USB-gLINK

User Manual

Rev.1.0 April 2020

olimex.com

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What is USB-gLINK

USB-gLINK is Open Source Hardware Industrial grade -25+85ºC LTE cat 4 module optimized for IoT applications with integrated LiPo Battery power supply charger and Navigation.

USB-gLINK will work with OLinuXino OSHW Linux Computers, Beaglebone and Raspberry Pi and any other PC running Windows, Linux or Android.

The LTE speed is 150Mbps downlink and 50Mbps uplink, but is backward-compatible with existing EDGE and GSM/GPRS networks. This allows USB-gLINK to connect to any existing 2G, 3G and 4G network.

Inside USB-gLINK there is build in navigation which supports: GPS, GLONASS, BeiDou/Compass, Galileo and QZSS.

The networking supported protocols are : TCP / UDP / PPP / FTP / HTTP / NTP / PING / QMI / NITZ / SMTP / MQTT / CMUX / HTTPS / FTPS / SMTPS / SSL / MMS / FILE.

USB-gLINK can operate on these bands: B1 / B2 / B3 / B4 / B5 / B7 / B8 / B12 / B13 / B18 / B19 / B20 / B25 / B26 / B28 / B38 / B39 / B40 / B41, which covers every mobile operator anywhere in the world. This allow your solution based on USB-gLINK to be sold globally without hardware changes.

There are number of carriers who already approved the module used in USB-gLINK: Deutsche Telekom (Europe), Verizon/AT&T/Sprint/U.S. Cellular/T-Mobile (North America), Telus/Rogers (Canada)

These regulatory are passed: GCF (Global), CE (Europe), FCC/PTCRB (North America), IC (Canada), Anatel (Brazil), IFETEL (Mexico), SRRC/CCC/NAL (China), KC (South Korea), NCC (Taiwan, China), JATE/TELEC (Japan), RCM (Australia & New Zealand), FAC (Russia), NBTC (Thailand), IMDA (Singapore), ICASA (South Africa)

USB-gLINK ordering options

USB-gLINK can be ordered as:

- USB-gLINK just the module
- USB-gLINK-ANT the module with GSM multiband antenna and GPS active antenna
- we also recommend you to buy USB micro cable if you do not have
- we offer LiPo batteries compatible with USB-gLINK but as these batteries are subject to many transport regulations they can be shipped only by ground i.e. in EU countries

USB-gLINK Open Source Licensee

USB-gLINK is Open Source Hardware.

The Hardware files are released under CERN OSHW licensee.
The software is released under GPL 3 licensee.
The documentation is released under CC BY-SA 3.0 licensee.

USB-gLINK software installation

If you use OLinuXino Linux SBC computers you can use the install script from this package.

Note that before you run the scrip you have to change settings.ini and to fill inside it user/pin/gateway information.

For Windows PC use these drivers.

For Linux PC (x86) use these drivers.

