

Ver.: 20250314

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The software image of G-series network switches is composed of the following parts:

OpenWrt

The image is built in the OpenWRT environment

Bootloader (at91bootstrap3)

A modified Microchip bootloader allows for the running of an encrypted bootloader.

Linux Kernel

The operating system is the Linux-at91_sama5 kernel.

Kernel Drivers (kmod-)

The kernel includes various drivers.

METEL packages (metel-)

The basic functionality of the switch is in the form of a proprietary application running in a Linux environment,

i.e. it is not open-source code:

LAN-RING protocol versions 1 and 2

A proprietary protocols developed by METEL that guarantees network functionality in the event of a single failure.

PoE power supply

Manage power over ethernet functionality delivering power via Ethernet ports.

SFP support

SFP module loading service.

IEEE 802.1X

Implementation of Authenticator, supplicant mode.

Terminal access (CLI)

Custom terminal mode allowing configuration without the SIMULand application.

List of used Open source packages

OpenWrt: r23630-842932a63d
Package: base-files
Version: 1554-r23630-842932a63d
License: GPL-2.0

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Package: fstools
Version: 2023-02-28-bfe882d5-1
License: GPL-2.0

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Package: fwtool
Version: 2019-11-12-8f7fe925-1
License: GPL-2.0

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Package: iptables-zz-legacy

Version: 1.8.8-2

License: GPL-2.0

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Package: kernel

Version: 6.6.16

License: GPL-2.0

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Package: kmod-crypto-crc32c

Version: 6.6.16-1

License: GPL-2.0

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Package: kmod-crypto-hash

Version: 6.6.16-1

License: GPL-2.0

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Package: kmod-input-core

Version: 6.6.16-1

License: GPL-2.0

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Package: kmod-ipt-core

Version: 6.6.16-1

License: GPL-2.0

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Package: kmod-lib-crc32c

Version: 6.6.16-1

License: GPL-2.0

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Package: kmod-nf-contrack6

Version: 6.6.16-1

License: GPL-2.0

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Package: kmod-nf-contrack

Version: 6.6.16-1

License: GPL-2.0

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Package: kmod-nf-flow

Version: 6.6.16-1

License: GPL-2.0

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Package: kmod-nf-ipt

Version: 6.6.16-1

License: GPL-2.0

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Package: kmod-nf-log6

Version: 6.6.16-1

License: GPL-2.0

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Package: kmod-nf-log

Version: 6.6.16-1

License: GPL-2.0

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Package: kmod-nf-nat

Version: 6.6.16-1

License: GPL-2.0

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Package: kmod-nf-reject6

Version: 6.6.16-1

License: GPL-2.0

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Package: kmod-nf-reject

Version: 6.6.16-1

License: GPL-2.0

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Package: kmod-nfnetlink

Version: 6.6.16-1

License: GPL-2.0

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Package: kmod-nft-core

Version: 6.6.16-1

License: GPL-2.0

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Package: kmod-nft-fib

Version: 6.6.16-1

License: GPL-2.0

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Package: kmod-nft-nat

Version: 6.6.16-1

License: GPL-2.0

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Package: kmod-nft-offload

Version: 6.6.16-1

License: GPL-2.0

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Package: libatomic1

Version: -4

License: GPL-3.0-with-GCC-exception

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Package: libc

Version: -

License: GPL-2.0

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Package: libgcc1

Version: -4

License: GPL-3.0-with-GCC-exception

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Package: libip4tc2

Version: 1.8.8-2

License: GPL-2.0

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Package: libip6tc2

Version: 1.8.8-2

License: GPL-2.0

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Package: libiptext0

Version: 1.8.8-2

License: GPL-2.0

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Package: libiptext6-0

Version: 1.8.8-2

License: GPL-2.0

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Package: libpthread

Version: -4

License: GPL-3.0-with-GCC-exception

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Package: librt

Version: -4

License: GPL-3.0-with-GCC-exception

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Package: libstdc++6

Version: -4

License: GPL-3.0-with-GCC-exception

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Package: libxtables12

Version: 1.8.8-2

License: GPL-2.0

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Package: nand-utils

Version: 2.1.5-1

License: GPLv2

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Package: ubi-utils

Version: 2.1.5-1

License: GPLv2

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Package: xtables-legacy

Version: 1.8.8-2

License: GPL-2.0

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Package: bash-completion

Version: 20080705-2

License: GPL-2.0

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Package: busybox

Version: 1.36.1-1

License: GPL-2.0

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Package: ca-certificates

Version: 20230311-1

License: GPL-2.0

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Package: custom-at91bootstrap3

