

```
Rev05
Done: Add +3.3v on OFF of Switch
Done: 12 MORE SWITCHES FOR AOS
Done: Add connector for LCD & keypad
Done: Change board to board connector alo
Done: Now has 32inputs, more relays & aos
Done: add pressure sensor for RothBros
Done: change input voltage to 3.3V
Done: another RS485 port
Done: leds for coms/heart
```

```
Rev06
    TBD: new enclosure
    DONE: fix mux chsel pins, maybe add a latch
    DONE: change the communication way to SPI
    DONE: modify the debug port
    DONE: change RX485_EN pin
```

```
Rev07
TBD: new enclosure
DONE: fix pull-up resistor for debugger
DONE: modify the vref to 3v
DONE: change the choose pin of analog input
DONE: add 74ls244 for checking switch status
DONE: modify the uart
DONE: modify the SPI port
```

```
Rev08
    TBD: new enclosure
    DONE: change the way for checking input to jumper, software check is not available
    DONE: change check switch status way to old way.
    DONE: enlarge the board
```

```
Rev09
  TBD: new enclosure
  DONE: add silk screen to indicate the input jumper
  DONE: modify the footprint of cpu
```

```
Rev10
TBD: new enclosure
DONE: change drive pin of U1.
DONE: modify the footprint of J6
DONE: modify the silk screen of JUMPER6
TBD: convert the Mini RS485 ports to 5V isolated
```

```
Rev11
  TBD: new enclosure
  Done: move RS485 to bottom board
  Done: add jumper for ISP
```

```
Rev14

Done: add HEART_BEAT LED
Done: make board bigger
done: add more silk screen
```

```
Rev15

Done: Modify 32 inputs
Done: No pressure sensor now, deleted pressure net name.
Done: Add zero ohm R for analog gnd tie point
Done: put RS485_EN on cpu
Done: delete isp jumper
Done: use in3l & 32 for high speed counters
Done: put zigbee on i2c port
Done: Add leds: heart, zig rx/tx
```

Rev16

Done: Change the footprint of LED

Done: Add pull-up resistors for SM5964's P0 port

Rev17
Top is not updated this rev, only the bottom

```

Rev18
Done: Fix Silk screen for led text
TBD: Rename components
TBD: Need to change silk screen gerber, other layers are the same as Rev16
TBD: Board isnt made yet
Done: change SM5964A to SM5964
Done: connect SW1-SW8 to pull-up resistor
Done: change LED circuit, controlled by new SM5964

```

Rev19

Done: With double row J18 to J43 single needle

Done: With double row J18 to J43 single
Rev20
tbd: add silk screen for input pin
tbd: change the footprint of power switch

Rev21
DNE:add two 16 channel input module replace jumpers
DNE:modify 3.3V wire which close to 36V

Rev23
Done:STM32F103ZE replace all MCU

```
Rev24
DONE:fix MAX3232 NETS.
DONE:Connect SW off PIN to GND
DONE: change Q1 2N2907 to 2N2222.
DONE: 2N7002 replace 2803 .
```

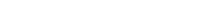
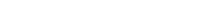
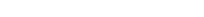
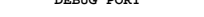
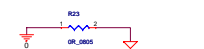
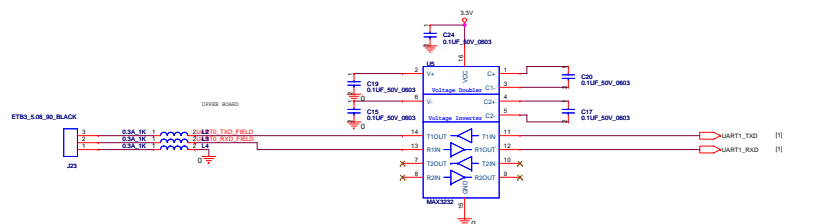
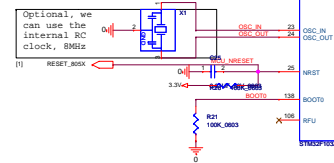
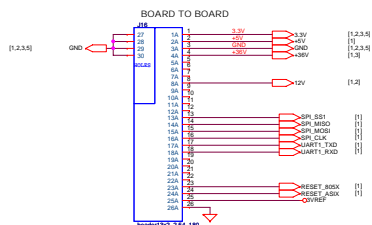
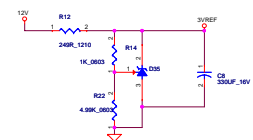
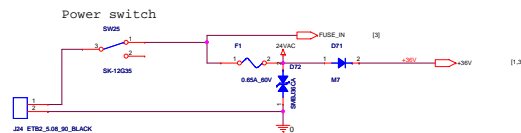
Rev25
DONE:Modify board line , fit BOT board .