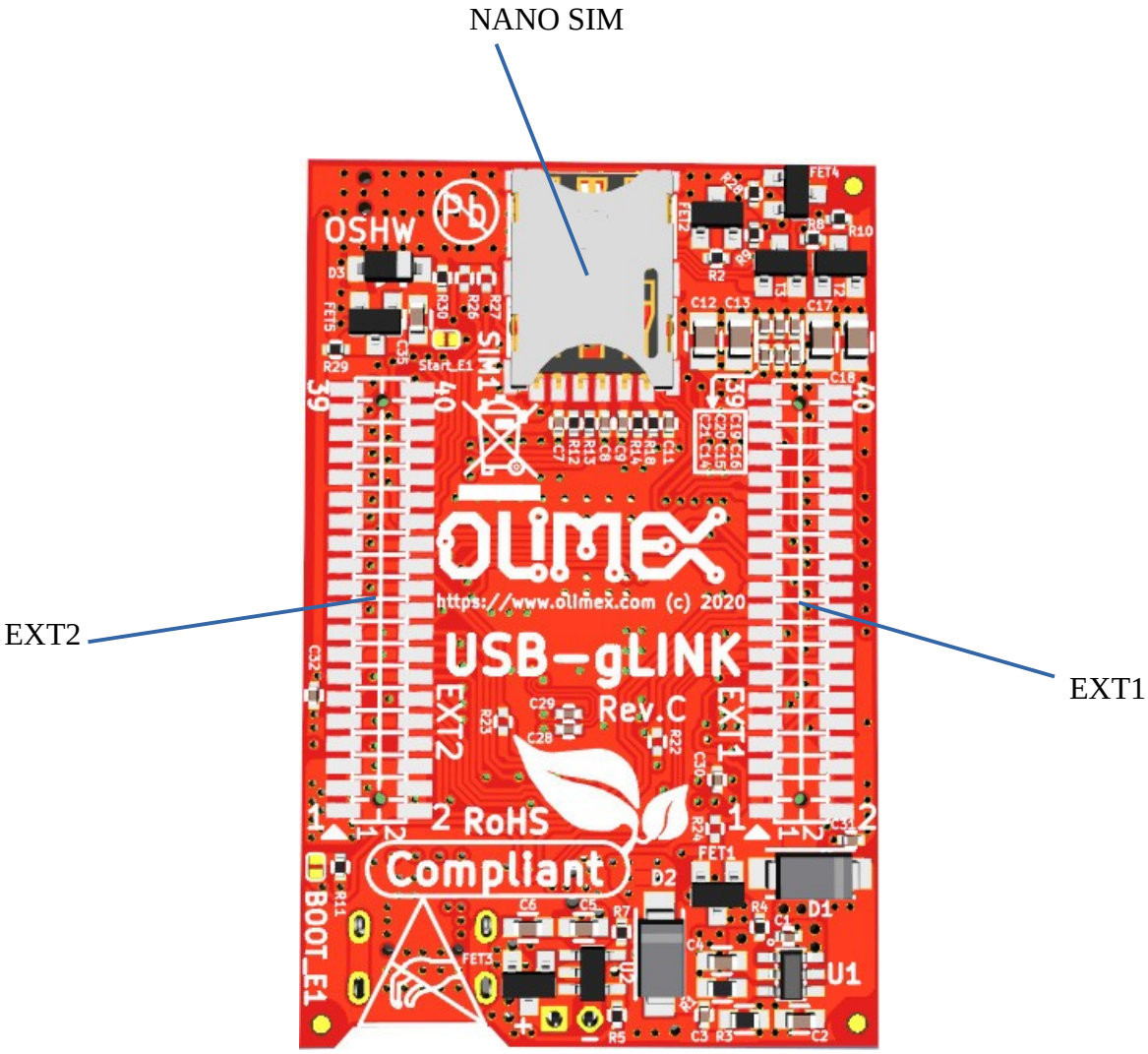
For Android use these drivers.

