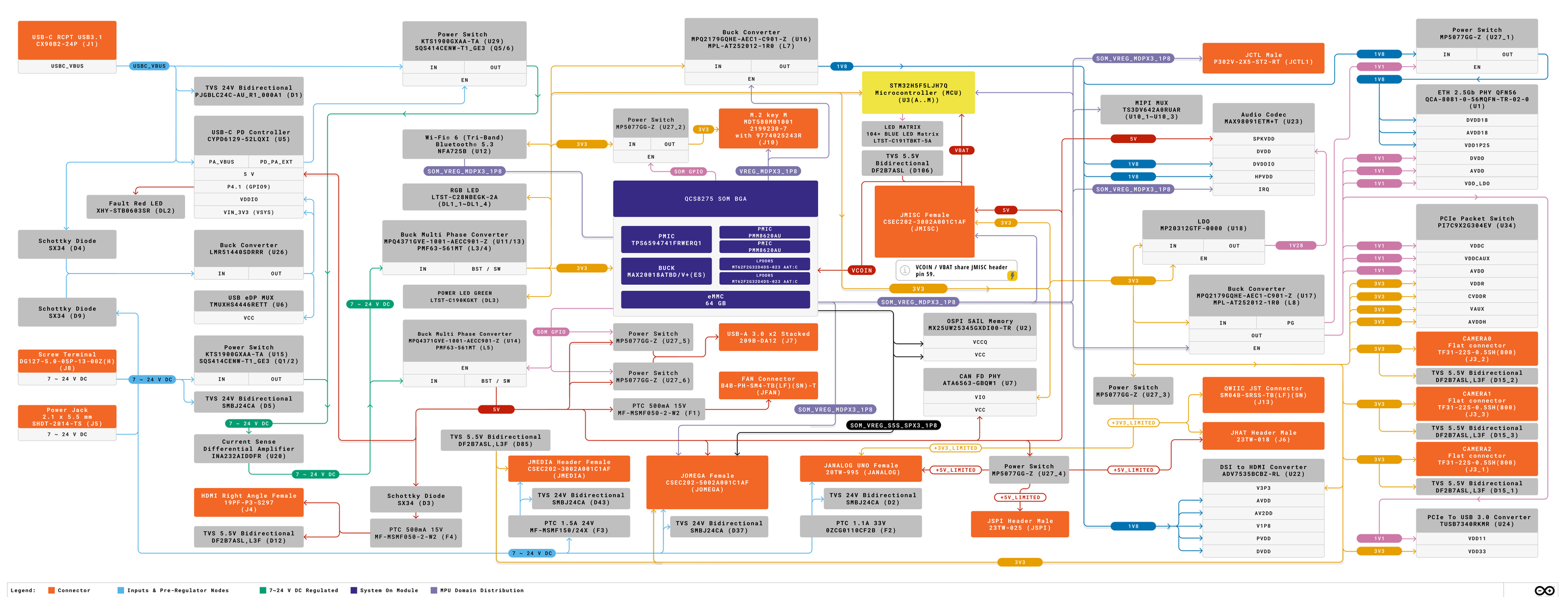
USB-C RCPT USB3.1
CX90B2-24P (J1)
USBC_VBUS
USBC_VBUS
TVS 24V Bidirectional
PJGBLC24C-AU_R1_000A1 (D1)
USB-C PD Controller
CYPD6129-52LQXI (U5)
PA_VBUS
PD_PA_EXT
5 V
P4.1 (GPIO9)
VDDIO
VIN_3V3 (VSYS)
Fault Red LED
XHY-STB0603SR (DL2)
Schottky Diode
SX34 (D4)
Schottky Diode
SX34 (D9)
Screw Terminal
DG127-5.0-05P-13-00Z(H) (J8)
7 ~ 24 V DC
Power Jack
2.1 x 5.5 mm
SHDT-2014-TS (J5)
7 ~ 24 V DC
Buck Converter
LMR51440SDRRR (U26)
IN
OUT
USB eDP MUX
TMUXHS4446RETT (U6)
VCC
Power Switch
KTS1900GXAA-TA (U15)
SQS414CENW-T1_GE3 (Q1/2)
IN
OUT
TVS 24V Bidirectional
SMBJ24CA (D5)
Current Sense
Differential Amplifier
INA232AIDDFR (U20)
HDMI Right Angle Female
19PF-P3-S297 (J4)
TVS 5.5V Bidirectional
DF2B7ASL,L3F (D12)
Schottky Diode
SX34 (D3)
PTC 500mA 15V
MF-MSMF050-2-W2 (F4)
Power Switch
KTS1900GXAA-TA (U29)
SQS414CENW-T1_GE3 (Q5/6)
IN
OUT
EN
Wi-Fi® 6 (Tri-Band)
Bluetooth® 5.3
NFA725B (U12)
RGB LED
LTST-C28NBEGK-2A
(DL1_1~DL1_4)
Buck Multi Phase Converter
MPQ4371GVE-1001-AECC901-Z (U11/13)
PMF63-561MT (L3/4)
IN
BST / SW
POWER LED GREEN
LTST-C190KGKT (DL3)
Buck Multi Phase Converter
MPQ4371GVE-1001-AECC901-Z (U14)
PMF63-561MT (L5)
EN
IN
BST / SW
TVS 5.5V Bidirectional
DF2B7ASL,L3F (D85)
JMEDIA Header Female
CSEC202-3002A001C1AF (JMEDIA)
TVS 24V Bidirectional
SMBJ24CA (D43)
PTC 1.5A 24V
MF-MSMF150/24X (F3)
Buck Converter
MPQ2179GQHE-AEC1-C901-Z (U16)
MPL-AT252012-1R0 (L7)
IN
OUT
EN
Power Switch
MP5077GG-Z (U27_2)
IN
OUT
EN
M.2 key M
MDT580M01001
2199230-7
with 97740252243R
(J10)
QCS8275 SOM BGA
PMIC
TPS6594741FRWERQ1
PMIC
PMM8620AU
PMIC
PMM8620AU
BUCK
MAX20018ATBD/V+(ES)
LPDDR5
MT62F2G32D4DS-023 AAT:C
LPDDR5
MT62F2G32D4DS-023 AAT:C
eMMC
64 GB
Power Switch
MP5077GG-Z (U27_5)
Power Switch
MP5077GG-Z (U27_6)
PTC 500mA 15V
MF-MSMF050-2-W2 (F1)
USB-A 3.0 x2 Stacked
209B-DA12 (J7)
FAN Connector
B4B-PH-SM4-TB(LF)(SN)-T
