# ROG-STRIX-RTX3060-12G-GAMING (CG190PI) Repair Guide

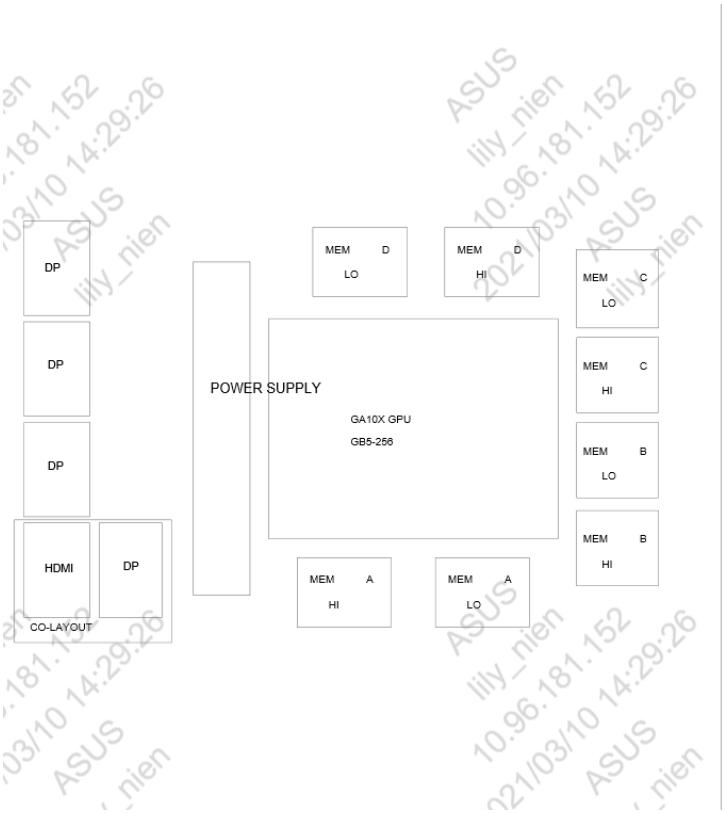
## Model List

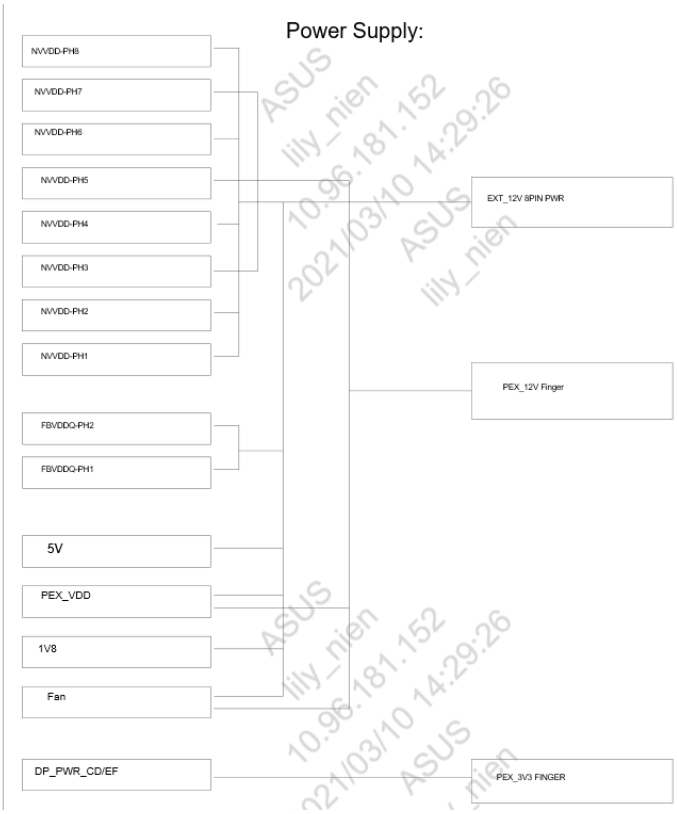
| Model name | 60PN | GPU | Date |
|---|---|---|---|
| ROG-STRIX-RTX3060-12G-GAMING | YV0GC4 | CG190PI | 2021/3/10 |