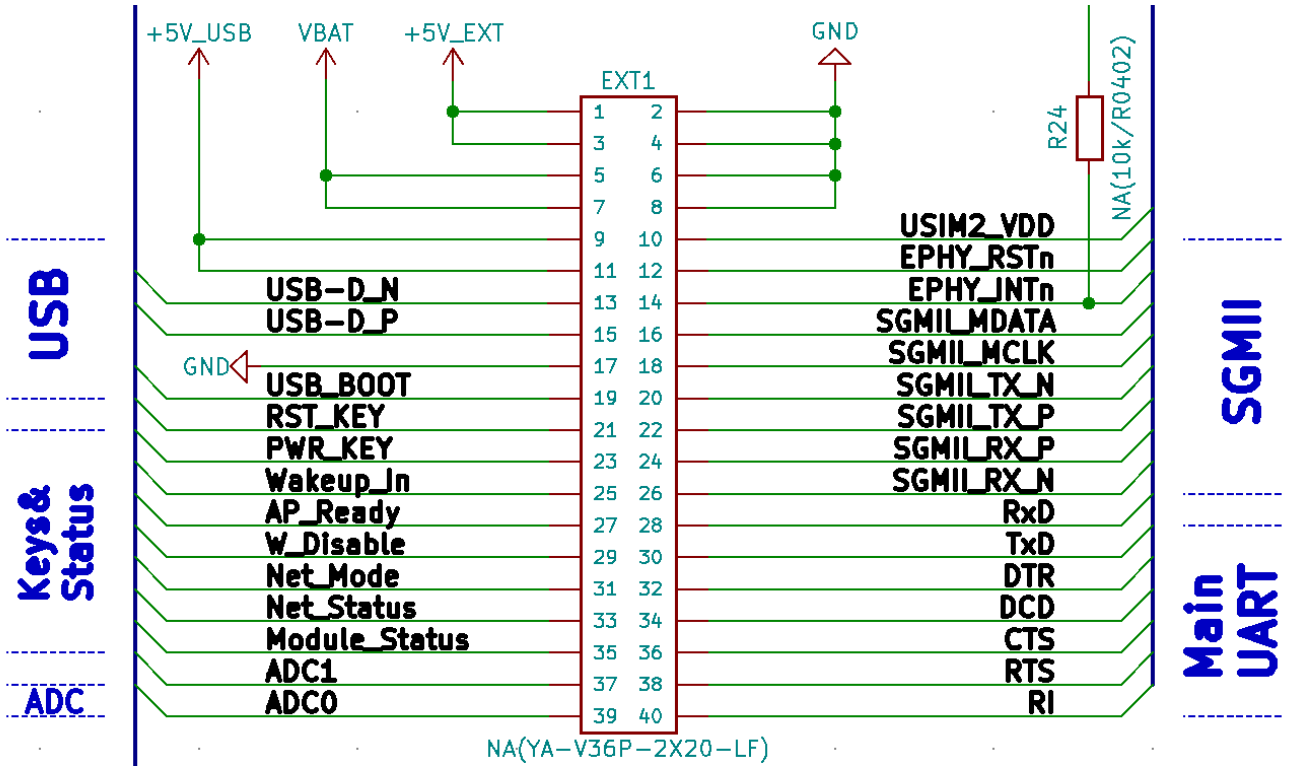
USB-gLINK connectors description:

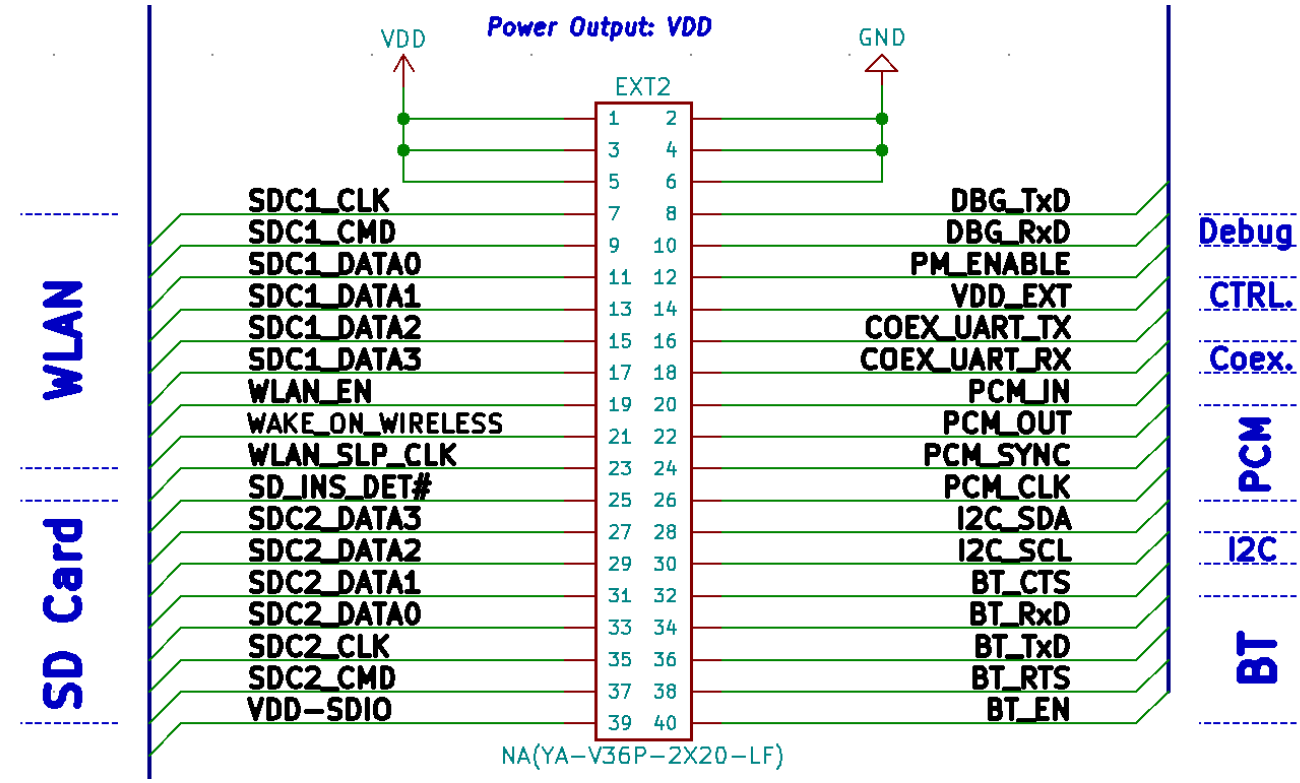
YELLOW LED:
Flicker slowly (200ms High/1800ms Low) - search network
Flicker slowly (1800ms High/200ms Low) – Idle
Flicker quickly (125ms High/125ms Low) – data transfer
ON – voice call

