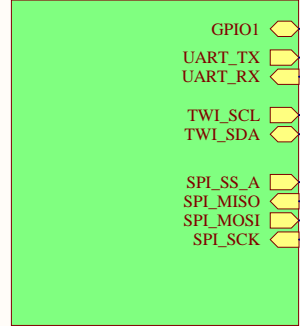
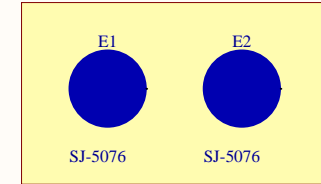
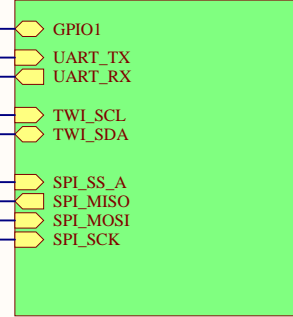


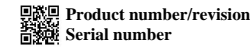
U_XPRO_Extension_TEMPLATE
88CKSCKT_XPRO_connector.SchDoc



U_CryptoSheet
88CKSCKT_XPRO_Socket.SchDoc



LABEL1

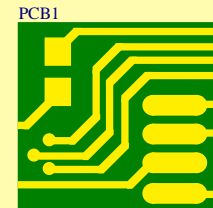


Label PCBA

BOM Variant Component Substitution Table

| VARIANT NAME | PCBA DOC | TEST DOC | TEST SFTWR |
|--------------|----------|----------|------------|
| SOIC Socket | A12-1175 | A12-1172 | A11-0350 |
| UDFN Socket | A12-1176 | A12-1173 | A11-0351 |

Place PCB component here



A08-2550
88CKSCKT PCB

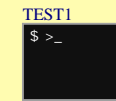
Place PCBA, TEST, TESTDOC documentation components here



A12-1175



A12-1172



A11-0350

Drawn By:
Jim Boomer
Engineer:
Jim Boomer



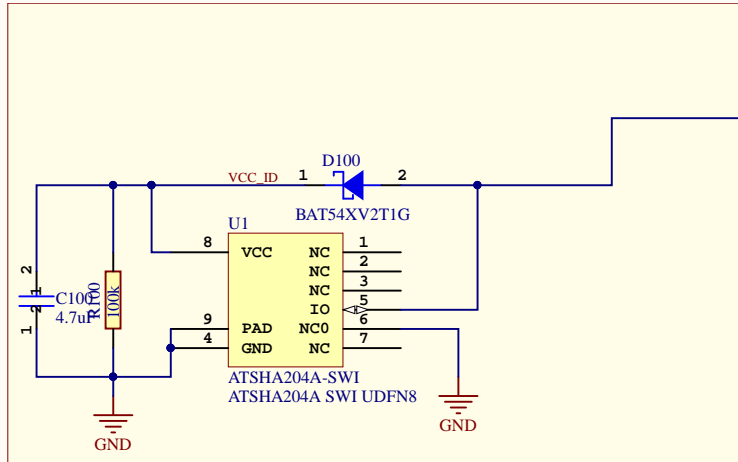
Project Title
88CKSCKTSOIC-UDFN Socket boards
Sheet Title
XPRO_Extension_TopLevel_Template_4L



| | | | |
|---------|------------------------|------------------|------------------|
| Size A4 | PCB Assembly Number: * | PCBA Revision: 1 | Date: 11/22/2017 |
| | PCB Number: * | PCB Revision: * | Page: 1 of 3 |