Version: 3.8.7-1

License: GPL-2.0

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Package: custom-board

Version: 0.6.4-1

License: GPL-2.0

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Package: custom-brand

Version: 0.1.0-1

License: GPL-2.0

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Package: custom-config-devel

Version: 0.0.0-1

License: GPL-2.0

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Package: custom-gen-version

Version: 0.0.3-1

License: GPL-2.0

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Package: custom-secure-ca

Version: 0.1.1-1

License: GPL-2.0

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Package: custom-secure

Version: 0.1.3-1

License: GPL-2.0

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Package: custom-syslog

Version: 0.1.2-1

License: GPL-2.0

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Package: devlink

Version: 6.3.0-1

License: GPL-2.0

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Package: e2fsprogs

Version: 1.47.0-2

License: GPL-2.0

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Package: ethtool

Version: 6.3-1

License: GPL-2.0

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Package: f2fs-tools

Version: 1.16.0-1

License: GPL-2.0-only

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Package: f2fsck

Version: 1.16.0-1

License: GPL-2.0-only

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Package: firewall4

Version: 2023-09-01-598d9fbb-1

License: ISC

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Package: gdbserver

Version: 12.1-3

License: GPL-3.0+

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Package: getrandom

Version: 2022-08-13-4c7b720b-2

License: GPL-2.0

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Package: ip-bridge

Version: 6.3.0-1

License: GPL-2.0

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Package: ip-full

Version: 6.3.0-1

License: GPL-2.0

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Package: jansson4

Version: 2.14-3

License: MIT

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Package: jshn

Version: 2023-05-23-75a3b870-1

License: ISC

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Package: jsonfilter

Version: 2018-02-04-c7e938d6-1

License: ISC

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Package: libblkid1

Version: 2.39-2

License: GPL-2.0-only

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Package: libblobmsg-json20230523

Version: 2023-05-23-75a3b870-1

License: ISC

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Package: libbpf1

Version: 1.2.2-1

License: LGPL-2.1 OR BSD-2-Clause

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Package: libbz2-1.0

Version: 1.0.8-1

License: bzip2-1.0.8

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Package: libcap

Version: 2.69-1

License: GPL-2.0-only

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Package: libcomerr0

Version: 1.47.0-2

License: GPL-2.0

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Package: libelf1

Version: 0.189-1

License: GPL-3.0-or-later

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Package: libevent2-7

Version: 2.1.12-1

License: BSD-3-Clause

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Package: libext2fs2

Version: 1.47.0-2

License: GPL-2.0

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Package: libf2fs6

Version: 1.16.0-1

License: GPL-2.0-only

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Package: libjson-c5

Version: 0.16-3

License: MIT

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Package: libjson-script20230523