(JFAN)
JOMEGA Female
CSEC202-5002A001C1AF
(JOMEGA)
TVS 24V Bidirectional
SMBJ24CA (D37)
JANALOG UNO Female
20TW-995 (JANALOG)
TVS 24V Bidirectional
SMBJ24CA (D2)
PTC 1.1A 33V
0ZCG0110CF2B (F2)
STM32H5F5LJH7Q
Microcontroller (MCU)
(U3(A..M))
LED MATRIX
104× BLUE LED Matrix
LTST-C191TBKT-5A
TVS 5.5V
Bidirectional
DF2B7ASL (D106)
JMISC Female
CSEC202-3002A001C1AF
(JMISC)
VCOIN / VBAT share JMISC header pin 59.
OSPI SAIL Memory
MX25UW25345GXDI00-TR (U2)
VCCQ
VCC
CAN FD PHY
ATA6563-GBQW1 (U7)
VIO
VCC
Power Switch
MP5077GG-Z (U27_4)
JSPI Header Male
23TW-025 (JSPI)
JCTL Male
P302V-2X5-ST2-RT (JCTL1)
MIPI MUX
TS3DV642A0RUAR
(U10_1~U10_3)
Audio Codec
MAX98091ETM+T (U23)
SPKVDD
DVDD
DVDDIO
HPVDD
IRQ
LDO
MP20312GTF-0000 (U18)
IN
OUT
EN
Buck Converter
MPQ2179GQHE-AEC1-C901-Z (U17)
MPL-AT252012-1R0 (L8)
IN
PG
OUT
EN
Power Switch
MP5077GG-Z (U27_3)
QWIIC JST Connector
SM04B-SRSS-TB(LF)(SN) (J13)
JHAT Header Male
23TW-018 (J6)
DSI to HDMI Converter
ADV7535BCBZ-RL (U22)
V3P3
AVDD
AV2DD
V1P8
PVDD
DVDD
Power Switch
MP5077GG-Z (U27_1)
IN
OUT
EN
ETH 2.5Gb PHY QFN56
QCA-8081-0-56MQFN-TR-02-0 (U1)
DVDD18
AVDD18
VDD1P25
DVDD
AVDD
VDD_LDO
PCIe Packet Switch
PI7C9X2G304EV (U34)
VDDC
VDDCAUX
AVDD
VDDR
CVDDR
VAUX
AVDDH
CAMERA0
Flat connector
TF31-22S-0.5SH(800) (J3_2)
TVS 5.5V Bidirectional
DF2B7ASL,L3F (D15_2)
CAMERA1
Flat connector
TF31-22S-0.5SH(800) (J3_3)
TVS 5.5V Bidirectional
DF2B7ASL,L3F (D15_3)
CAMERA2
Flat connector
TF31-22S-0.5SH(800) (J3_1)
TVS 5.5V Bidirectional
DF2B7ASL,L3F (D15_1)
PCIe To USB 3.0 Converter
TUSB7340RKMR (U24)
VDD11
VDD33
Legend:
Connector
Main Part
Internal Part
Inputs & Pre-Regulator Nodes
5V,VCOIN,VBAT System Distribution
3V3 Board Rail
7~24 V DC Regulated
1V28,1V1,SOM GPIO
1V8 Rail
System On Module
5V Limited
3V3 Limited
MPU Domain Distribution
RTSS Domain Distribution
ARDUINO
SKU code: ABX00101
Block Diagram
Last update: 19 Jun, 2026