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BSC IP-Gateway Software V1.02.XXX
BSC BACnet-Gateway Software V1.01.XXX

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2 Überblick über die Systemarchitektur

Die IP-/BACnet Gateway Firmware besteht aus den folgenden Komponenten

- Boot-Loader (U-Boot, inkl. patches)
<http://www.denx.de/wiki/U-Boot>
Lizenz: GPLv2
Version: 1.1.4
- Operating System Kernel (Linux 4.4.93 inkl. wireless backports, einzelne openwrt patches)
Copyright © by Linus Torvalds and the people who actually wrote the code
Lizenz: GPLv2
<http://www.kernel.org>
<http://wireless.kernel.org>

inkl. “regdb” (Wireless regulatory database for CRDA)
<http://git.kernel.org/cgit/linux/kernel/git/sforshee/wireless-regdb.git/log/db.txt>
Lizenz: <http://git.kernel.org/cgit/linux/kernel/git/sforshee/wireless-regdb.git/tree/LICENSE>
Version: master-2016-06-10

UIF2 - Kernel Treiber zur LED Ansteuerung
Copyright © Q-loud GmbH
Lizenz: GPLv2
Version: 2.0.5
- Laufzeit-System („root Filesystem“) mit Programmen, Hilfsdateien und Bibliotheken

3 Software-Komponenten im Laufzeit-System

Das Laufzeit-System wird über buildroot erzeugt. Alle benötigten Open Source Komponenten werden über das entsprechende buildroot-Skript eingebunden und aus dem Original-Sourcecode erzeugt.

Hinweis zu den aufgeführten Versionen: diese entsprechen dem aktuellen Stand der Entwicklung am 22.06.2018.

Folgende buildroot Packages werden eingebunden (der Name bezieht sich auf die Bezeichnung im buildroot-System, die angegebene URL bezeichnet die Originalquelle aus dem buildroot Config.in file):

- avahi, libavahi
Fundstelle: <http://avahi.org/>
Lizenz: LGPLv2.1
Verwendung: mit eigenem Programmcode (“Entwicklungsergebnis“) dynamisch verlinkt
Version: 0.6.32
- busybox
Fundstelle: <http://busybox.net/>
Lizenz: GPLv2

Verwendung: liegt im Dateisystem, Kommandozeilen-Tool wird über die Shell aufgerufen
Version: 1.24.1

- curl, libcurl
Fundstelle: <http://curl.haxx.se/>
Lizenz: <https://curl.haxx.se/docs/copyright.html>
Verwendung: mit eigenem Programmcode (“Entwicklungsergebnis”) dynamisch verlinkt
Version: 7.47.1
- dnsmasq
Fundstelle: <http://www.thekelleys.org.uk/dnsmasq/>
Lizenz: GPLv2 or GPLv3 at your option
Verwendung: liegt im Dateisystem, Kommandozeilen-Tool wird über die Shell aufgerufen
Version: 2.78
- json-c
Fundstelle: <https://github.com/json-c/json-c/>
Lizenz: <https://github.com/json-c/json-c/blob/master/COPYING>
Verwendung: mit eigenem Programmcode (“Entwicklungsergebnis”) dynamisch verlinkt
Version: 0.12
- libnl
Fundstelle: <https://www.infradead.org/~tgr/libnl>
Lizenz: LGPLv2.1
Verwendung: mit eigenem Programmcode (“Entwicklungsergebnis”) dynamisch verlinkt
Version: 3.2.27
- libwebsockets
Fundstelle: <https://libwebsockets.org/>
Lizenz: LGPLv2.1
Verwendung: mit eigenem Programmcode (“Entwicklungsergebnis”) dynamisch verlinkt
Version: 2.1
- openssl
Fundstelle: <http://www.openssl.org/>
Lizenz: <https://github.com/openssl/openssl/blob/master/LICENSE>
Verwendung: mit eigenem Programmcode (“Entwicklungsergebnis”) dynamisch verlinkt
Version: 1.0.2g
- tz
(Zeitzoneinformationen, Teil von uclibc, Fundstelle, Lizenz und Version siehe dort)
Verwendung: liegt im Dateisystem, wird zur Laufzeit vom Betriebssystem eingelesen
- uclibc
Fundstelle: <https://uclibc-ng.org/>
Lizenz: LGPLv2.1
Verwendung: mit eigenem Programmcode (“Entwicklungsergebnis”) dynamisch verlinkt
Version: 1.0.13
- wpa_supplicant
Fundstelle: http://hostap.epitest.fi/wpa_supplicant/
Lizenz: BSD license
Verwendung: liegt im Dateisystem, Kommandozeilen-Tool wird über die Shell aufgerufen
Version: 2.6 (inkl. offiziellem KRACK Attacks Patch)
- zlib
Fundstelle: <http://www.gzip.org/zlib/>
Lizenz: http://www.zlib.net/zlib_license.html

Verwendung: mit eigenem Programmcode ("Entwicklungsergebnis") dynamisch verlinkt
Version: 1.2.8

Folgende Komponente wird direkt mit dem Programmcode ("Entwicklungsergebnis") verlinkt und wurde manuell dem Programmcode hinzugefügt.

- BACnet
Fundstelle: <http://bacnet.sourceforge.net/>
Lizenz: angepasste GPL („GPL with exception license“, <http://bacnet.sourceforge.net>)
Verwendung: mit eigenem Programmcode ("Entwicklungsergebnis") verlinkt
Version: 0.8.3

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```
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/*  
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 * Wolfgang Denk, DENX Software Engineering, wd@denx.de.  
 * Joe Hershberger, National Instruments
```

1.2 regdb

```
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Copyright (c) 2008, Johannes Berg <johannes@sipsolutions.net>  
Copyright (c) 2008, Michael Green <Michael.Green@Atheros.com>
```

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*** /

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1.5 curl

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*/

1.7 json-c

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1.8 libnl

```
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1.10 openssl

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WPA SupPLICANT
 =====

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1.13 zlib

```
/* zlib.h -- interface of the 'zlib' general purpose compression library
   version 1.2.11, January 15th, 2017
```

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Jean-loup Gailly
jloup@gzip.org

Mark Adler
madler@alumni.caltech.edu

```
*/
```

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```

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```
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```

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1.17 Lizenztext LGPLv2.1

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<signature of Ty Coon>, 1 April 1990  
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