Version: 2023-05-23-75a3b870-1

License: ISC

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Package: liblua5.1.5

Version: 5.1.5-10

License: MIT

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Package: libmbedtls12

Version: 2.28.5-2

License: GPL-2.0-or-later

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Package: libmnl0

Version: 1.0.5-1

License: LGPL-2.1+

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Package: libncurses6

Version: 6.4-2

License: MIT

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Package: libnftnl11

Version: 1.2.6-1

License: GPL-2.0-or-later

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Package: libnl-cli200

Version: 3.7.0-1

License: LGPL-2.1

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Package: libnl-core20

Version: 3.7.0-1

License: LGPL-2.1

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Package: libnl-genl200

Version: 3.7.0-1

License: LGPL-2.1

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Package: libnl-nf200

Version: 3.7.0-1

License: LGPL-2.1

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Package: libnl-route200

Version: 3.7.0-1

License: LGPL-2.1

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Package: libnl-tiny1

Version: 2023-07-27-bc92a280-1

License: LGPL-2.1

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Package: libnl200

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Version: 3.7.0-1

License: LGPL-2.1

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Package: libopenssl-conf

Version: 3.0.12-1

License: Apache-2.0

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Package: libopenssl3

Version: 3.0.12-1

License: Apache-2.0

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Package: libpcap1

Version: 1.10.4-1

License: BSD-3-Clause

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Package: libpcr2

Version: 10.42-1

License: BSD-3-Clause

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Package: libreadline8

Version: 8.2-1

License: GPL-3.0-or-later

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Package: libss2

Version: 1.47.0-2

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License: GPL-2.0

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Package: libubox20230523

Version: 2023-05-23-75a3b870-1

License: ISC

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Package: libubus20230605

Version: 2023-06-05-f787c97b-1

License: LGPL-2.1

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Package: libuci-lua

Version: 2023-08-10-5781664d-1

License: LGPL-2.1

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Package: libuci20130104

Version: 2023-08-10-5781664d-1

License: LGPL-2.1

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Package: libuclient20201210

Version: 2023-04-13-007d9454-1

License: ISC

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Package: libucode20230711

Version: 2023-11-07-a6e75e02-1

License: ISC

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Package: libustream-mbedtls20201210

Version: 2023-02-25-498f6e26-1

License: ISC

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Package: libuuid1

Version: 2.39-2

License: GPL-2.0-only

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Package: logd

Version: 2022-08-13-4c7b720b-2

License: GPL-2.0

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Package: logger

Version: 2.39-2

License: GPL-2.0-only

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Package: lua

Version: 5.1.5-10

License: MIT

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Package: mkf2fs

Version: 1.16.0-1

License: GPL-2.0-only

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Package: netifd
Version: 2023-11-10-35facc83-1.1
License: GPL-2.0

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Package: nftables-json
Version: 1.0.8-1
License: GPL-2.0

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Package: nginx-php-cfg
Version: 1.0.0
License: GPL-2.0

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Package: openssl-util
Version: 3.0.12-1
License: Apache-2.0

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Package: openwrt-keyring
Version: 2022-03-25-62471e69-2
License: GPL-2.0

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Package: opkg
Version: 2022-02-24-d038e5b6-2
License: GPL-2.0

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Package: procd-seccomp

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Version: 2023-06-25-2db83655-2