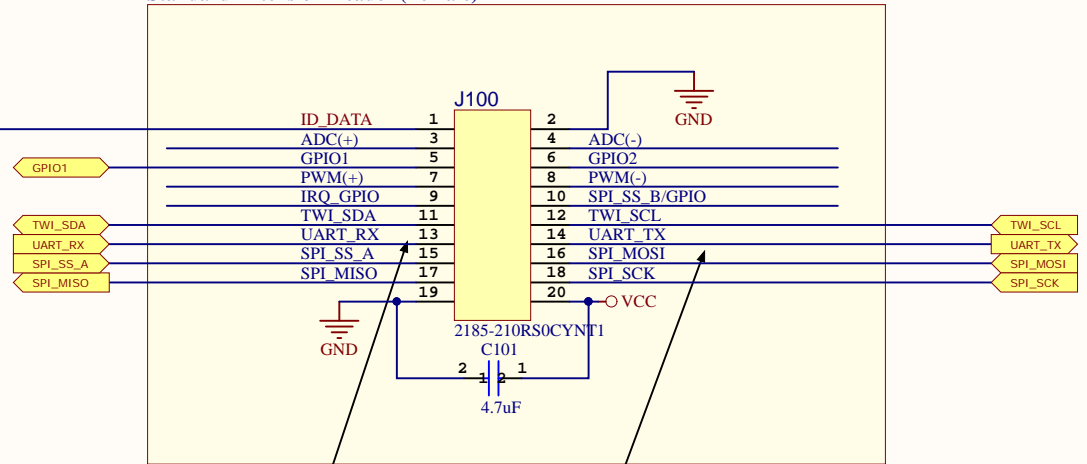
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Extension Identification



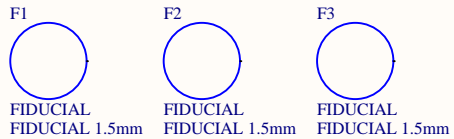
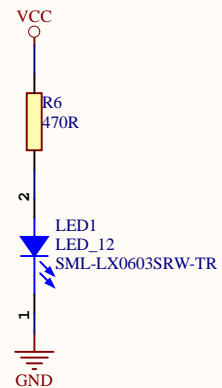
[DESIGN NOTE]
 The ATSHA204 is powered through an IO Pin from the EDBG on an MCU board.
 R100 is present to drain the capacitor C100 when power is removed from an MCU board.



Standard Extension Header (Female)

