmodules_nfc [3,4]
- qt_qmlmodules_qml [3,4]
- qt_qmlmodules_qt_labs [3,4]
- qt_qmlmodules_quick2 [3,4]
- qt_qmlmodules_sensors [3,4]
- qt_qmlmodules_test [3,4]
- qt_qmlmodules_webchannel [3,4]
- qt_qmlmodules_webengine [3,4]
- qt_qmlmodules_webkit [3,4]
- qt_qmlmodules_websockets [3,4]
- qt_quick [3]
- qt_touchscreen
- qt_webengine [3,4]
- rng
- rootfs_base
- splashscreen
- splashscreen_logo
- ssh_client
- ssh_server

- telnet_server
- tslib
- tslib_tools
- tslib_uinput
- ubiutils
- valgrind_callgrind [2,3,4,5]
- valgrind_common [2,3,4,5]
- valgrind_full [2,3,4,5]
- valgrind_memcheck [2,3,4,5]
- wlan
- xserver
- zoneinfo

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7 QUELLEN PAKETE

7.1 TOOLCHAIN

- binutils-2.32
- gcc-8.4.0
- gettext-tiny-adaa9c64921e

- glibc-2.30-20-g50f20fe506a
- gmp-6.1.2
- isl-0.22

- linux-5.4.30
- mpc-1.1.0
- mpfr-4.0.2

- ncurses-6.1

7.2 BUILDROOT

- acl-2.2.53
- alsa-lib-1.2.1.2
- alsa-utils-1.2.1
- at-7c74fa1aece6b-c6db351763dc012193d5d634b7e
- attr-2.4.48
- aumix-2.9.1
- autoconf-2.69
- automake-1.15.1
- avahi-0.7
- berkeleydb-5.3.28
- bison-3.4.2
- bluez5_utils-5.54
- bluez5_utils-headers-5.54
- boost-1.72.0
- buildroot-2020.02.1
- busybox-1.31.1
- bzip2-1.0.8
- ca-certificates-20190110
- can-utils-2020.02.0
- c-ares-1.15.0
- cifs-utils-6.9
- cmake-3.15.5
- cramfs-1a1e65f2a049
- crda-4.14
- cyrus-sasl-2.1.27
- dbus-1.12.16

- dbus-glib-0.110
- dbus-triggerd-ba3dbec805cb707c-94c54de21666bf18b79bcc09
- dejavu-2.37
- dhrystone-2
- dnsmasq-2.80
- dosfstools-4.1
- e2fsprogs-1.45.5
- elfutils-0.177
- ethtool-5.4
- evemu-2.7.0
- evtest-1.34
- expat-2.2.9
- faad2-2.9.1
- fakeroot-1.20.2
- fbdump-0.4.2
- fbgrab-1.3.1
- fcgiwrap-99c942c90063c73734e56ba-caa65f947772d9186
- ffmpeg-4.2.2
- fftw-double-3.3.8
- flac-1.3.3
- flex-2.6.4
- fontconfig-2.13.1
- freetype-2.10.1
- gawk-5.0.1
- gdb-8.2.1

- genext2fs-1.4.1
- glibmm-2.62.0
- glib-networking-2.61.1
- glmark2-9e01aef1a786b28aca-73135a5b00f85c357e8f5e [3]
- gnupg-1.4.23
- gnutls-3.6.13
- gperf-3.1
- gst1-libav-1.16.2
- gst1-plugins-bad-1.16.2
- gst1-plugins-base-1.16.2
- gst1-plugins-good-1.16.2
- gst1-plugins-ugly-1.16.2
- gstreamer1-1.16.2
- gzip-1.10
- hostapd-2.9
- hotplugd-14993
- htop-2.2.0
- i2c-tools-4.1
- icu-65-1
- ifplugd-0.28
- imagemagick-7.0.8-59
- inotify-tools-3.20.1
- input-event-daemon-0.1.3
- intltool-0.51.0
- iostat-2.2
- iproute2-5.5.0

- iptables-1.8.3
- iw-5.3
- jasper-2.0.16
- jimtcl-0.79
- jitterentropy-library-2.2.0
- jpeg-turbo-2.0.4
- kbd-2.0.4
- kmod-26
- latencytop-0.5
- ldd-crosstool-ng-1.23.0
- leveldb-1.22
- libao-1.2.0
- libargon2-20171227
- libbsd-0.10.0
- libcurl-7.68.0
- libdaemon-0.14
- libdrm-2.4.100 [3]
- liberation-2.00.5
- libestr-0.1.11
- libevdev-1.8.0
- libevent-2.1.11
- libfastjson-0.99.8
- libfcgi-2.4.2
- libffi-3.3
- libftdi-0.20
- libgcrypt-1.8.5
- libgecan-1527