RED LED: On – registered to LTE network

GREEN LED: Module status – ON module is working


NANO SIM
EXT2
EXT1
OSHW
SIM1
Start_E1
olimex
https://www.olimex.com (c) 2020
USB-gLINK
Rev.C
EXT2
EXT1
2 RoHS
Compliant
BOOT_E1
FET1
FET2
FET3
FET4
D1
D2
U1


+5V_USB
VBAT
+5V_EXT
GND
EXT1
R24
NA(10k/R0402)
USB
Keys& Status
ADC
SGMII
Main UART
USB-D_N
USB-D_P
GND
USB_BOOT
RST_KEY
PWR_KEY
Wakeup_In
AP_Ready
W_Disable
Net_Mode
Net_Status
Module_Status
ADC1
ADC0
USIM2_VDD
EPHY_RSTn
EPHY_INTn
SGMII_MDATA
SGMII_MCLK
SGMII_TX_N
SGMII_TX_P
SGMII_RX_P
SGMII_RX_N
RxD
TxD
DTR
DCD
CTS
RTS
RI
1 2
3 4
5 6
7 8
9 10
11 12
13 14
15 16
17 18
19 20
21 22
23 24
25 26
27 28
29 30
31 32
33 34
35 36
37 38
39 40
NA(YA-V36P-2X20-LF)


Power Output: VDD
VDD
GND
EXT2
WLAN
SD Card
Debug
CTRL.
Coex.
PCM
I2C
BT
SDC1_CLK
SDC1_CMD
SDC1_DATA0
SDC1_DATA1
SDC1_DATA2
SDC1_DATA3
WLAN_EN
WAKE_ON_WIRELESS
WLAN_SLP_CLK
SD_INS_DET#
SDC2_DATA3
SDC2_DATA2
SDC2_DATA1
SDC2_DATA0
SDC2_CLK
SDC2_CMD
VDD-SDIO
DBG_TxD
DBG_RxD
PM_ENABLE
VDD_EXT
COEX_UART_TX
COEX_UART_RX
PCM_IN
PCM_OUT
PCM_SYNC
PCM_CLK
I2C_SDA
I2C_SCL
BT_CTS
BT_RxD
BT_TxD
BT_RTS
BT_EN
1 2
3 4
5 6
7 8
9 10
11 12
13 14
15 16
17 18
19 20
21 22
23 24
25 26
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29 30
31 32
33 34
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37 38
39 40
NA(YA-V36P-2X20-LF)

USB-gLINK power consumption

- 0.2A @ Active operation
- 22mA @ Idle
- 3mA @ Sleep
- 20 uA @ Power off

Revision History

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