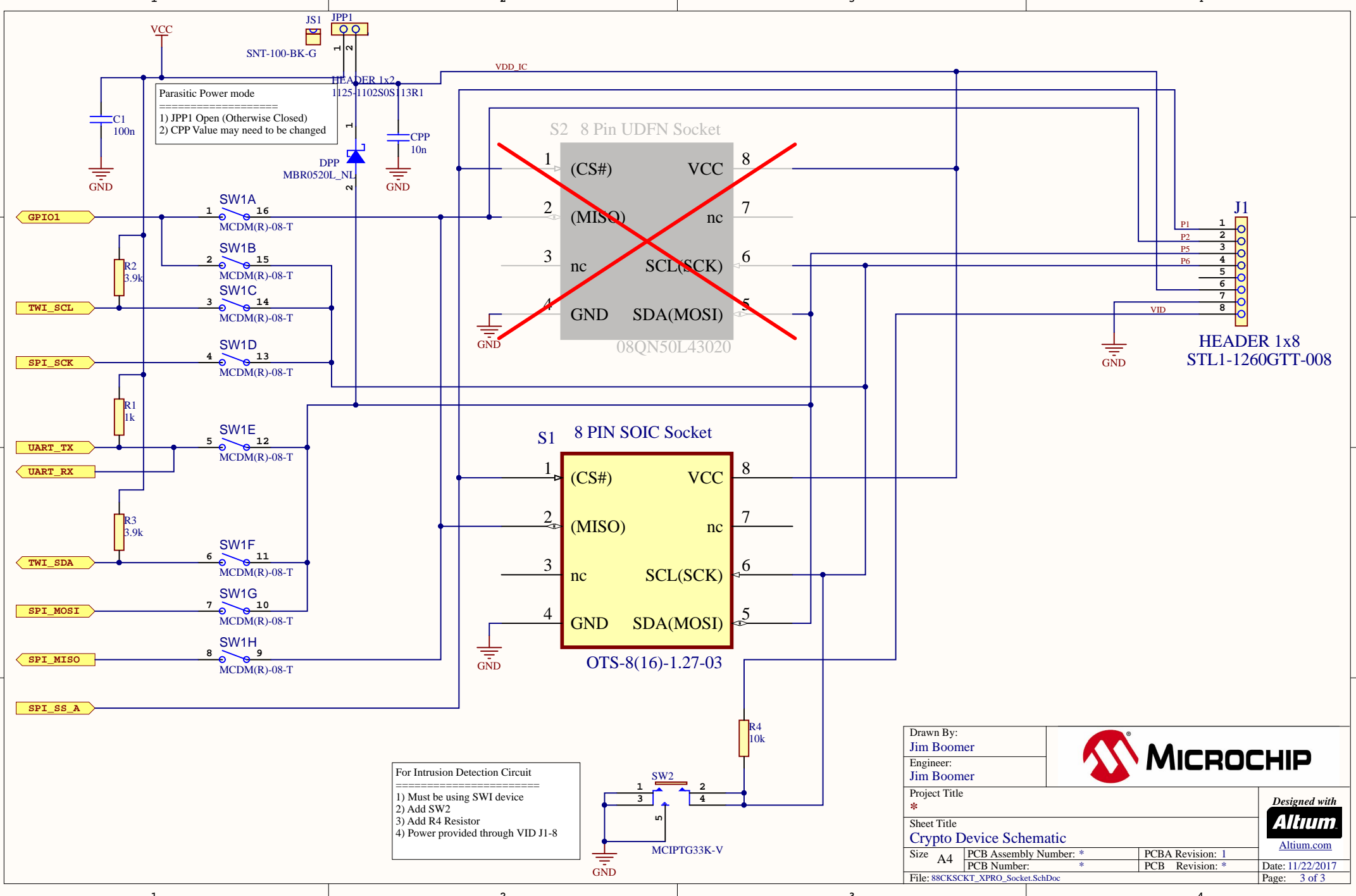


[DESIGN NOTE]
IMPORTANT NOTICE:
 UART_RX and UART_TX refer to RX (input) and TX (output) at the target device side. Connect UART_RX to TX of the UART device on the extension board and UART_TX to RX of the UART device on the extension board.

LED Power Circuit



| | | |
|--|--|------------------|
| Drawn By: Jim Boomer |  | |
| Engineer: Jim Boomer | | |
| Project Title * | Designed with  Altium.com | |
| Sheet Title XPRO_Extension_Connector_Template_4L | Date: 11/22/2017 | |
| Size A4 | PCB Assembly Number: * | PCBA Revision: 1 |
| | PCB Number: * | PCB Revision: * |
| File: 88CKSCKT_XPRO_Connector.SchDoc | | Page: 2 of 3 |

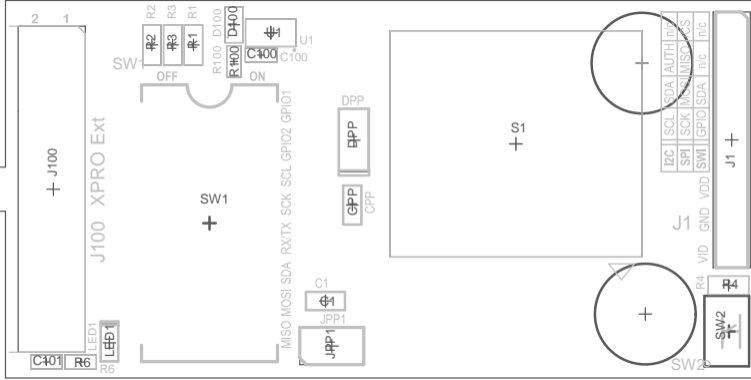


Parasitic Power mode
 =====
 1) JPP1 Open (Otherwise Closed)
 2) CPP Value may need to be changed

For Intrusion Detection Circuit
 =====
 1) Must be using SW1 device
 2) Add SW2
 3) Add R4 Resistor
 4) Power provided through VID J1-8

| | | |
|--|------------------------|------------------|
| Drawn By: Jim Boomer | | |
| Engineer: Jim Boomer | | |
| Project Title * | | |
| Sheet Title Crypto Device Schematic | | |
| Size A4 | PCB Assembly Number: * | PCBA Revision: 1 |
| | PCB Number: * | PCB Revision: * |
| File: 88CKSCKT_XPRO_Socket.SchDoc | | Date: 11/22/2017 |
| | | Page: 3 of 3 |





