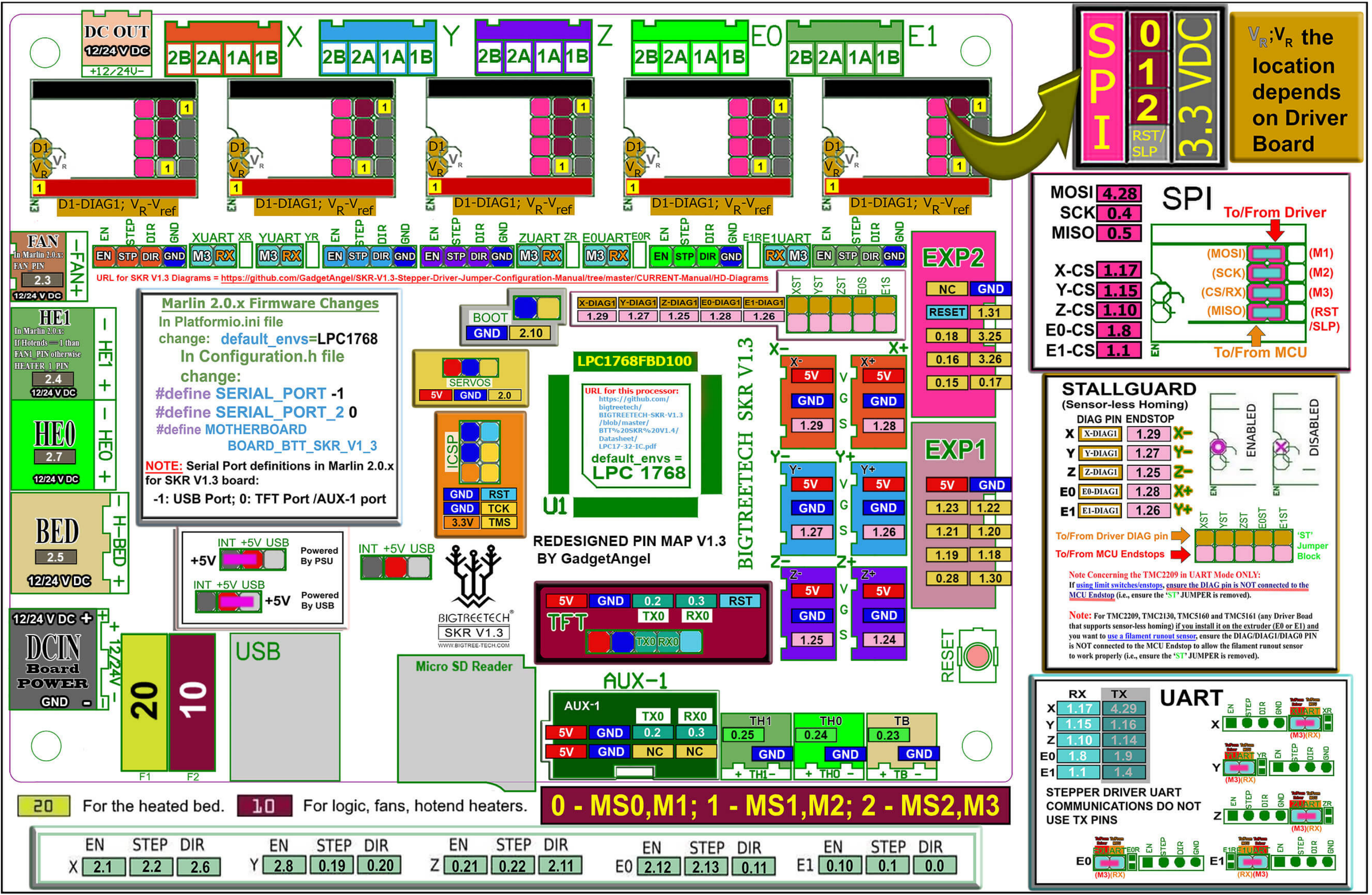
DC OUT
12/24 V DC
+12/24V-
X
Y
Z
E0
E1
2B 2A 1A 1B
D1-DIAG1; VR-Vref
EN STEP DIR GND
XUART XR
YUART YR
ZUART ZR
E0UART E0R
E1UART E1R
EN STP DIR GND
M3 RX
URL for SKR V1.3 Diagrams = https://github.com/GadgetAngel/SKR-V1.3-Stepper-Driver-Jumper-Configuration-Manual/tree/master/CURRENT-Manual/HD-Diagrams
FAN
In Marlin 2.0.x: FAN_PIN
2.3
12/24 V DC
-FAN+
HE1
In Marlin 2.0.x: If Hotends = 1 than FAN1_PIN otherwise HEATER_1_PIN
2.4
12/24 V DC
-HE1+
HE0
2.7
12/24 V DC
-HE0+
BED
2.5
12/24 V DC
-BED+
12/24 V DC +
DCIN
Board POWER
GND -
+12/24V-
20
10
F1
F2
USB
Micro SD Reader
Marlin 2.0.x Firmware Changes
In Platformio.ini file
change: default_envs=LPC1768
In Configuration.h file
change:
#define SERIAL_PORT -1
#define SERIAL_PORT_2 0
#define MOTHERBOARD
BOARD_BTT_SKR_V1_3
NOTE: Serial Port definitions in Marlin 2.0.x for SKR V1.3 board:
-1: USB Port; 0: TFT Port /AUX-1 port
INT +5V USB
+5V
Powered By PSU
Powered By USB
BIGTREETECH
SKR V1.3
WWW.BIGTREE-TECH.COM
BOOT
GND 2.10
SERVOS
5V GND 2.0
ICSP
GND RST
GND TCK
3.3V TMS
X-DIAG1 1.29
Y-DIAG1 1.27
Z-DIAG1 1.25
E0-DIAG1 1.28
E1-DIAG1 1.26
XST YST ZST E0S E1S
LPC1768FBD100
URL for this processor:
https://github.com/bigtreetech/BIGTREETECH-SKR-V1.3/blob/master/BTT%20SKR%20V1.4/Datasheet/LPC17-32-IC.pdf
default_envs =
LPC 1768
U1
REDESIGNED PIN MAP V1.3
BY GadgetAngel
BIGTREETECH SKR V1.3
X- X+
Y- Y+
Z- Z+
5V GND 1.29 1.28 1.27 1.26 1.25 1.24
V G S
TFT
5V GND 0.2 0.3 RST
TX0 RX0
AUX-1
TX0 RX0
5V GND 0.2 0.3
