

The diagram shows the SN74AUP1T97 2-input AND gate (U3) in a yellow box. It is powered by a +3V3 supply connected to pin 5 (VCC). A 100nF capacitor (C6) is connected between VCC and GND. The inputs are EventA_1V8 (pin 3, A) and EventB_1V8 (pin 6, C). The output is PPSO_3V3 (pin 4, Y). The gate is labeled U3 SN74AUP1T97DCK.

COM4_TX R9 0 U2_RX
COM4_RX R10 0 U2_TX

Sheet: USB_HUB

Module Pin	Board Pin
VBUS_USB	VBUS_USB
SerialU0_TX	USBX_RX
SerialU0_RX	USBX_TX
ESP_EN	ESP_EN
ESP_BOOT	ESP_I00
MSC_USB_P	USB_M_P
MSC_USB_N	USB_M_N

File: subsys_usb.sch

The diagram shows two switches, SW1A and SW1B, used for signal routing. SW1A is controlled by CAS-D20B1 and has two positions: TTL_SW and PWR_FLAG. In the TTL_SW position, the signal path goes from +3V3 through pin 1 to pin 2, then to a green line labeled TTL_MSC. In the PWR_FLAG position, the signal path goes from +5V through pin 3 to pin 2, then to a green line labeled TTL_MSC. SW1B is controlled by SW1B and also has two positions: TTL_SW and PWR_FLAG. In the TTL_SW position, the signal path goes from +3V3 through pin 4 to pin 5, then to a green line labeled TTL_ESP. In the PWR_FLAG position, the signal path goes from +5V through pin 6 to pin 5, then to a green line labeled TTL_ESP. The TTL_MSC and TTL_ESP lines are green, while the PWR_FLAG lines are blue.

Sheet: Power

VBUS.MSC
 VBUS.ESP
 VBUS.PXH
 VBUS.AXM
 VBUS.USB

File: subsys_power.sch

VBUS.MSC
 VBUS.ESP
 VBUS.PXH
 VBUS.AXM
 VBUS.USB
 GND

PWR_FLAG
 PWR_FLAG
 PWR_FLAG
 PWR_FLAG
 PWR_FLAG
 PWR_FLAG

Sheet: Connectors

JST_Mosaic

SerialMSC.RX → MSC_RX
 SerialMSC.TX → MSC_TX
 EventA_3V3 → EventA
 PPSQ_3V3 → PPSQ

JST_Wrover

SerialU1.RX → ESP_RX
 SerialU1.TX → ESP_TX
 SerialU1.RTS → ESP_RTS
 SerialU1.CTS → ESP_CTS

JST_Pixhawk

SerialPXH.RX → PXH_RX
 SerialPXH.TX → PXH_TX
 SerialPXH.RTS → PXH_RTS
 SerialPXH.CTS → PXH_CTS

VBUS

VBUS.MSC → VBUS_JSTM
 VBUS.ESP → VBUS_JSTW
 VBUS.PXH → VBUS_JSTP
 VBUS.AXM → VBUS_AXM

Advanced

M_RST → MSC_RST
 EventB → EventB_3V3
 LOG_BUTTON → LOG_BUTTON
 GP1 → GP1
 GP2 → GP2

Sensor

SEN_VPD → Sensor.VP
 SEN_VND → Sensor.VN
 SEN_SCL → Sensor.SCL
 SEN_SDA → Sensor.SDA

AsterX only

AXM_RXD → SerialAXM.RX
 AXM_TXD → SerialAXM.TX
 AXM_RTS → SerialAXM.RTS
 AXM_CTS → SerialAXM.CTS
 LED_GPIO → LED_GPIO
 LOG_LED → LOG_LED
 MSC_RDY → MSC_RDY

