

DATENBLATT GELIN 19.10 – GINZINGER EMBEDDED LINUX PLATTFORM

Zweite Generation der Ginzinger Embedded Linux Distribution. Basierend auf dem Mainline Linux Kernel 4.14

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-4.8.2
- qt-everywhere-opensource-src-5.11.3

3 GINZINGER UPDATE MECHANISMUS ^{1,2,3,4}

- ge_update_V7.7
- 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 für neue Kernel-Parameter für rootfs-, data- und flag-partition
- Unterstützung für neue rootfs-Filesysteme: squashfs, ubifs auf ubi
- Unterstützung für neue data-Filesysteme: ubifs
- Unterstützung für Update vom internen Flash (Daten Partition)

4 KERNEL SOURCE

- linux-4.14.146-ge-19.10

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

7 QUELLEN PAKETE

7.1 TOOLCHAIN

- binutils-2.29.1
- gcc-7.4.0
- gettext-0.19.8.1

- glibc-2.28
- gmp-6.1.2
- isl-0.18

- linux-4.14.146
- mpc-1.0.3
- mpfr-3.1.6

- ncurses-6.1

7.2 BUILDROOT

- acl-2.2.53
- alsa-lib-1.1.7
- alsa-utils-1.1.7
- attr-2.4.48
- aumix-2.9.1
- autoconf-2.69
- automake-1.15.1
- avahi-0.7
- bison-3.0.4
- bluez5_utils-5.50
- bluez5_utils-headers-5.50
- boost-1.69.0
- buildroot-2019.02.6
- busybox-1.29.3
- bzip2-1.0.8
- ca-certificates-20190110
- can-utils-v2018.02.0
- c-ares-1.15.0
- cifs-utils-6.8
- cmake-3.8.2
- cramfs-1a1e65f2a049
- crda-4.14
- dbus-1.12.16
- dbus-glib-0.110
- dbus-triggerd-ba3dbec805cb707c94c54de21666bf18b79bcc09
- dejavu-2.37

- dhystone-2
- dosfstools-4.1
- e2fsprogs-1.45.4
- elfutils-0.176
- ethtool-4.19
- evemu-2.7.0
- evtest-1.33
- expat-2.2.8
- faad2-2.8.8
- fakeroot-1.20.2
- fbdump-0.4.2
- fbgrab-1.3
- fcgiwrap-99c942c90063c73734e56ba
caa65f947772d9186
- ffmpeg-3.4.6
- fftw-double-3.3.8
- flac-1.3.2
- flex-2.6.4
- fontconfig-2.13.1
- freetype-2.9.1
- gawk-4.2.1
- gdb-7.12.1
- genext2fs-1.4.1
- gettext-0.19.8.1
- glibmm-2.56.0
- glib-networking-2.58.0
- gmp-6.1.2

- glmark2-9b1070fe9c5cf908f323909d3-
8cbed08022abe8³
- gnupg-1.4.23
- gnutils-3.6.7.1
- gperf-3.0.4
- gst1-libav-1.14.4
- gst1-plugins-bad-1.14.4
- gst1-plugins-base-1.14.4
- gst1-plugins-good-1.14.4
- gst1-plugins-ugly-1.14.4
- gstreamer1-1.14.4
- gzip-1.9
- hostapd-2.7
- hotplugd-14993
- htop-2.2.0
- i2c-tools-4.1
- icu-60.2
- ifplugd-0.28
- imagemagick-7.0.8-59
- inotify-tools-3.20.1
- input-event-daemon-v0.1.3
- intltool-0.51.0
- iostat-2.2
- iproute2-4.19.0
- iptables-1.8.3
- iw-4.14
- jasper-version-2.0.14

