

# PMGDuino Kit - 2 Ports

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A4	N/A	Karen Hsu	Asurada Ko	03
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Source 1. DC\_In

Source 2. Arduino\_Vin

Source 3. Daughter Board P0\_Vin

Source 4. Daughter Board P1\_Vin

Source 5. USB-C VBUS P1

Source 6. USB-C VBUS P0

RT2872GSP

Buck 36V In 5V Out 3A Out

AP7347DQ-33W5-7

DC/DC Regulator 5V In 3V3 Out

PMG1-S3

GPIO

GPIO\_1

GPIO\_2

I2C

Daughter Board\_1

Power source could be 5V-28V Vin

DB: Daughter Baugter

Header 18 pins BuckBoost Vout DB\_VIN

Buck Boost RT6190

Header 2pins

DB\_VIN

Consumer Header

Daughter Board\_2

Power source could be 5V-28V Vin

DB: Daughter Baugter

Header 18 pins BuckBoost Vout DB\_VIN

Buck Boost RT6190

Header 2pins

DB\_VIN

Consumer Header

Header 18pins BuckBoost Vout P0

IFX-IRF7240TRPBF

IFX-BSC059N04LS6A

EN\_OUT

EN\_IN

Rsense

CSM\_P0

CSP\_P0

SNK P0 Header 2pins

Header 18pins BuckBoost Vout P1

IFX-IRF7240TRPBF

IFX-BSC059N04LS6A

EN\_OUT

EN\_IN

Rsense

CSM\_P1

CSP\_P1

SNK P1 Header 2pins

USB-C P0 28V-5V

Without Daughter Board USB P0 Capability: Non-SRC

With Daughter Board 1 USB P0 Capability: SRC 28V + SNK 28V

With Daughter Board 2 USB P0 Capability: Non-SRC

USB-C P1 28V-5V

Without Daughter Board USB P1 Capability: Non-SRC

With Daughter Board 1 USB P1 Capability: Non-SRC

With Daughter Board 2 USB P1 Capability: SRC 28V + SNK 28V

Input voltage: 5V~28V

Header 6x2 pins

VIN\_SYS

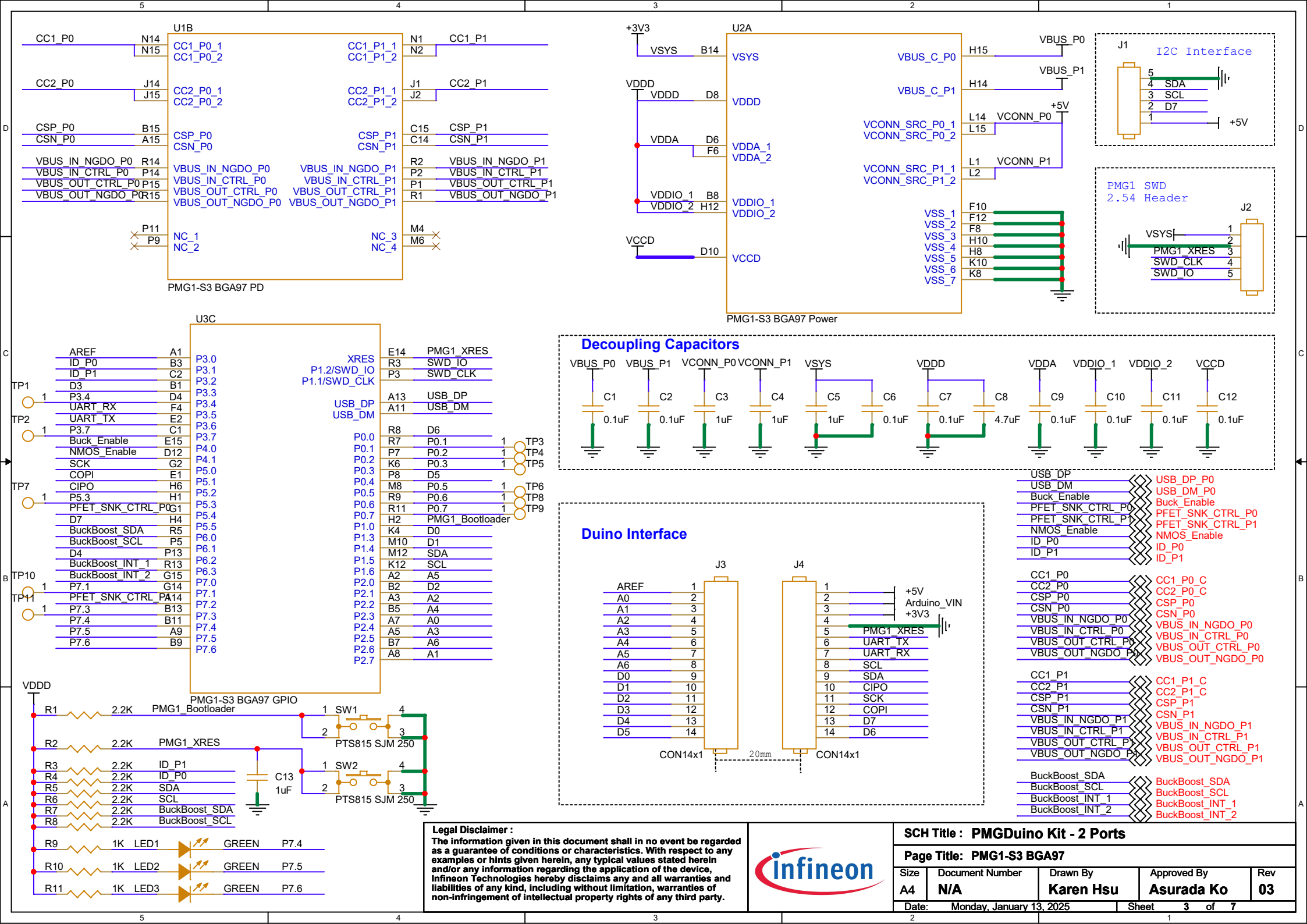
VBUS\_P0

VBUS\_P1

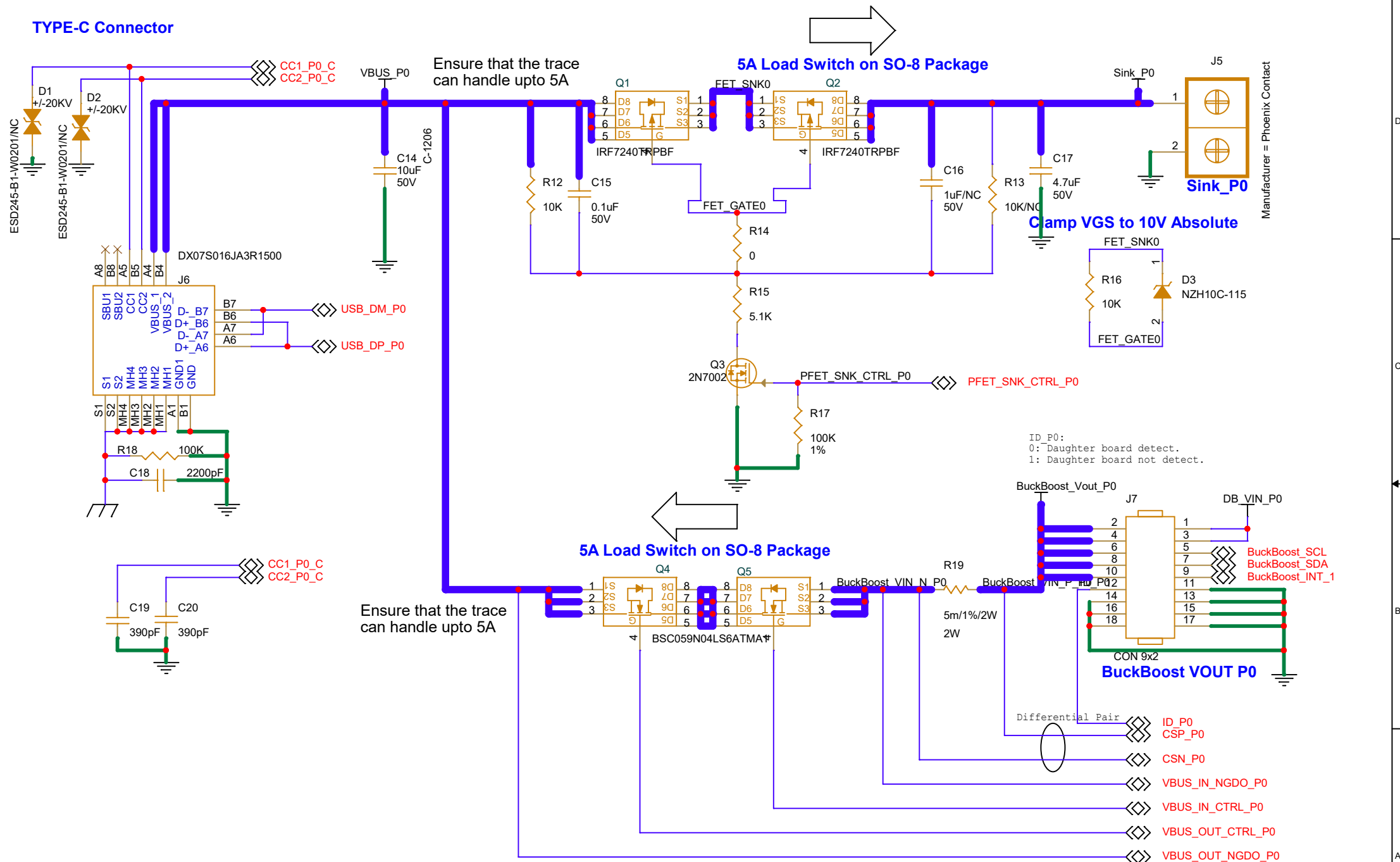
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## TYPE-C Connector



