LEDS

+3V3
D3
LED GREEN
R2
1K
GND

+3V3
D4
LED RED
R3
1K
PB7

PORT

+5V 1
GND 2
PB7 3
PB1 4
PA7 5
PA6 6
PA5 7
PA4 8
PC19 9
PA3 10
PA2 11
+3V3 12
J1
Conn_01x12

+3V3 1
GND 2
PC16 3
PC17 4
PC18 5
PA9 6
PA10 7
PA11 8
PC3 9
PA0 10
PA1 11
GND 12
J2
Conn_01x12

MCU

+3V3
U3
CH32X033F8P6
VCC 9

PB1 3 PB1   PA0 14 PA0
PB7 4 PB7/RST   PA1 15 PA1
                  PA2 16 PA2 -->TX
PC3 13 PC3   PA3 17 PA3 <--RX
PC16 5 PC16/UDM   PA4 19 PA4
PC17 6 PC17/UDP   PA5 20 PA5
PC18 8 PC18/SWIO PA6 1 PA6
PC19 18 PC19/SWCK PA7 2 PA7
                  PA9 10 PA9
C5   PA10 12 PA10
100nF GND 7   PA11 11 PA11

RESET_CIRCUIT
GND

USB

J3
USB_C_Receptacle

VBUS A4   +VBUS 3
CC1 A5 TP2
CC2 B5
D- A7 DM R10 22 PC16
D- B7
D+ A6 DP R8 22   PC17
D+ B6
       D+ TP1
SHIELD GND
S1 A1
GND

USB SWITCH

BAT54S
+5V
U2
MIC2026-1BM
D1
           IN 7   ENA 1
                       FLGA
           OUTA 8
C2   C6   OUTB 5   ENB 4   R9 10K PB1
10uF 1uF   FLGB
           GND 6
GND

POWER

+5V
U1
MCP1703Ax-330xxTT
+3V3
       VI 3   VO 2
C3   GND   C4
100nF   1   10uF
GND

DEBUG

PC18 R4 33 SWIO
PC19 R5 33 SWCK
PB7 R1 33 RST
PA2 R6 10K RXD
PA3 R7 10K TXD

J4
DEBUG
+5V 1   2 RST
    3   4
GND 5   6 GND
SWIO 7   8 TXD
SWCK 9   10 RXD

GND GND A1 A0 C3 C11 A11 A10 A9 C18 C17 C16 GND GND +3V3

J4

R5
R4
R6
C3
R7
R1

U3

R3
C2
R2
C3
C3
C4

D1

U1.

J2

J3

J1

+3V3 A2 A3 C19 A4 A5 A6 A7 B1 B7 GND +5V

MIRTILLO BLU #1

TP1
R8
TP2
R10
C2 C6
R9
U2

C:\dirpers\Progetti x MCU\MIRTILLO-BLUE\hw\MIRTILLO-BLU\MIRTILLO-BLU.kicad_sch

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Eeschema 8.0.2

Component Count:27

Ref	Qnty	Value	Part	Datasheet	Description	Vendor	DNP
C2, C4	2	10uF	Device:C	~	Unpolarized capacitor		
C3, C5	2	100nF	Device:C	~	Unpolarized capacitor		
C6	1	1uF	Device:C	~	Unpolarized capacitor		
D1	1	BAT54S	Device:D_Schottky_Dual_Series_AKC_Parallel	~	Dual Schottky diode, anode/cathode/center		
D3	1	LED GREEN	Device:LED	~	Light emitting diode		
D4	1	LED RED	Device:LED	~	Light emitting diode		
J1, J2	2	Conn_01x12	Connector_Generic:Conn_01x12	~	Generic connector, single row, 01x12, script generated (kicad-library-utils/schlib/autogen/connector/)		
J3	1	USB_C_Receptacle	Connector:USB_C_Receptacle_USB2.0_14P	https://www.usb.org/sites/default/files/documents/usb_type-c.zip	USB 2.0-only 14P Type-C Receptacle connector		
J4	1	DEBUG	Connector_Generic:Conn_02x05_Odd_Even	~	Generic connector, double row, 02x05, odd/even pin numbering scheme		

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Refs	Qty	Value	Footprint	Datasheet	Description
					(row 1 odd numbers, row 2 even numbers), script generated (kicad-library-utils/ schlib/autogen/ connector/)
R1, R4, R5	3	33	Device:R_US	~	Resistor, US symbol
R2, R3	2	1K	Device:R_US	~	Resistor, US symbol
R6, R7, R9	3	10K	Device:R_US	~	Resistor, US symbol
R8, R10	2	22	Device:R_US	~	Resistor, US symbol
TP1	1	D+	Connector:TestPoint	~	test point
TP2	1	D-	Connector:TestPoint	~	test point
U1	1	MCP1703Ax-330xxTT	Regulator_Linear:MCP1703Ax-330xxTT	http://ww1.microchip.com/ downloads/en/ DeviceDoc/20005122B.pdf	Low Quiescent Current LDO Regulator, 3.3V, 250mA, Vin<=16V, SOT-23
U2	1	MIC2026-1BM	Power_Management:MIC2026-1xM	https://ww1.microchip.com/ downloads/aemDocuments/ documents/APID/ ProductDocuments/DataSheets/ MIC2026-MIC2076-Dual-Channel-Power-Distribution-Switch-DS20006443A.pdf	Dual-channel, high side, power distribution switch, 2.7V-5.5V, Active High Output, SOIC-8
U3	1	CH32X033F8P6	MCU_WCH_CH32X03x:CH32X033F8P6	https://www.wch-ic.com/ downloads/ CH32X035DS0_PDF.html	WCH Microcontroller, QingKe 32-bit RISC-V core, 62Kbyte FLASH, 20 Kbyte SRAM, 1 ADC 10bits, USART,

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I2C, SPI, USB 2.0,
SWD 2-wire debug
interface, USB 2.0,
USB-PD