Rev26:
TBD:Delete Relay and Related components .

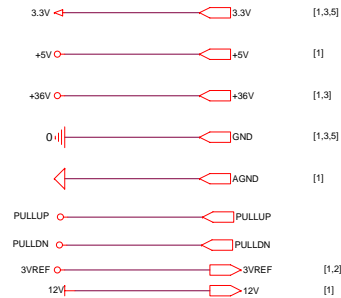
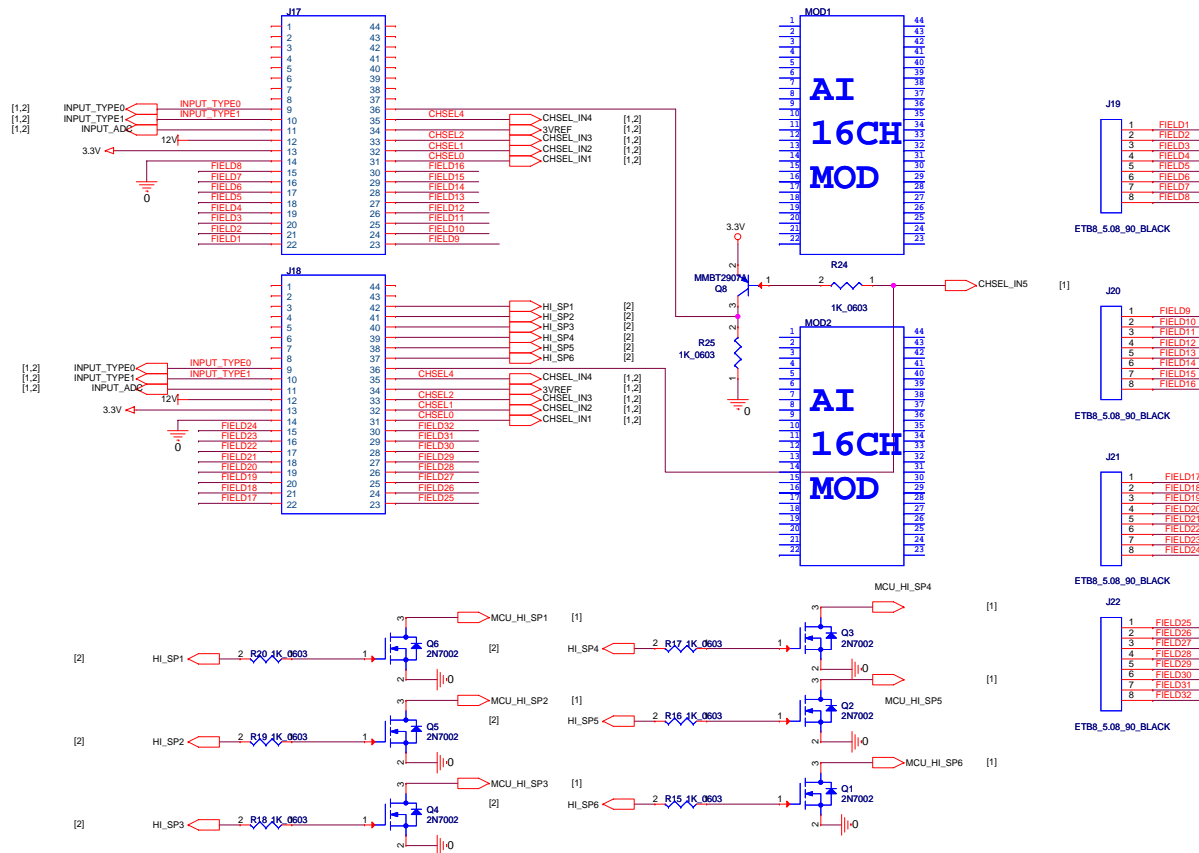
Rev27:
TBD:Delete R12 change to 249R 1210.