5V GND NC NC
TH1 0.25 GND + TH1 -
TH0 0.24 GND + TH0 -
TB 0.23 GND + TB -
RESET
EXP2
NC GND
RESET 1.31
0.18 3.25
0.16 3.26
0.15 0.17
EXP1
5V GND
1.23 1.22
1.21 1.20
1.19 1.18
0.28 1.30
SPI
0
1
2
RST/SLP
3.3 VDC
VR;VR the location depends on Driver Board
MOSI 4.28
SCK 0.4
MISO 0.5
X-CS 1.17
Y-CS 1.15
Z-CS 1.10
E0-CS 1.8
E1-CS 1.1
SPI
To/From Driver
(MOSI) (M1)
(SCK) (M2)
(CS/RX) (M3)
(MISO) (RST /SLP)
To/From MCU
STALLGUARD
(Sensor-less Homing)
DIAG PIN ENDSTOP
X X-DIAG1 1.29 X-
Y Y-DIAG1 1.27 Y-
Z Z-DIAG1 1.25 Z-
E0 E0-DIAG1 1.28 X+
E1 E1-DIAG1 1.26 Y+
ENABLED
DISABLED
To/From Driver DIAG pin
To/From MCU Endstops
XST YST ZST E0ST E1ST
'ST' Jumper Block
Note Concerning the TMC2209 in UART Mode ONLY:
If using limit switches/enstops, ensure the DIAG pin is NOT connected to the MCU Endstop (i.e., ensure the 'ST' JUMPER is removed).
Note: For TMC2209, TMC2130, TMC5160 and TMC5161 (any Driver Boad that supports sensor-less homing) if you install it on the extruder (E0 or E1) and you want to use a filament runout sensor, ensure the DIAG/DIAG1/DIAG0 PIN is NOT connected to the MCU Endstop to allow the filament runout sensor to work properly (i.e., ensure the 'ST' JUMPER is removed).
UART
RX TX
X 1.17 4.29
Y 1.15 1.16
Z 1.10 1.14
E0 1.8 1.9
E1 1.1 1.4
STEPPER DRIVER UART COMMUNICATIONS DO NOT USE TX PINS
(M3)(RX)
20 For the heated bed.
10 For logic, fans, hotend heaters.
0 - MS0,M1; 1 - MS1,M2; 2 - MS2,M3
EN STEP DIR
X 2.1 2.2 2.6
Y 2.8 0.19 0.20
Z 0.21 0.22 2.11
E0 2.12 2.13 0.11
E1 0.10 0.1 0.0