- jpeg-turbo-2.0.1
- kbd-2.0.4
- kmod-25
- latencytop-0.5
- ldd-crosstool-ng-1.23.0
- leveledb-v1.20
- libao-1.2.0
- libbsd-0.10.0
- libcurl-7.66.0
- libdaemon-0.14
- libdrm-2.4.97³
- liberation-2.00.1
- libevdev-1.6.0
- libevent-2.1.8-stable
- libfcgi-2.4.0
- libffi-v3.3-rc0
- libftdi-0.20
- libgcrypt-1.8.5
- libgecan-1527
- libglib2-2.56.4
- libgpg-error-1.33
- libhid-0.2.16
- libhttpparser-v2.9.0
- libical-1.0.1
- libkrb5-1.16.2
- liblog4c-localtime-v1.0
- libmicrohttpd-0.9.60

- libmms-0.6.4
- libmnl-1.0.4
- libmodbus-3.1.4
- libmpeg2-0.5.1
- libnftnl-1.1.3
- libnl-3.4.0
- libnspr-4.22^{3,4}
- libnss-3.46^{3,4}
- libogg-1.3.3
- libopenssl-1.1.1d
- libowfat-0.30
- libpcap-1.9.0
- libpng-1.6.37
- libpthread-stubs-0.4
- libqrencode-4.0.0
- libsigc-2.10.0
- libsndfile-1.0.28
- libsocketcan-0.0.10
- libsoup-2.62.3
- libssh2-1.9.0
- libtasn1-4.13
- libtheora-1.1.1
- libtirpc-1.1.4
- libtool-2.4.6
- libuboot-ge-env-15002
- libunistring-0.9.10
- liburcu-0.9.2
- libusb-1.0.22
- libusb-compat-0.1.5
- libuv-1.25.0
- libv4l-1.16.3
- libvncserver-0.9.11
- libvorbis-1.3.6
- libvpx-1.7.0
- libxcb-1.13.1
- libxkbcommon-0.8.2
- libxml2-2.9.9
- libxml-parser-perl-2.44
- libxslt-1.1.32
- libzip-1.5.1
- libzlib-1.2.11
- linrpcd2-14646
- linux-4.14.146
- linuxconsoletools-1.6.0
- linux-headers-4.14.146
- linux-zigbee-v0.3.1
- live555-2019.03.06
- log4cplus-2.0.2
- logrotate-3.13.0
- lrzsz-0.12.20
- ltrace-c22d359433b333937ee3d803450dc41998115685
- ltng-libust-2.10.1
- lz4-v1.8.3
- 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-4.0
- memstat-1.0
- mesa3d-18.3.3³
- meson-0.49.0
- minit-0.10
- mmc-utils-37c86e60c0442fef570b75cd81aeb1db4d0cbafd
- mosquito-1.5.9
- mpg123-1.25.12
- mtd-2.0.2
- mxt-app-14190
- ncurses-6.1
- ne10-v1.2.0^{2,3,4}
- neard-0.16
- netcat-openbsd-debian_1.190-1
- netsnmp-5.8
- nettle-3.4.1
- nfs-utils-1.3.3
- nftables-0.9.0
- nghttp2-1.39.2^{2,3,4}
- nginx-1.16.1
- ninja-v1.8.2
- nodejs-8.16.1^{2,3,4}
- ntp-4.2.8p13
- opencv3-3.4.3
- openobex-1.7.2
- openssh-7.9p1
- openvpn-2.4.6
- oprofile-1.2.0
- opus-1.3.1^{3,4}
- PACKAGE-VERSION
- patchelf-0.9
- pcre2-10.32
- pcre-8.42
- pixman-0.34.0
- pkgconf-1.5.3
- poprt-1.16
- pppd-2.4.7
- pptp-linux-1.9.0
- pwgen-2.07
- python-2.7.16
- python3-3.7.4
- python3-setuptools-40.6.3
- python-pycrypto-2.6.1
- qjson-0.9.0
- qt53d-5.11.3³
- qt5base-5.11.3
- qt5canvas3d-5.11.3³
- qt5charts-5.11.3
- qt5connectivity-5.11.3
- qt5declarative-5.11.3
- qt5graphicaleffects-5.11.3³
- qt5imageformats-5.11.3
- qt5location-5.11.3
- qt5multimedia-5.11.3
- qt5quickcontrols2-5.11.3^{3,4}
- qt5quickcontrols-5.11.3^{3,4}
- qt5script-5.11.3
- qt5sensors-5.11.3
- qt5serialbus-5.11.3
- qt5serialport-5.11.3
- qt5svg-5.11.3
- qt5webchannel-5.11.3^{3,4}
- qt5webengine-5.11.3^{3,4}
- qt5webkit-5.9.1
- qt5websockets-5.11.3
- qt5xmlpatterns-5.11.3
- quazip-0.7.6
- qwt-6.1.3
- readline-8.0
- rng-tools-5
- rpcbind-0.2.3
- rp-pppoe-3.12
- rsync-3.1.3
- rt-tests-1.0
- ruby-2.4.6
- sdl-1.2.15
- sdl2-2.0.9
- sdl_mixer-1.2.12
- sdl_net-1.2.8
- snappy-1.1.7
- socat-1.7.3.2
- softether-v4.28-9669-beta