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- libglib2-2.62.4
- libglu-9.0.1 [3]
- libgpg-error-1.37
- libgpiod-1.4.1
- libhid-0.2.16
- libhttpparser-2.9.3
- libical-1.0.1
- libkrb5-1.17
- liblog4c-localtime-1.0
- liblogging-1.0.6
- libmicrohttpd-0.9.70
- libmms-0.6.4
- libmnl-1.0.4
- libmodbus-3.1.6
- libmpeg2-0.5.1
- libnftnl-1.1.5
- libnl-3.5.0
- libnspr-4.25 [3, 4]
- libnss-3.50 [3, 4]
- libogg-1.3.4
- libopenssl-1.1.1g
- libowfat-0.30
- libpcap-1.9.1
- libpng-1.6.37
- libpthread-stubs-0.4
- libqrencode-4.0.2
- libsigc-2.10.0
- libsndfile-1.0.28
- libsocketcan-0.0.11
- libsoup-2.62.3
- libssh2-1.9.0
- libsysfs-2.1.0
- libtasn1-4.14
- libtheora-1.1.1
- libtirpc-1.2.5
- libtool-2.4.6
- libuboot-ge-env-15002

- libunistring-0.9.10
- liburcu-0.11.1
- liburiparser-0.9.3
- libusb-1.0.23
- libusb-compat-0.1.5
- libuv-1.34.1
- libv4l-1.18.0
- libvncserver-0.9.12
- libvorbis-1.3.6
- libvpx-1.8.2
- libxcb-1.13.1
- libxkbcommon-0.8.4
- libxml2-2.9.10
- libxml-parser-perl-2.46
- libxslt-1.1.34
- libzip-1.5.2
- libzlib-1.2.11
- linrpcd2-15576
- linuxconsoletools-1.7.0
- linux-zigbee-0.3.1
- live555-2019.09.30
- log4cplus-2.0.5
- logrotate-3.15.1
- lrzsz-0.12.20
- ltrace-c22d359433b333937ee3d803450 dc41998115685
- lttng-libust-2.11.0
- lz4-1.9.2
- lzip-1.20
- lzo-2.10
- lzop-1.03
- m4-1.4.18
- matchbox-1.2
- matchbox-common-0.9.1
- matchbox-desktop-0.9.1
- matchbox-fakekey-0.1
- matchbox-keyboard-0.1

- matchbox-lib-1.9
- matchbox-panel-0.9.3
- mdadm-4.1
- memstat-1.0
- memtester-4.3.0
- mesa3d-19.3.5 [3]
- meson-0.53.1
- minit-0.10
- mmc-utils-d40ec535b9d4e4c974e8c2-fbfb422cd0348cc5e8
- mosquitto-1.6.9
- mpg123-1.25.13
- mtd-2.1.1
- mxt-app-14190
- ne10-1.2.0 [2,3,4]
- neard-0.16
- netcat-openbsd-debian_1.195-2
- netsnmp-5.8
- nettle-3.5.1
- nfs-utils-2.4.3
- nftables-0.9.3
- nghttp2-1.39.2 [2,3,4]
- nginx-1.17.7
- ninja-1.10.0
- nodejs-12.16.1 [2,3,4]
- ntp-4.2.8p14
- oniguruma-6.9.4
- opencv3-3.4.9
- openldap-2.4.48
- openobex-1.7.2
- openssh-8.1p1
- openvpn-2.4.9
- oprofile-1.3.0
- opus-1.3.1 [3, 4]
- PACKAGE-VERSION
- patchelf-0.9
- pcre2-10.33

- pcre-8.43
- php-7.4.4
- pixman-0.38.4
- pkgconf-1.6.1
- popt-1.16
- pppd-2.4.8
- pptp-linux-1.10.0
- protobuf-3.11.0
- pwgen-2.08
- python-2.7.17
- python3-3.8.2
- python3-mako-1.1.0 [3]
- python3-setuptools-41.4.0
- python-pycrypto-2.6.1
- qjson-0.9.0
- qt53d-5.12.7 [3]
- qt5base-5.12.7
- qt5canvas3d-5.12.7 [3]
- qt5charts-5.12.7
- qt5connectivity-5.12.7
- qt5declarative-5.12.7
- qt5graphicaleffects-5.12.7 [3]
- qt5imageformats-5.12.7
- qt5location-5.12.7
- qt5multimedia-5.12.7
- qt5quickcontrols2-5.12.7 [3,4]
- qt5quickcontrols-5.12.7 [3,4]
- qt5script-5.12.7
- qt5sensors-5.12.7
- qt5serialbus-5.12.7
- qt5serialport-5.12.7
- qt5svg-5.12.7
- qt5webchannel-5.12.7 [3,4]
- qt5webengine-5.12.7 [3,4]
- qt5webkit-5.9.1
- qt5websockets-5.12.7
- qt5xmlpatterns-5.12.7