C401 R6 LED1 LED1

+ J100

J100 XPRO Ext

2 1

SW1

OFF

+ SW1

ON

R2 R3 R1 R100 D100 C400 C100

MISO MOSI SDA RX/TX SCK SCL GPIO2 GPIO1

JPP1 C1

GPP CPP

BPP DPP

+ S1

+ SW2 R4

J1

| | | | | |
|-----|------|------|------|-----|
| I2C | SCL | SDA | AUTH | n/c |
| SPI | SCK | MOSI | MISO | CS |
| SWI | GPIO | SDA | n/c | n/c |

+ J1 +

SW2

GND _ADC_ GPIOA _PWM_ SSB _TWI_SCL_I2C_UART_TX_MOSI_SCK_VCC

ID-EXT ADC+ GPIOB PWM+ IRQ/GPIODMA_SDA_UART_RX SSA MISO GND

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PCBA LABEL

A08-2550 Rev 3



88CKSCKT X PLAINED Pro



| MODE | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 |
|------|-----|-----|-----|-----|-----|-----|-----|-----|
| SPI | OFF | OFF | OFF | ON | OFF | OFF | ON | ON |
| I2C | ON | OFF | ON | OFF | OFF | ON | OFF | OFF |
| SW1 | OFF | ON | OFF | OFF | ON | OFF | OFF | OFF |

