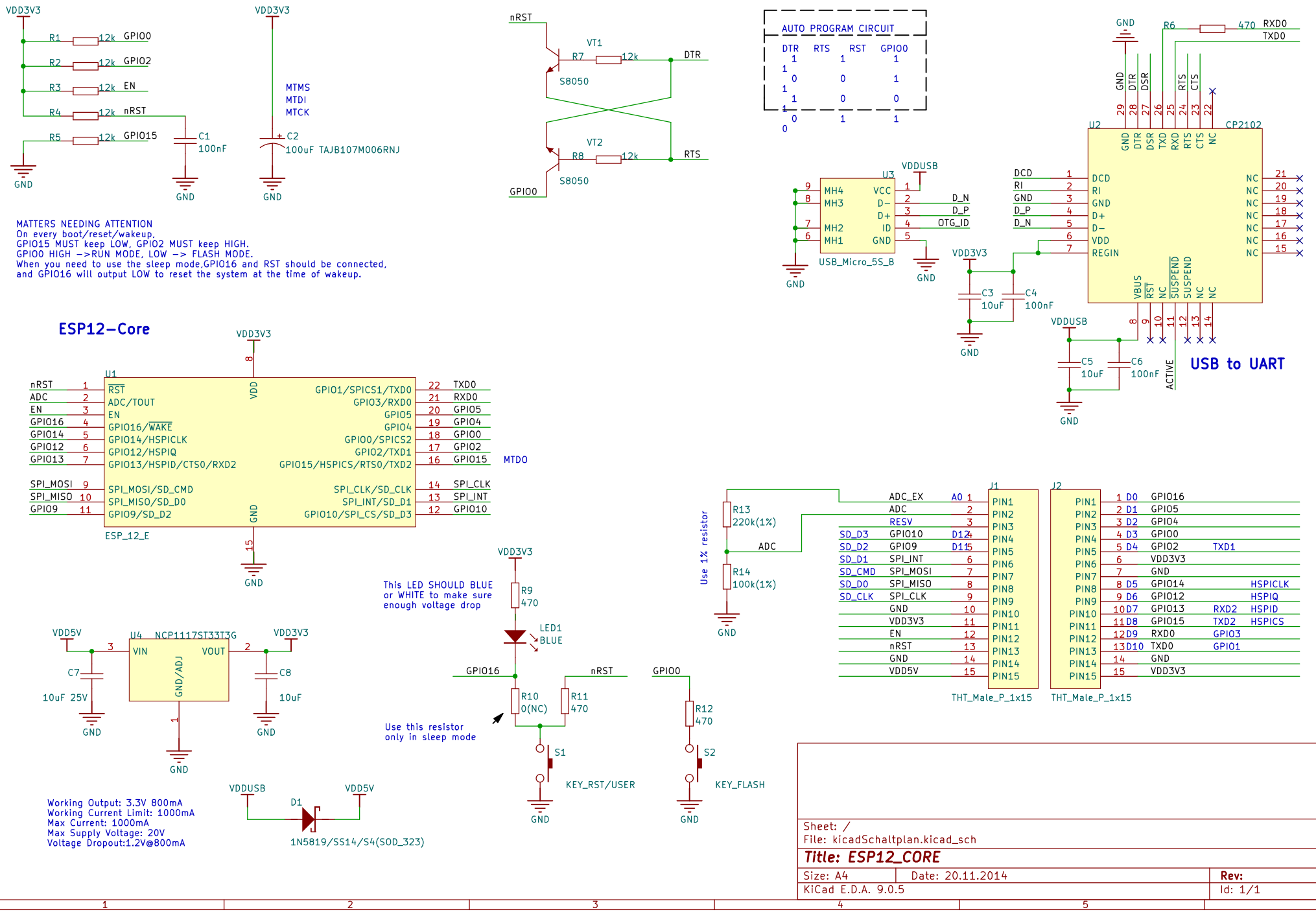
VDD3V3
R1 12k GPIO0
R2 12k GPIO2
R3 12k EN
R4 12k nRST
R5 12k GPIO15
C1 100nF
GND
MTMS
MTDI
MTCK
C2 100uF TAJB107M006RNJ
nRST
VT1
R7 12k DTR
S8050
VT2
R8 12k RTS
GPIO0
AUTO PROGRAM CIRCUIT
DTR RTS RST GPIO0
MATTERS NEEDING ATTENTION
On every boot/reset/wakeup,
GPIO15 MUST keep LOW, GPIO2 MUST keep HIGH.
GPIO0 HIGH –>RUN MODE, LOW –> FLASH MODE.
When you need to use the sleep mode,GPIO16 and RST should be connected,
and GPIO16 will output LOW to reset the system at the time of wakeup.
ESP12–Core
U1
ESP_12_E
nRST
ADC
EN
GPIO16
GPIO14
GPIO12
GPIO13
SPI_MOSI
SPI_MISO
GPIO9
RST
ADC/TOUT
GPIO16/WAKE
GPIO14/HSPICLK
GPIO12/HSPIQ
GPIO13/HSPID/CTS0/RXD2
SPI_MOSI/SD_CMD
SPI_MISO/SD_D0
GPIO9/SD_D2
VDD
GND
GPIO1/SPICS1/TXD0
GPIO3/RXD0
GPIO5
GPIO4
GPIO0/SPICS2
GPIO2/TXD1
GPIO15/HSPICS/RTS0/TXD2
SPI_CLK/SD_CLK
SPI_INT/SD_D1
GPIO10/SPI_CS/SD_D3
TXD0
RXD0
GPIO5
GPIO4
GPIO0
GPIO2
GPIO15
MTDO
SPI_CLK
SPI_INT
GPIO10
U4 NCP1117ST33T3G
VIN
VOUT
GND/ADJ
VDD5V
C7 10uF 25V
C8 10uF
This LED SHOULD BLUE
or WHITE to make sure
enough voltage drop
R9 470
LED1
BLUE
GPIO16
nRST
R10 0(NC)
R11 470
Use this resistor
only in sleep mode
S1
KEY_RST/USER
GPIO0
R12 470
S2
KEY_FLASH
Working Output: 3.3V 800mA
Working Current Limit: 1000mA
Max Current: 1000mA
Max Supply Voltage: 20V
Voltage Dropout:1.2V@800mA
VDDUSB
D1
VDD5V
1N5819/SS14/S4(SOD_323)
U3
USB_Micro_5S_B
MH4
MH3
MH2
MH1
VCC
D–
D+
ID
GND
D_N
D_P
OTG_ID
U2
CP2102
DCD
RI
GND
D_P
D_N
VDD
REGIN
VBUS
RST
SUSPEND
SUSPEND
ACTIVE
C3 10uF
C4 100nF
C5 10uF
C6 100nF
R6 470 RXD0
TXD0
USB to UART
R13 220k(1%)
R14 100k(1%)
Use 1% resistor
ADC
J1
THT_Male_P_1x15
ADC_EX
RESV
SD_D3 GPIO10
SD_D2 GPIO9
SD_D1 SPI_INT
SD_CMD SPI_MOSI
SD_D0 SPI_MISO
SD_CLK SPI_CLK
VDD3V3
EN
VDD5V
J2
THT_Male_P_1x15
GPIO16
GPIO5
GPIO4
GPIO0
GPIO2 TXD1
VDD3V3
GPIO14 HSPICLK
GPIO12 HSPIQ
GPIO13 RXD2 HSPID
GPIO15 TXD2 HSPICS
RXD0 GPIO3
TXD0 GPIO1
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Size: A4
Date: 20.11.2014
Rev:
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Id: 1/1