- spawn-fcgi-1.6.4
- spidev_test-v4.10
- splashscreen-14997
- sqlite-3280000
- squashfs-e38956b92f738518c29734399629e7cdb33072d3
- sshpass-1.06
- strace-4.26
- sysstat-11.6.3
- tar-1.29
- tcpdump-4.9.2
- tiff-4.0.10
- tmux-2.8
- trace-cmd-trace-cmd-v2.7
- tremor-7c30a66346199f3f09017a09567c6c8a3a0eedc8
- tslib-1.20
- tzdata-2018e
- ubiecdump-13895
- uboot-tools-2018.07
- usb_modeswitch-2.5.2
- util-linux-2.33
- valgrind-3.14.0^{2,3,4,5}
- vorbis-tools-1.4.0
- wavpack-5.1.0
- webp-1.0.1^{3,4}
- wget-1.20.3
- whetstone-1.2
- wireless-regdb-2019.06.03
- wireless_tools-30.pre9
- wpa_supplicant-2.7
- x11vnc-0.9.16
- xapp_bdfpcf-1.1
- xapp_mkfontdir-1.0.7
- xapp_mkfontscale-1.1.3
- xapp_xauth-1.0.10
- xapp_xbacklight-1.2.2
- xapp_xev-1.2.2
- xapp_xeyes-1.1.2
- xapp_xhost-1.0.7
- xapp_xinit-1.4.0
- xapp_xinput-1.6.2
- xapp_xkbcomp-1.4.2
- xapp_xkbevd-1.1.4
- xapp_xkbprint-1.0.4
- xapp_xlogo-1.0.4
- xapp_xmessage-1.0.5
- xapp_xmodmap-1.0.9
- xapp_xset-1.2.4
- xapp_xsetmode-1.0.0
- xapp_xsetpointer-1.0.0
- 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-1.0.4
- 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-2.23.1
- xlib_libfontenc-1.1.3
- xlib_libICE-1.0.10
- xlib_libSM-1.2.3
- xlib_libX11-1.6.7
- xlib_libXau-1.0.8
- xlib_libXaw-1.0.13
- xlib_libXcomposite-0.4.4
- xlib_libXcursor-1.1.15
- xlib_libXdamage-1.1.4
- xlib_libXdmcp-1.1.3
- xlib_libXext-1.3.3
- xlib_libXfixes-5.0.3
- xlib_libXfont-1.5.4
- xlib_libXft-2.3.2
- xlib_libXi-1.7.9
- xlib_libXinerama-1.1.4
- xlib_libXkbfile-1.0.9
- xlib_libXmu-1.1.2
- xlib_libXpm-3.5.12
- xlib_libXrandr-1.5.1
- xlib_libXrender-0.9.10
- xlib_libXres-1.2.0
- xlib_libXScrnSaver-1.2.3
- xlib_libxshmfence-1.3³
- xlib_libXt-1.1.5
- xlib_libXtst-1.2.3
- xlib_libXv-1.0.11
- xlib_libXxf86vm-1.1.4
- xlib_xtrans-1.3.5
- xorgproto-2018.4
- xserver_xorg-server-1.17.4
- xterm-327
- xutil_util-macros-1.19.2
- xvkbd-3.7
- xz-5.2.3
- zic-2018e
- zstd-v1.3.5