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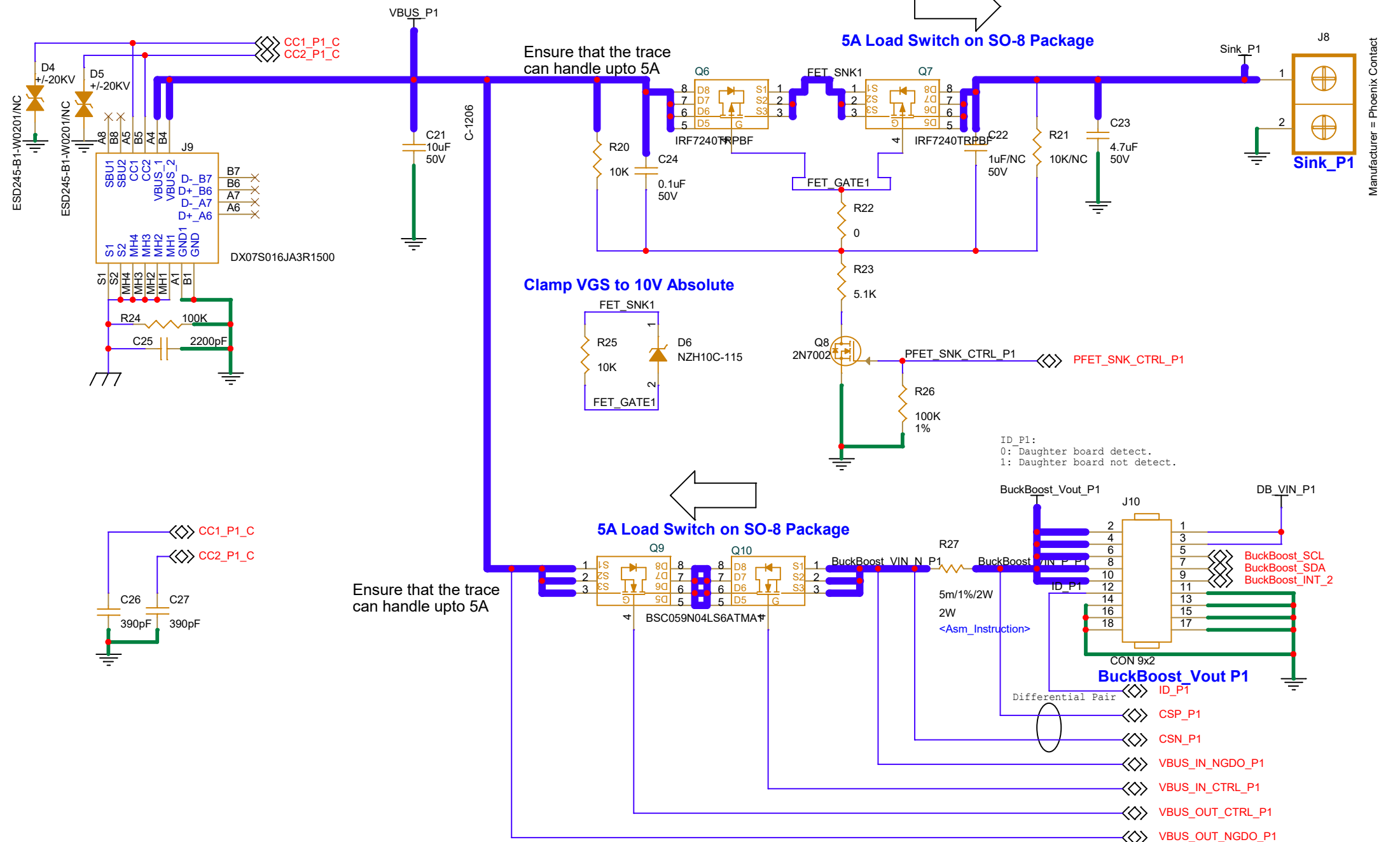