TTL ref

TTL_MSC → TTL_MSC
 TTL_ESP → TTL_ESP

File: subsys_connectors.sch

Sheet: Ethernet

Signal	Direction	Internal Signal	Signal
EtherMSC_RST	Input	ME_RST	EtherESP_RST
EtherMSC_MDIO	Input	ME_MDIO	EtherESP_MDIO
EtherMSC_MDC	Input	ME_MDC	EtherESP_MDC
EtherMSC_RXD1	Input	QME_RMII_RXD1	EtherESP_RXD1
EtherMSC_RXD0	Input	QME_RMII_RXD0	EtherESP_RXD0
EtherMSC_RXER	Input	QME_RMII_RXER	
EtherMSC_TXD1	Input	ME_RMII_TXD1	EtherESP_TXD1
EtherMSC_TXD0	Input	ME_RMII_TXD0	EtherESP_TXD0
EtherMSC_TXEN	Input	ME_RMII_TXEN	EtherESP_TXEN
EtherMSC_CLK	Input	ME_RMII_CLK	EtherESP_CLK
EtherMSC_CRS_DV	Input	QME_RMII_CRS_DV	EtherESP_CRS_DV

File: subsys_ethernet.sch

Sheet: LEDs	
LED_GP	▷ GPLED
GP1	▷ GP1
LOG_LED	▷ SDLOG
LED_WiFi	▷ WiFi
LED_Bt	▷ Bluetooth

File: subsys_led.sch

The schematic diagram illustrates the power and antenna sections of the MMICX-J-P-H-RA-TH1 module. It features the following components and connections:

- Power Section:**
 - VANT:** Connected to a +5V supply.
 - PWR_FLAG:** A flag pin connected to the +5V supply.
 - FB1:** A fuse (MPZ1608R391AT, 390R @ 100MHz, 120mR) connected in series with the +5V supply.
 - C12:** A capacitor (10uF, 10V) connected to ground.
- Antenna Section:**
 - ANT_1:** Connected to the module via inductor L1 (744786139A, 39nH @ 100MHz, 1400MHz).
 - ANT_2:** Connected to the module via inductor L2 (744786139A, 39nH @ 100MHz, 1400MHz).
 - C8:** A capacitor (100nF, 10V) connected to ground.
 - D1:** A diode (SES0402X1BN-0010-098) connected to ground.
- Module Connections:**
 - J5:** MMCX-J-P-H-RA-TH1 connector.
 - J6:** 1909763-1 DNS connector.
 - J3:** MMCX-J-P-H-RA-TH1 connector.
 - J4:** 1909763-1 DNS connector.
- Resistors:**
 - R15, R16:** 0 DNS.
 - R13, R14:** 0 DNS.

The diagram shows the U4 FEMCxxxGTT module with the following connections:

- Top Pins:**
 - F5: eMMC_VCCQ
 - F6: eMMC_VCC
 - F7: eMMC_VCC
 - F8: eMMC_VCC
 - F9: eMMC_VCC
 - F10: eMMC_VCC
- Left Pins:**
 - K5: MSC_RDY
 - K6: SDcard.CLK
 - K7: SDcard.CMD
 - K8: SDcard.DATA
- Bottom Pins:**
 - A6: VSS
 - A7: VSS
 - A8: VSS
 - A9: VSS
 - A10: VSS
 - A11: VSS
- Right Pins:**
 - M4: VCCQ
 - M5: VCCQ
 - M6: VCCQ
 - M7: VCCQ
- Internal Components:**
 - C7: 1uF, 10v capacitor connected to SDcard.DATA and GND.
 - C9: 100nF capacitor connected to SDcard.DATA and GND.
 - R11: 10k resistor connected to SDcard.DATA and +3V3.
 - R12: 10k resistor connected to SDcard.CMD and +3V3.
 - C10: 100nF capacitor connected to eMMC_VCC and GND.
 - C11: 2uF, 10V capacitor connected to eMMC_VCC and GND.
 - C13: 100nF capacitor connected to eMMC_VCCQ and GND.
 - C14: 1uF, 10V capacitor connected to eMMC_VCCQ and GND.
 - C15: 2uF, 10V capacitor connected to eMMC_VCCQ and GND.