Switch Settings

+

+ E1

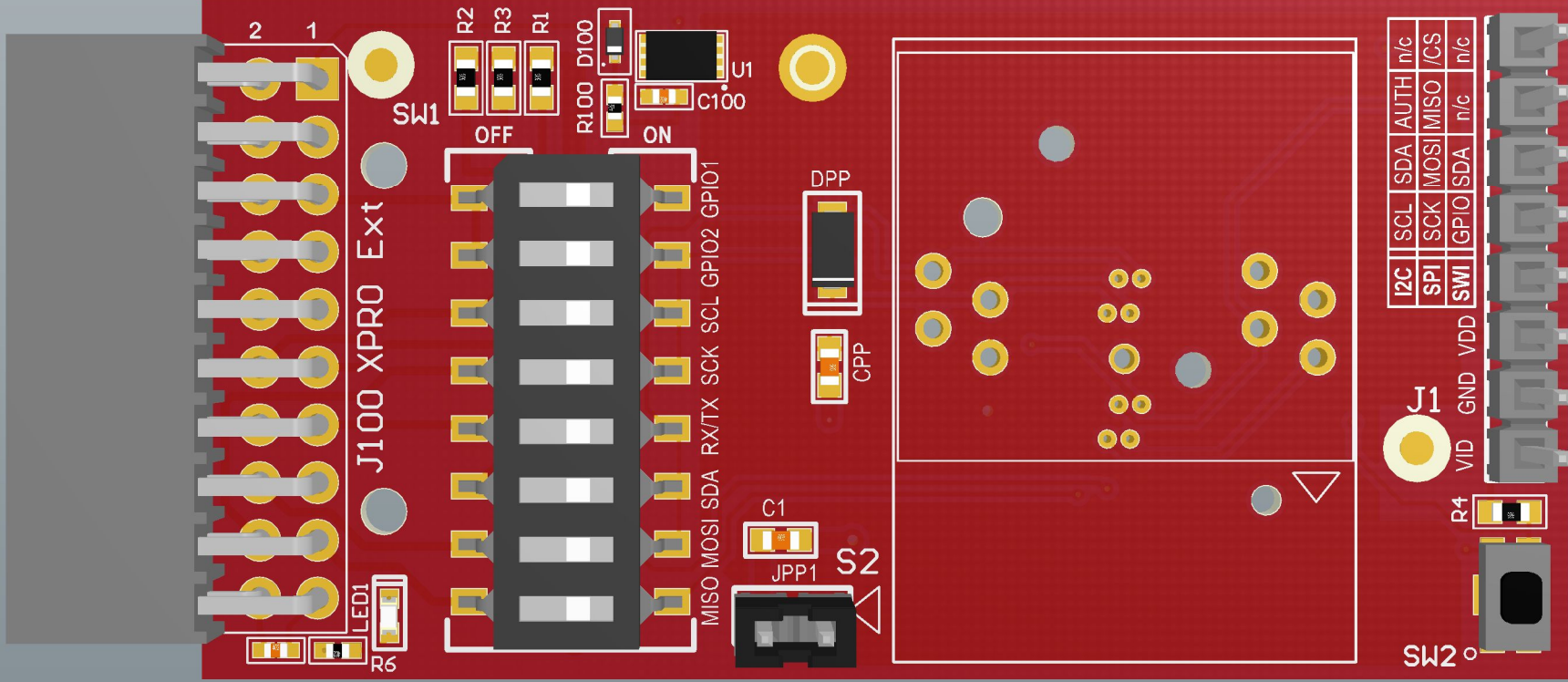
+ E2

www.microchip.com/cryptokits

+

+

+



| | | | | |
|-----|------|------|------|-----|
| I2C | SCL | SDA | AUTH | n/c |
| SPI | SCK | MOSI | MISO | /CS |
| SWI | GPIO | SDA | n/c | n/c |

| | | | | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| GND | ADC- | GPIOA | PWM- | SSB | TMU_SCL | UART_TX | MOSI | SCK | VCC |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ID-EXT | ADC+ | GPIOB | PWM+ | IR/GPIO | TMU_SDA | UART_RX | SSA | MISO | GND |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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PCBA LABEL
A08-2550 Rev 3