## STANDARD APPEARANCE

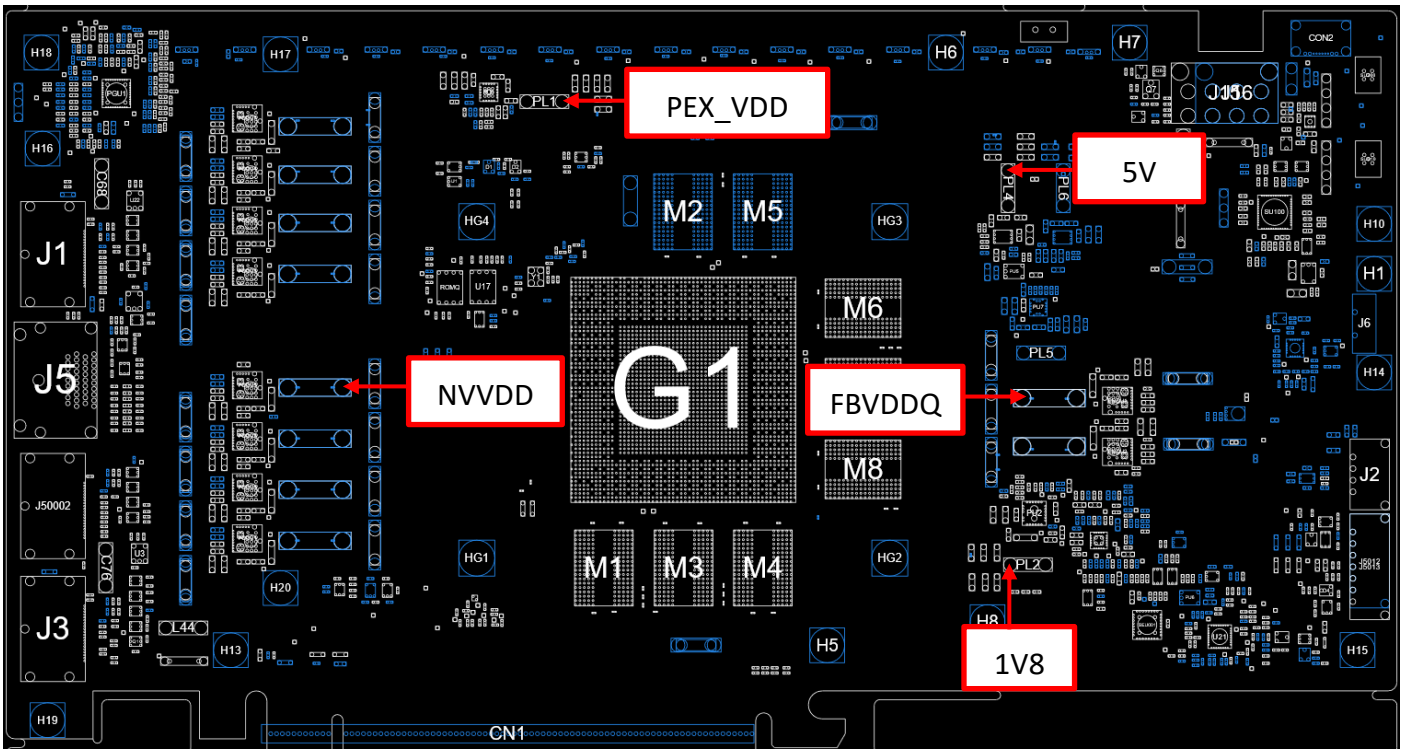
ROG-STRIX-RTX3060-12G-GAMING

# BLOCK DIAGRAM

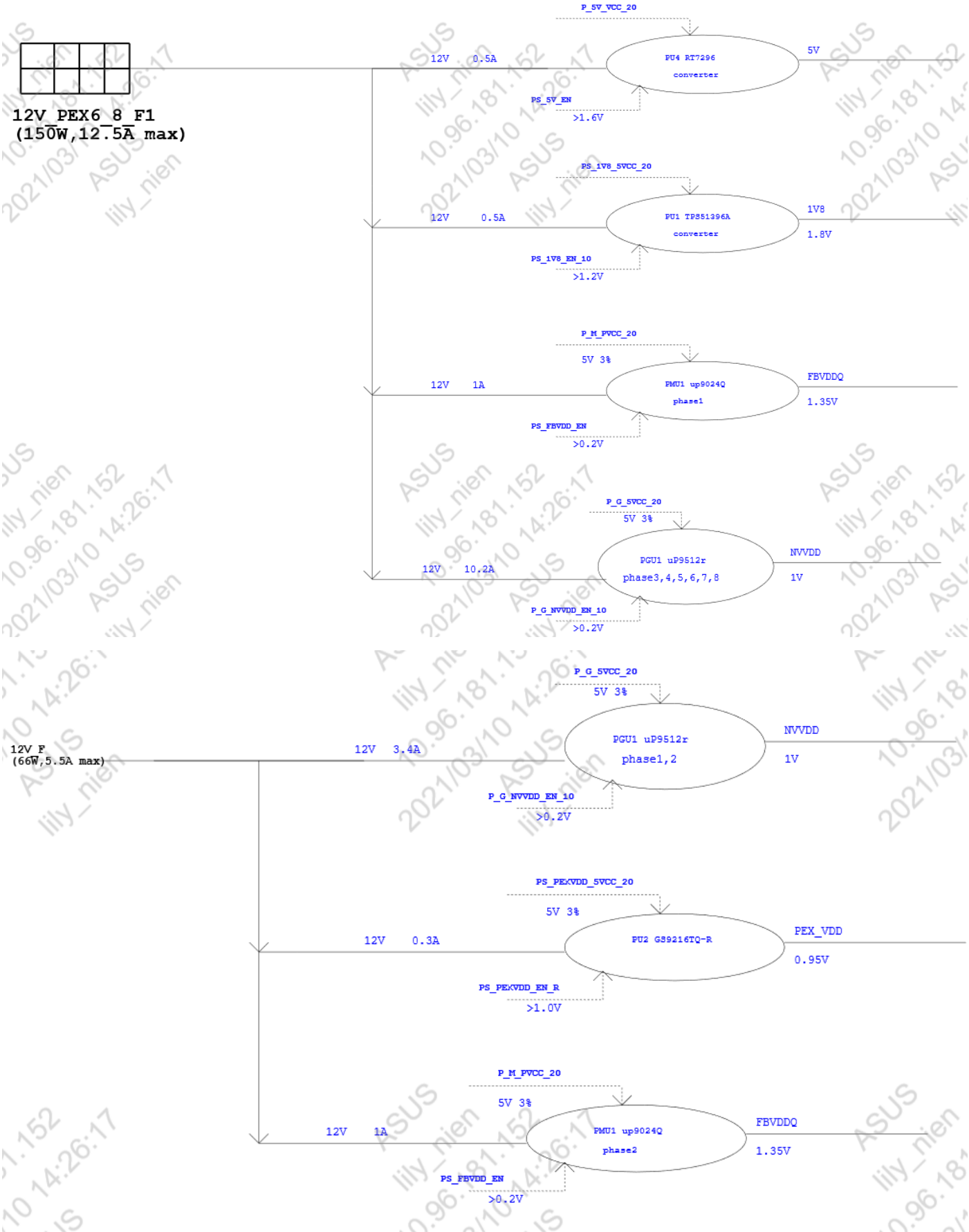


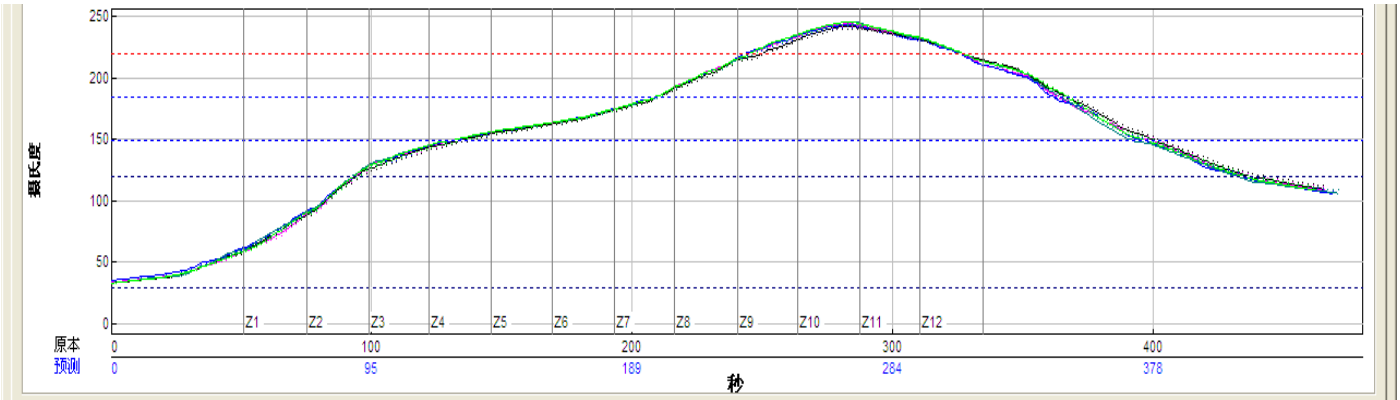
# VOLTAGE MEASURE POINT



# POWER FLOW


12V_PEX6_8_F1
(150W,12.5A max)
P_5V_VCC_20
12V 0.5A
PU4 RT7296
converter
5V
PS_5V_EN
>1.6V
PS_1V8_5VCC_20
12V 0.5A
PU1 TPS51396A
converter
1V8
1.8V
PS_1V8_EN_10
>1.2V
P_M_PVCC_20
5V 3%
12V 1A
PMU1 up9024Q
phase1
FBVDDQ
1.35V
PS_FBVDD_EN
>0.2V
P_G_5VCC_20
5V 3%
12V 10.2A
PGU1 uP9512r
phase3,4,5,6,7,8
NVVDD
1V
P_G_NVVDD_EN_10
>0.2V
12V_F
(66W,5.5A max)
P_G_5VCC_20
5V 3%
12V 3.4A
PGU1 uP9512r
phase1,2
NVVDD
1V
P_G_NVVDD_EN_10
>0.2V
PS_PEXVDD_5VCC_20
5V 3%
12V 0.3A
PU2 G89216TQ-R
PEX_VDD
