HOST CONNECTION AND CHAINING

J1 — I IN
+3V3, +5V, P3_GPIO, P4_UN, P5_UN, P6_GPIO, P7_UN, P8_SDA, P9_SCL, GND

JP8 — CHAIN P8 BRIDGED — SDA — CHAIN_P8

JP9 — CHAIN P9 BRIDGED — SCL — CHAIN_P9

J2 — I CHAIN
+3V3, +5V, P3_GPIO, P4_UN, P5_UN, P6_GPIO, P7_UN, P8_SDA, P9_SCL, GND
G_P3, G_P4, G_P5, G_P6, G_P7, CHAIN_P8, CHAIN_P9

QWIIC AND I2C

J6 — QWIIC 3V3
GND, +3V3, SDA, SCL

J7 — ALT I2C HEADER
GND, +3V3, SDA, SCL

12V EFUSE

J3 — 12V DC IN — +12V, GND — 12V_IN_RAW

J4 — 12V LINK OUT — +12V, GND — 12V_LINK

UF1 — TPS26600PWPR
NC, IMON, SHDN, NC, GND, GND
12V_IN_RAW, 12V_IN_RAW, OV, OVLO, OVP, MODE, RTN, RTN, ILIM, dVdT, SLEW, FLT, 12V_FUSED, 12V_FUSED, RTN

CF1 — 100nF 25V X7R — SCL_N — RTN
CF2 — 100nF 50V X7R — 12V_IN_RAW — GND
CF3 — 1uF 50V X7R — 12V_FUSED — GND

R13 — 100k 1% — 12V_PROT — EN_12V
RF1 — 72.0k 0.1% — 12V_IN_RAW — UV
RF2 — 10k 0.1% — UV — RTN
RF3 — 110k 0.1% — 12V_IN_RAW — OV
RF4 — 10k 0.1% — OV — RTN
RF5 — 24.0k 1% — ILIM — RTN
DF1 — 1N4148WS-7-F — WARN — 12V_IN_RAW

DF10 — BAT54WS-7-F — FLT_A — FLT
DF2 — RED FAULT — FLT — FLT_A
SJF1 — CUT FAULT LED — FLT_A — FLT_R
D1 — B340A — 12V_PROT — 12V_FUSED
D2 — SMBJ15A — 12V_PROT — GND
SJ2 — 12V TO REMOTE — 12V_PROT — 12V_LINK

D3 — GREEN 12V — 12V_PROT — PWR_K
JP10 — CUT 12V LED — PWR_K — PWR_R
R10 — 4.7k — PWR_R — GND

LINK CAT5E (J5)

C1 — 100nF 16V X7R — +3V3 — GND
C2 — 100nF 16V X7R — +5V — GND
C3 — 10uF 16V X7R — +5V — GND
C4 — 1nF 2KV X7R — SHIELD — GND

J5 — LINK CAT5E
SCL_P, SCL_N, SDA_P, NC, NC, SDA_N, NC, NC, SHIELD
SCL+, SCL−, SDA+, NC, NC, SDA−, NC, NC, SHIELD

R9 — 1M — SHIELD — GND
SJ1 — SHIELD BOND — SHIELD — GND

REVERSE POLARITY LAMP

QF1 — MMBT3904-7-F — B1 — 12V_IN_RAW — C1
QF2 — MMBT3904-7-F — B2 — 12V_IN_RAW — C2

CF4 — 10uF 16V X7R — C1 — B1
CF5 — 10uF 16V X7R — C2 — B2

RF12 — 47k 1% — REV_VCC — B1
RF13 — 47k 1% — REV_VCC — B2
RF14 — 10k 1% — REV_VCC — C1
RF15 — 10k 1% — REV_VCC — C2
DF7 — BZT52C3V9S-7-F — REV_VCC — 12V_IN_RAW

RF11 — 4.7k 0.25W — REV_VCC — REV_FEED
DF6 — 1N4148WS-7-F — REV_FEED — GND
RF16 — 2.2k 1% — REV_VCC — REV_R
SJF3 — CUT REVERSE LED — REV_R — REV_A
DF8 — RED REVERSE — REV_A — C1

CABLE LINES

U2 — TPD4E1U06DBVR
NC, GND, D1+, D2+, D2−, D1−
GND, SCL_P, SDA_P, SDA_N, SCL_N

OVERVOLTAGE CUTOFF

QF3 — B5S84-7-F — OV_GATE, OV_SAFE, G, S, D — 12V_IN_RAW

RF17 — 100k 1% — OV_GATE — GND
DF11 — BZT52C12S-7-F — OV_SAFE — OV_GATE

SUPPLY RAILS

PWR_FLAG +3V3 — PWR_FLAG +5V — PWR_FLAG GND

I2C DIFFERENTIAL BUFFER

U1 — PCA9615DP
+3V3, VDDA, VDDB, SDA, SCL, GND, EN, DSCLM, DSCLP, DSDAP, DSDAM, EN, SCL_N, SCL_P, SDA_P, SDA_N

R14 — 47k 1% — EN_12V — GND
JP11 — EN FOLLOWS 12V — EN_12V — EN
JP7 — EN TO PIN 3 — EN_K — EN
R3 — 604R 1% — +5V — SCL_P
R4 — 120R 1% 0.25W — SCL_N — SCL_P
R5 — 604R 1% — SCL_N — GND

R6 — 604R 1% — +5V — SDA_P
R7 — 120R 1% 0.25W — SDA_N — SDA_P
R8 — 604R 1% — SDA_N — GND

OVERVOLTAGE LAMP

UF2 — TL431BIDBZR — OV_K, OV_REF, A, K, REF — GND

RF6 — 10k 1% — WARN — FLT_2
RF7 — 45.3k 0.1% — OV_SAFE — OV_REF
RF8 — 10k 0.1% — OV_REF — GND
RF9 — 8.2k 0.25W — WARN — OV_2
DF3 — BAT54WS-7-F — OV_REF — GND

DF4 — BZT52C12S-7-F — OV_K — GND
DF9 — BAT54WS-7-F — OV_K — GND

RF10 — 10k 0.25W — WARN — OV_R
SJF2 — CUT OV LED — OV_R — OV_A
DF5 — RED OVERVOLTAGE — OV_A — OV_2

SUPPORT CIRCUITRY

JP1 — PULLUP SDA — +3V3 — PU_SDA
R1 — 3k3 1% — PU_SDA — SDA
JP2 — PULLUP SCL — +3V3 — PU_SCL
R2 — 3k3 1% — PU_SCL — SCL
D4 — RED 5V — +5V — LS_K
JP12 — CUT 5V LED — LS_K — LS_R
R15 — 1k — LS_R — GND

TEST PADS

TP1 GND — GND
TP2 +3V3 — +3V3
TP3 +5V — +5V
TP4 12V_PROT — 12V_PROT
TP5 SDA — SDA
TP6 SCL — SCL

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