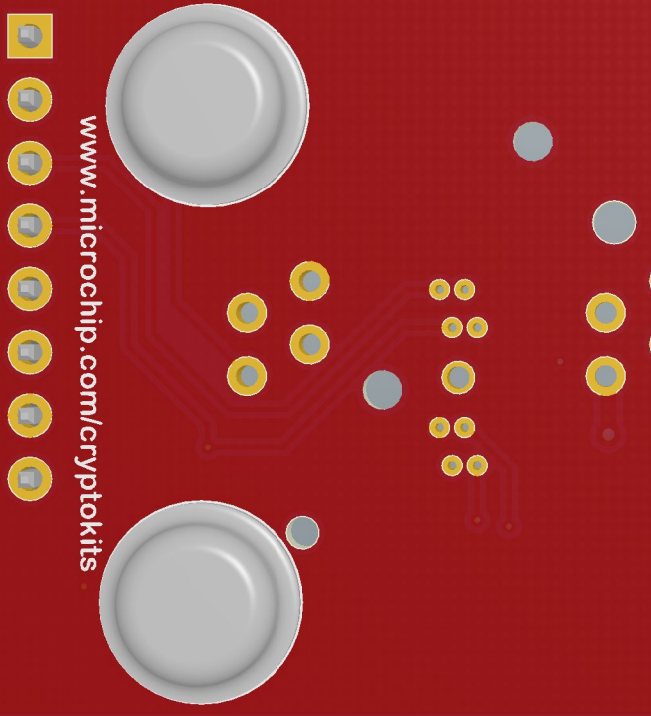


88CKSCKT X PLAINED PRO

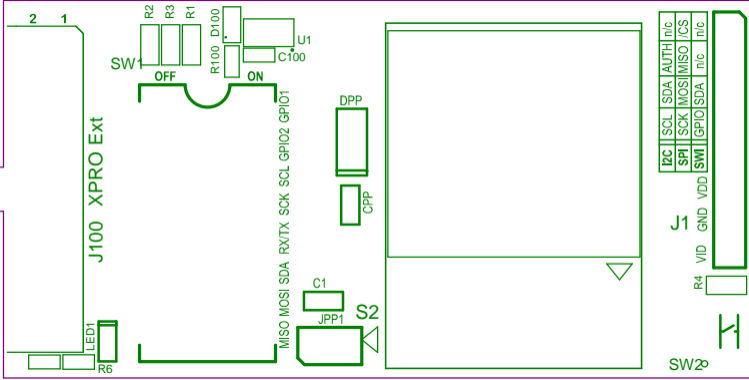


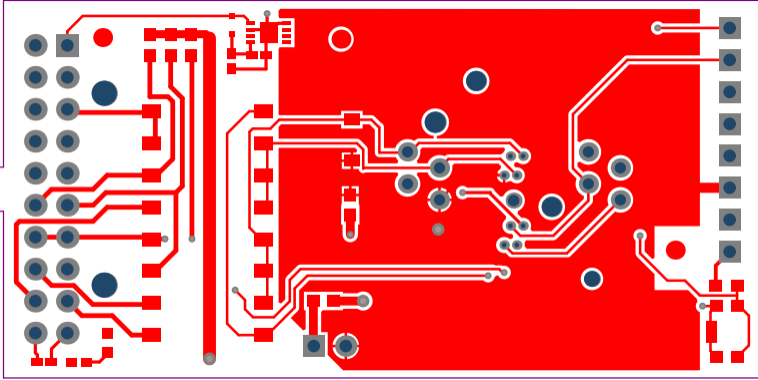
| MODE | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 |
|------|-----|-----|-----|-----|-----|-----|-----|-----|
| SPI | OFF | OFF | OFF | ON | OFF | OFF | ON | ON |
| I2C | ON | OFF | ON | OFF | OFF | ON | OFF | OFF |
| SWI | OFF | ON | OFF | OFF | ON | OFF | OFF | OFF |

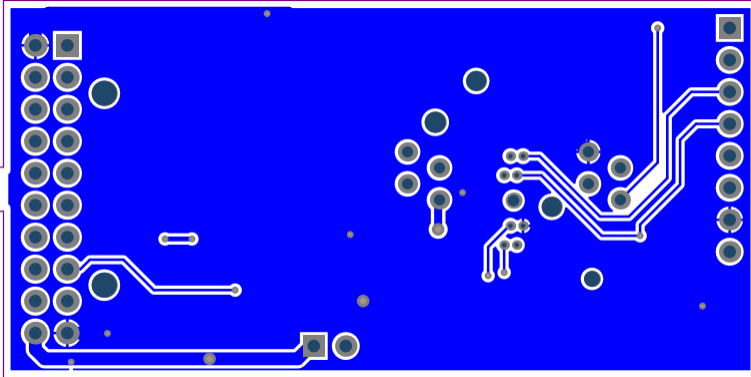
Switch Settings



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Switch Settings

| | | | | | | | | | |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| SMI | OFF | ON | OFF | OFF | ON | OFF | OFF | OFF | OFF |
| ISC | ON | OFF | ON | OFF | OFF | ON | OFF | OFF | |
| SpI | OFF | OFF | OFF | ON | OFF | OFF | ON | ON | |
| MODE | 21 | 25 | 23 | 24 | 22 | 29 | 27 | 28 | |



MICROCHIP

88CK2CK1

X

PLAINED PRO



A08-5P20 Rev 3
PCBA LABEL

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IDEXT1 VDC+ GNIOB PNM+ IRO/GNIO TMI_3DV UVRT_RX 28V M3O GND

GND VDC- GNIOA PNM- 28B TMI_SCT UVRT_TX M0B 30X VCC

Component list

Bill of Materials Fitted For Variant [SOIC Socket] of Project [88CKSCKT_XPRO.PrjPCB] (No PCB Document Selected)

Source Data From: 88CKSCKT_XPRO.PrjPCB
 Project: 88CKSCKT_XPRO.PrjPCB
 Variant: SOIC Socket