0.95V
PS_PEXVDD_EN_R
>1.0V
P_M_PVCC_20
5V 3%
12V 1A
PMU1 up9024Q
phase2
FBVDDQ
1.35V
PS_FBVDD_EN
>0.2V

# BGA REFLOW PROFILE




| TCs | 温度最高上升斜率 | | 温度最高下降斜率 | | 预热 30至120°C | | 恒温时间 150至185°C | | 回流时间 /220°C | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| <TC2> | 1.63 | 9% | -1.22 | 78% | 92.86 | 10% | 76.54 | -45% | 83.17 | 84% | 244.90 |
| <TC3> | 1.51 | 1% | -1.19 | 81% | 92.26 | 8% | 77.19 | -43% | 83.14 | 84% | 244.01 |
| <TC5> | 1.51 | 0% | -1.15 | 85% | 93.18 | 11% | 75.30 | -49% | 78.40 | 73% | 242.84 |
| <TC7> | 1.55 | 4% | -1.37 | 63% | 91.85 | 6% | 78.23 | -39% | 82.31 | 82% | 246.45 |
| <TC9> | 1.55 | 4% | -1.29 | 71% | 92.52 | 8% | 77.63 | -41% | 82.96 | 84% | 246.17 |
| 温差 | 0.12 | | 0.22 | | 1.33 | | 2.93 | | 4.77 | | 3.61 |
| P.<TC2> | 1.69 | 12% | -1.23 | 77% | 89.49 | -2% | 69.48 | -68% | 77.06 | 70% | 243.30 |
| P.<TC3> | 1.57 | 5% | -1.22 | 78% | 89.23 | -3% | 69.76 | -67% | 76.88 | 70% | 242.36 |

| | P.W.I. | 公分/分 | 温区 1 | 温区 2 | 温区 3 | 温区 4 | 温区 5 | 温区 6 | 温区 7 | 温区 8 | 温区 9 | 温区 10 | 温区 11 | 温区 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 原本上温区 | 85% | 70.0 | 130 | 155 | 200 | 175 | 175 | 180 | 200 | 245 | 270 | 270 | 210 | 190 |
| 原本下温区 | | | 130 | 155 | 200 | 175 | 175 | 180 | 200 | 245 | 270 | 270 | 210 | 190 |
| 预测上温区 | 81% | 74.1 | 130 | 155 | 200 | 175 | 175 | 180 | 200 | 245 | 270 | 270 | 210 | 190 |
| 预测下温区 | | | 130 | 155 | 200 | 175 | 175 | 180 | 200 | 245 | 270 | 270 | 210 | 190 |