LP2981 U?

VIN   VOUT
ONnOFF NC
GND

C? 10uF
C? 10uF
C? 100nF
C? 100nF
C? 100nF
C? 100nF
C? 100nF
C? 100nF

+3.3V

STM32F105TB U?

+3.3V

D? R? 330E
D? R? 330E

PA0   14
PA1   15
PA2   16
PA3   17
PA4   20
PA5   21
PA6   22
PA7   23
PA8   41
PA9 OTG_VBUS   42
PA10 OTG_ID   43
PA11 OTG_DM   44
PA12 OTG_DP   45
PA13 JTMS   46
PA14 JTCK   49
PA15 JTDI   50

VBAT   1
VDDA   13
VDD_1   32
VDD_2   48
VDD_3   64
VDD_4   19
NRST   7
BOOT0   60
PB0   26
PB1   27
BOOT1 PB2   28
JTDO PB3   55
NJTRST PB4   56
PB5   57
PB6   58
PB7   59

+3.3V

S?

R? 10K

R? 10K

R? 120E

SN65HVD230 U?

+3.3V

VCC   3   RS   8
R   4   CANH   7
D   1   CANL   6
GND   2   VREF   5

J?

USB_MINI_B

VBUS   1
D−   2
D+   3
ID   4
GND   5

J?

R? 22E
R? 22E

USBLC6−4 U?

IO1   1   IO4   6
GND   2   VBUS   5
IO2   3   IO3   4

+3.3V

CAN1_RX PB8   61
CAN1_TX PB9   62
PB10   29
PB11   30
PB12   33
PB13   34
PB14   35
PB15   36

PC0   8
PC1   9
PC2   10
PC3   11
PC4   24
PC5   25
PC6   37
PC7   38
PC8   39
PC9   40
PC10   51
PC11   52
PC12   53
PC13   2
PC14   3
PC15   4

PD0 OSC_IN   5
PD1 OSC_OUT   6
PD2   54

VSSA   12
VSS_1   31
VSS_2   47
VSS_3   63
VSS_4   18

J?

SWDIO   1
6
2
7
3
8
4
9
5

SWCLK

+3.3V

SWDIO
SWCLK

R? 330E
X? 8MHz

C? 18pF
R? 10M
C? 18pF

Notes:

Since USB is peripheral only, ID pin is unused and VBUS is connected to 3.3V.

Unused pins will be left not−connected for the first prototype.

SWDP programming signals are available on reserved CAN pins.

Firmware upgrade is possible over USB or CAN if BOOT0 is pulled high on applying power.

BOOT0 pin is connected PB7 so that firmware upgrade can be requested from firmware.

CAN tranciever slope control may be enabled by software on PB6.

USB CAN Adapter

BLACK SPHERE TECHNOLOGIES