Report Date: 11/22/2017 2:54:12 PM
 Print Date: 11/22/2017 2:33:02 PM

| Fitted | Designator | Quantity | Value | Manufacturer | MPN | Description |
|------------|------------|----------|--------------------------------------|------------------------------------|--------------------|---|
| Fitted | C1 | 1 | 100n | AVX | 0603YC104KAT2A | Ceramic capacitor, SMD 0603, X7R, 16V, +/-10 % |
| Fitted | C100, C101 | 2 | 4.7uF | Murata | GRM155R60J475ME87D | Ceramic capacitor, SMD 0402, X5R, 6.3V, +/-20% (de33687) |
| Fitted | CPP | 1 | 10n | tdk | C1608COG1H103J | Ceramic capacitor, SMD 0603, NPO, 50V, A±5% |
| Fitted | D100 | 1 | BAT54XV2T1G | ON Semiconductor | BAT54XV2T1G | Schottky diode, If:200mA, Vf:0.35V, Vrrm:30V, SOD-523 |
| Fitted | DOC1 | 1 | A09-2647 PCB A Files | | | 88CKSCKTISOIC PCB A Files |
| Fitted | DPP | 1 | MBR0520L_NL | Fairchild | MBR0520L_NL | SMD Schottky diode, 0.5A 20V |
| Fitted | E1, E2 | 2 | SJ-5076 | 3M | SJ-5076 | 2.8mm adhesive feet,diam 8.0mm |
| Fitted | F1, F2, F3 | 3 | FIDUCIAL 1.5mm | | | Fiducial point for PCB coordinates 1.5mm pad and 3mm hole in mask |
| Fitted | J1 | 1 | STL1-1260GTT-008 | Garry | STL1-1260GTT-008 | 1x8 Pin Header, 2.54mm pitch, THM, pin-in-paste, (MPN seems not be valid please use 087-1-008-0-T-XS0-1260 instead) |
| Fitted | J100 | 1 | 2185-210RS0CYNT1 | WCON HARDWARE ELECTRONICS CO., LTD | 2185-210RS0CYNT1 | 2x10, female pin header receptable, right-angled, 2.54mm pitch, THM, PIP |
| Fitted | JPP1 | 1 | 1125-1102S0S113R1 | WCON HARDWARE ELECTRONICS CO., LTD | 1125-1102S0S113R1 | 1x2 pin header, 2.54mm pitch, Pin-in-Paste THM |
| Fitted | JS1 | 1 | SNT-100-BK-G | SAMTEC | SNT-100-BK-G | Jumper cap for 2.54mm pinheader |
| Fitted | LABEL1 | 1 | Label PCBA | ACT Logimark AS | 505462 | PCBA identification label PP Top White Gloss |
| Fitted | LED1 | 1 | SML-LX0603SRW-TR | Lumex | SML-LX0603SRW-TR | LED, Red, SMD 0603 |
| Fitted | PCB1 | 1 | 88CKSCKT PCB | | | Common PCB Socket Board for 88CKSCKTISOIC/88CKSCKTUDFN/88CKSCTRBH |
| Fitted | R1 | 1 | 1k | KOA | RK73H1JTTD1001F | Thick film resistor, SMD 0603, 1/10W, 1% |
| Fitted | R100 | 1 | 100k | | | Thick film resistor, SMD 0402, 1/16W, 1% |
| Fitted | R2, R3 | 2 | 3.9k | | | Thick film resistor, SMD 0603, 1/10W, 1% |
| Fitted | R4 | 1 | 10k | KOA | RK73H1JTTD1002F | Thick film resistor, SMD 0603, 1/10W, 1% |
| Fitted | R6 | 1 | 470R | | | Thick film resistor, SMD 0402, 1/16W, 1% |
| Fitted | S1 | 1 | 8 PIN SOIC Socket | Enplas | OTS-8(16)-1.27-03 | 8 Pin SOIC Socket 1.27mm Pin Pitch (150 Mil Body Width) |
| Fitted | SW1 | 1 | MCDM(R)-08-T | Multicomp | MCDM(R)-08-T | Switch 8W DIL SM Multicomp |
| Fitted | SW2 | 1 | MCPTG33K-V | Multicomp | MCPTG33K-V | SMD SWITCH, 2.8X3.8MM VERTICAL PUSH |
| Fitted | TEST1 | 1 | 88CKSCKTISOIC Test | | | Fixture test for 88CKSCKTISOIC |
| Fitted | TESTDOC1 | 1 | 88CKSCKTISOIC XPRO Test Instructions | | | 88CKSCKTISOIC XPRO Test Instructions |
| Fitted | U1 | 1 | ATSHA204A SWI UDFN8 | ATMEL | ATSHA204A-MAHCZ-T | ATSHA204A with 1-wire interface and UDFN8 package |
| Not Fitted | S2 | 0 | 8 Pin UDFN Socket | Plastronics | 08QN50L43020 | 8 Pin UDFN Socket 0.5mm Pin Pitch (Package Size 2.0 x 3.0 mm) |
| | | 31 | | | | |

Approved

Notes