License: GPL-2.0

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Package: procd-ujail

Version: 2023-06-25-2db83655-2

License: GPL-2.0

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Package: procd

Version: 2023-06-25-2db83655-2

License: GPL-2.0

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Package: tcpdump

Version: 4.99.4-1

License: BSD-3-Clause

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Package: terminfo

Version: 6.4-2

License: MIT

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Package: ubox

Version: 2022-08-13-4c7b720b-2

License: GPL-2.0

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Package: ubus

Version: 2023-06-05-f787c97b-1

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License: LGPL-2.1

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Package: uci

Version: 2023-08-10-5781664d-1

License: LGPL-2.1

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Package: uclient-fetch

Version: 2023-04-13-007d9454-1

License: ISC

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Package: ucode-mod-fs

Version: 2023-11-07-a6e75e02-1

License: ISC

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Package: ucode-mod-ubus

Version: 2023-11-07-a6e75e02-1

License: ISC

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Package: ucode-mod-uci

Version: 2023-11-07-a6e75e02-1

License: ISC

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Package: ucode

Version: 2023-11-07-a6e75e02-1

License: ISC

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Package: urandom-seed

Version: 3

License: GPL-2.0-only

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Package: urngd

Version: 2023-11-01-44365eb1-1

License: GPL-2.0 BSD-3-Clause

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Package: usign

Version: 2020-05-23-f1f65026-1

License: ISC

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Package: zlib

Version: 1.2.13-1

License: Zlib

--

Package: alsa-ucm-conf

Version: 1.2.9-1

License: BSD-3-Clause

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Package: bash

Version: 5.2.15-1

License: GPL-3.0-or-later

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Package: coreutils-stty

Version: 9.3-1

License: GPL-3.0-or-later

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Package: coreutils

Version: 9.3-1

License: GPL-3.0-or-later

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Package: file

Version: 5.41-2

License: BSD-2-Clause

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Package: i2c-tools

Version: 4.3-3

License: GPL-2.0-or-later LGPL-2.1-or-later

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Package: iperf3

Version: 3.13-1

License: BSD-3-Clause

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Package: libcbor0

Version: 0.8.0-1

License: GPL-3.0-or-later

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Package: libdaemon

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Version: 0.14-5

License: GPL-2.0

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Package: libestr

Version: 0.1.11-3

License: LGPL-2.1-or-later

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Package: libevdev

Version: 1.13.0-1

License: MIT

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Package: libfastjson

Version: 0.99.8-1

License: MIT

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Package: libfido2-1

Version: 1.12.0-1

License: GPL-3.0-or-later

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Package: libi2c

Version: 4.3-3

License: GPL-2.0-or-later LGPL-2.1-or-later

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Package: libiperf3

Version: 3.13-1

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License: BSD-3-Clause

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Package: liblzma

Version: 5.4.2-1

License: Public-Domain LGPL-2.1-or-later GPL-2.0-or-later GPL-3.0-or-later

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Package: libmagic

Version: 5.41-2

License: BSD-2-Clause

--

Package: libnetsnmp

Version: 5.9.1-5

License: MIT BSD-3-Clause-Clear

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Package: libpam

Version: 1.5.2-1

License: BSD-3c GPL

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Package: libpci

Version: 3.10.0-1

License: GPL-2.0

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Package: libpcrc

Version: 8.45-5

License: BSD-3-Clause

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Package: libudev-zero

Version: 1.0.1-1

License: MIT

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Package: macchanger

Version: 1.7.0-3

License: GPL-2.0-or-later

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Package: nginx-ssl-util

Version: 1.6-18

License: GPL-2.0

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Package: nginx-ssl

Version: 1.25.0-3

License: 2-clause BSD-like license

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Package: nginx-util

Version: 1.6-18

License: GPL-2.0

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Package: openssh-client

Version: 9.3p1-3

License: BSD ISC

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Package: openssh-keygen

Version: 9.3p1-3

License: BSD ISC

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Package: openssh-server-pam

Version: 9.3p1-3

License: BSD ISC

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Package: openssh-server

Version: 9.3p1-3

License: BSD ISC

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Package: openssh-sftp-client

Version: 9.3p1-3

License: BSD ISC

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Package: openssh-sftp-server

Version: 9.3p1-3

License: BSD ISC

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Package: php8-fpm

Version: 8.2.8-1

License: PHP-3.01

--

Package: php8-mod-session

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Version: 8.2.8-1

License: PHP-3.01

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Package: php8

Version: 8.2.8-1

License: PHP-3.01

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Package: rsyslog

Version: 8.2110.0-1

License: GPL-3.0-or-later

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Package: shadow-common

Version: 4.8.1-3

License: BSD-3-Clause

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Package: shadow-login

Version: 4.8.1-3

License: BSD-3-Clause

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Package: shadow-usermod

Version: 4.8.1-3

License: BSD-3-Clause

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Package: shadow-utils

Version: 4.8.1-3

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License: BSD-3-Clause

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Package: snmp-mibs

Version: 5.9.1-5

License: MIT BSD-3-Clause-Clear

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Package: snmp-utils

Version: 5.9.1-5

License: MIT BSD-3-Clause-Clear

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Package: socat

Version: 1.7.4.4-1

License: GPL-2.0-or-later OpenSSL

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Package: wget-ssl

Version: 1.21.3-2

License: GPL-3.0-or-later

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Package: xxd

Version: 9.0-1

License: GPL-2.0