<Core Design>

Title			
MP24_TOP			
Size B	Document Number	Revision	Rev REV25
Date:	Monday, July 17, 2017		Sheet 1 of 1



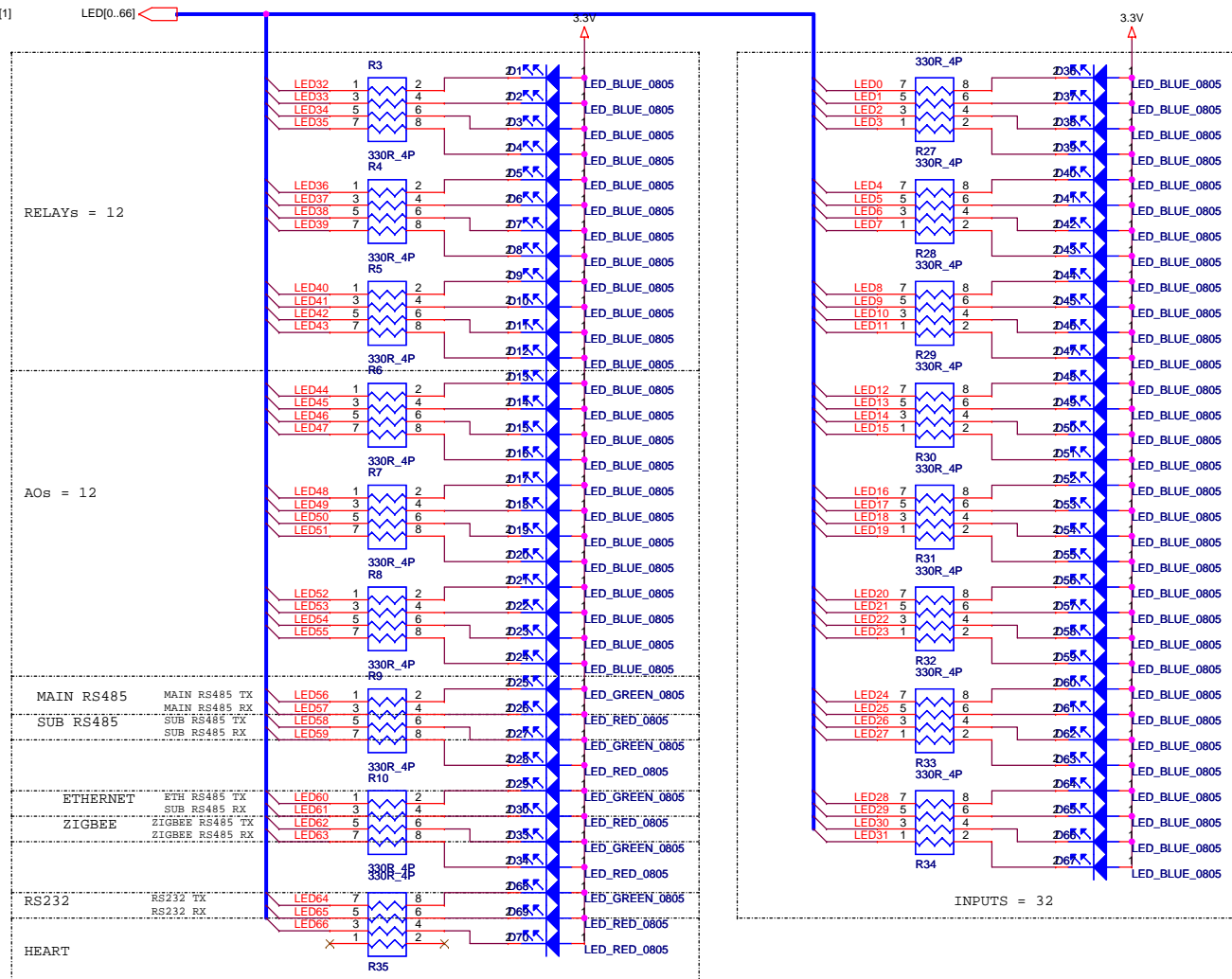
«Circ Design»				
File	MPLA_TOP			
Size	1	Microcontroller	CPU_STM32F103C8	Rev
Date	Monday, July 17, 2017	Page	1	of 5