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- quazip-0.8.1
- qwt-6.1.4
- readline-8.0
- rng-tools-6.9
- rpcbind-1.2.5
- rp-pppoe-3.12
- rsync-3.1.3
- rsyslog-8.1911.0
- rt-tests-1.6
- ruby-2.4.9
- sdl-1.2.15
- sdl2-2.0.10
- sdl_mixer-1.2.12
- sdl_net-1.2.8
- snappy-1.1.7
- socat-1.7.3.4
- softether-4.30-9700-beta
- spawn-fcgi-1.6.4
- spidev_test-4.10
- splashscreen-14997
- sqlite-3300100
- squashfs-4.4
- sshpass-1.06
- strace-5.4
- sysstat-11.6.3
- tar-1.32
- tcpdump-4.9.3
- tiff-4.1.0
- tmux-2.9a
- tpm2-tools-4.1.1

- tpm2-tss-2.3.3
- trace-cmd-trace-cmd-v2.7
- tremor-7c30a66346199f 3f09017a09567c6c8a3a0eedc8
- tslib-1.21
- tzdata-2019c
- ubiecdump-13895
- uboot-tools-2020.01
- usb_modeswitch-2.6.0
- util-linux-2.35.1
- valgrind-3.15.0 [2,3,4,5]
- vorbis-tools-1.4.0
- wavpack-5.2.0
- webp-1.1.0 [3,4]
- wget-1.20.3
- whetstone-1.2
- wireless-regdb-2019.06.03
- wireless_tools-30.pre9
- wpa_supplicant-2.9
- x11vnc-0.9.16
- xapp_bdftopcf-1.1
- xapp_mkfontscale-1.2.1
- xapp_xauth-1.1
- xapp_xbacklight-1.2.3
- xapp_xev-1.2.3
- xapp_xeyes-1.1.2
- xapp_xhost-1.0.8
- xapp_xinit-1.4.1
- xapp_xinput-1.6.3
- xapp_xkbcomp-1.4.2

- xapp_xkbevd-1.1.4
- xapp_xkbprint-1.0.5
- xapp_xlogo-1.0.5
- xapp_xmessage-1.0.5
- xapp_xmodmap-1.0.10
- xapp_xset-1.2.4
- xapp_xsetmode-1.0.0
- xapp_xsetpointer-1.0.1
- xapp_xsetroot-1.1.2
- xcb-proto-1.13
- xcb-util-0.4.0
- xcb-util-image-0.4.0
- xcb-util-wm-0.4.1
- xdata_xbitmaps-1.1.2
- xfont_encodings-1.0.5
- xfont_font-alias-1.0.3
- xfont_font-cursor-misc-1.0.3
- xfont_font-misc-misc-1.1.2
- xfont_font-util-1.3.2
- xkeyboard-config-2.28
- xlib_libfontenc-1.1.4
- xlib_libICE-1.0.10
- xlib_libSM-1.2.3
- xlib_libX11-1.6.9
- xlib_libXau-1.0.9
- xlib_libXaw-1.0.13
- xlib_libXcomposite-0.4.5
- xlib_libXcursor-1.2.0
- xlib_libXdamage-1.1.5
- xlib_libXdmcp-1.1.3

- xlib_libXext-1.3.4
- xlib_libXfixes-5.0.3
- xlib_libXfont-1.5.4
- xlib_libXft-2.3.3
- xlib_libXi-1.7.10
- xlib_libXinerama-1.1.4
- xlib_libxkbfile-1.1.0
- xlib_libXmu-1.1.3
- xlib_libXpm-3.5.13
- xlib_libXrandr-1.5.2
- xlib_libXrender-0.9.10
- xlib_libXres-1.2.0
- xlib_libXScrnSaver-1.2.3
- xlib_libxshmfence-1.3 [3]
- xlib_libXt-1.2.0
- xlib_libXtst-1.2.3
- xlib_libXv-1.0.11
- xlib_libXxf86vm-1.1.4
- xlib_xtrans-1.4.0
- xmlstarlet-1.6.1
- xorgproto-2019.2
- xserver_xorg-server-1.17.4
- xterm-349
- xutil_util-macros-1.19.2
- xvkbd-4.0
- xz-5.2.4
- zic-2019c
- zip-3.0
- zstd-1.4.3

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