thingSoC Reference Design
Open Source Sockets for IoT

thingSoC

TITLE: TSOC-USBUART1

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UART
PA_FTD1_BASIC_HOST-

Pin		
1	GND	(BLK)
2	CTS	(BRN)
3	VCC	(RED)
4	TXD	(ORG)
5	RXD	(YEL)
6	DTR	(GRN)

GND CTS 3V3 TXD RXD DTR

JP1 / JP2
IO2 / IO1
SLEEP TXDEN

TSOC-24-BB
thingSoC Module Template

thingSoC

TSOC

3V3	3.3VDC	
5V0	5.0VDC	
GND	GND	
AGND	GND	

I2C1_SCL SCL 9C SCL
I2C1_SDA SDA 10C SDA
SPI1_SCK SCK 8B SCK
SPI1_MISO MISO 9B MISO
SPI1_MOSI MOSI 10B MOSI
SPI1_CS CS 7B CS
SPI1_SS2 SS2 3B SS2
SPI1_SS1 SS1 4B SS1
SPI1_IO2 IO2 1B IO2
SPI1_IO1 IO1 2B IO1
SPI1_IRQ IRQ 5B IRQ
SPI1_ATN ATN 6B ATN
UART1_RTS RTS 5C RTS
UART1_CTS CTS 6C CTS
UART1_TXD TXD 8C TXD
UART1_RXD RXD 7C RXD

UART1_RI RI 1C RI
UART1_DCD DCD 2C DCD
UART1_DSR DSR 3C DSR
UART1_DTR DTR 4C DTR

3V3 5V0 GND GND 11B 11C 12B 12C

U4
CY7C65213-28PVXI

TXD 1 USBDM 16 USB1_M
RXD 5 USBDP 15 USB1_P
CTS 11 VCC 20 5V0
RTS 3 VCCIO 4 3V3
DTR 9 RESET 19 RST
DSR 2
DCD 10
RI 6 WAKEUP

TX_LED GPIO0 23
RX_LED GPIO1 22
TXDEN GPIO2 13
POWER GPIO3 14
SLEEP GPIO4 12
BUSDETECT GPIO5 8
BCD1 GPIO6 27
BCD0 GPIO7 28

VCCD 17
GND 7
GND 18
GND 21
NC 26
NC 25
NC 24

0.1uF 0.1uF 1.0uF
C6 C5 C4 GND GND GND
GND GND

U1
NUF2221W1T2

6 D1A D1B 4
3 D2A D2B
5 VBUS
2 GND

USB1_M USB1_P

U2
NCP361SNT1G

1 IN OUT 5
3 EN FLAG 4
    GND 2

5V0
USB_FAULT
R5 10K
GND GND

USB-AB
USB "B" Device

USBID
D-
D+
VBUS
GND
SHIELD1
SHIELD2

USB1_ID
GND
L1 MH2029-300Y
GND

U3
MIC5219 3.3V

IN OUT
EN
GND BP

3V3
C3 2.2uF GND
C2 470pF GND
GND
USB_FAULT
5V0
C1 2.2uF GND

BUS_DET
RST
RX_LED
TX_LED
SLEEP
POWER

D4 D3 D2 D1
R7 10K R6 10K R4 1K R3 1K R2 1K R1 1K
3V3