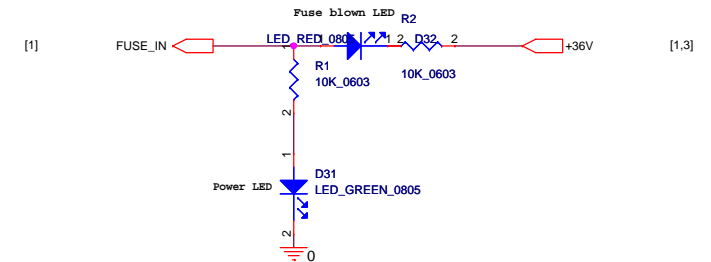
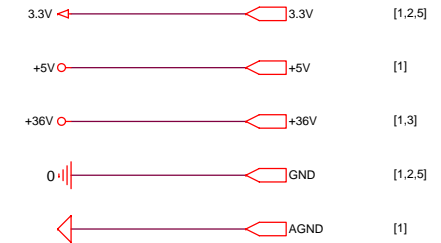
TOTAL 67 LEDs

[1]

LED[0..66]

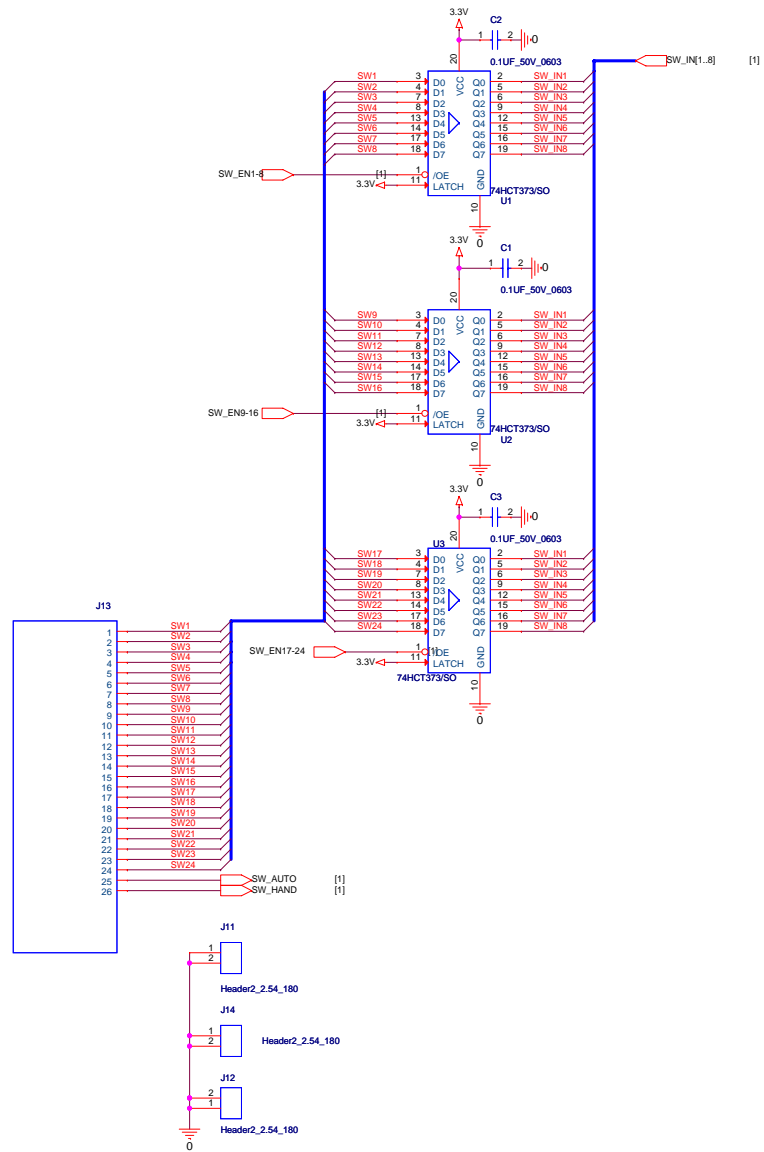


```
TX=GREEN LED
RX=RED LED
UI AO DO =BLUE LED
```



<Core Design>

Title MP24_TOP			
Size A3	Document Number LED		Rev REV25
Date:	Thursday, June 15, 2017	Sheet	3 of 5



<Core Design>			
Title			
MP24_TOP			
Size	Document Number	SWITCH	Rev
C			rev24
Date:	Thursday, June 15, 2017	Sheet	5 of 5