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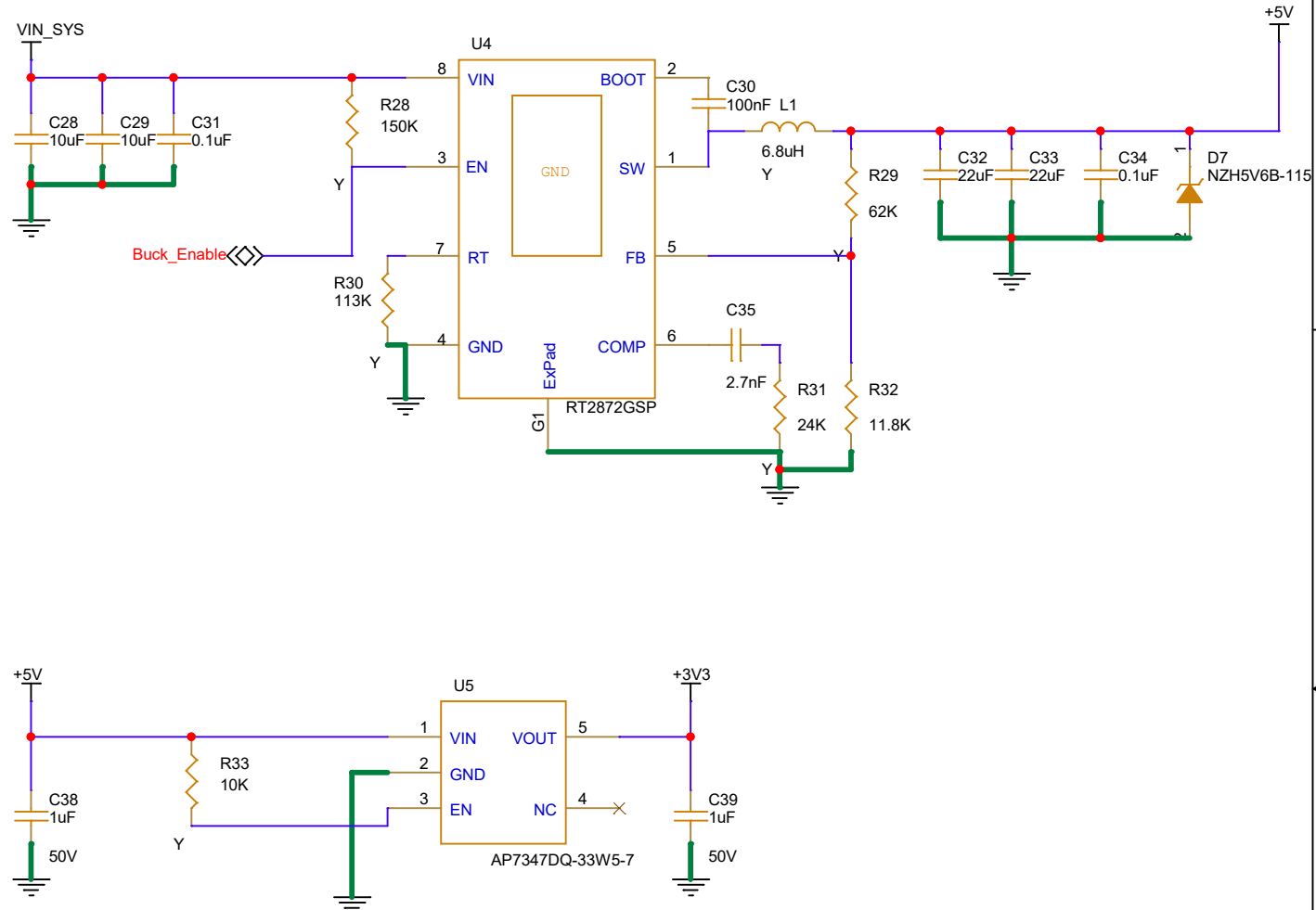
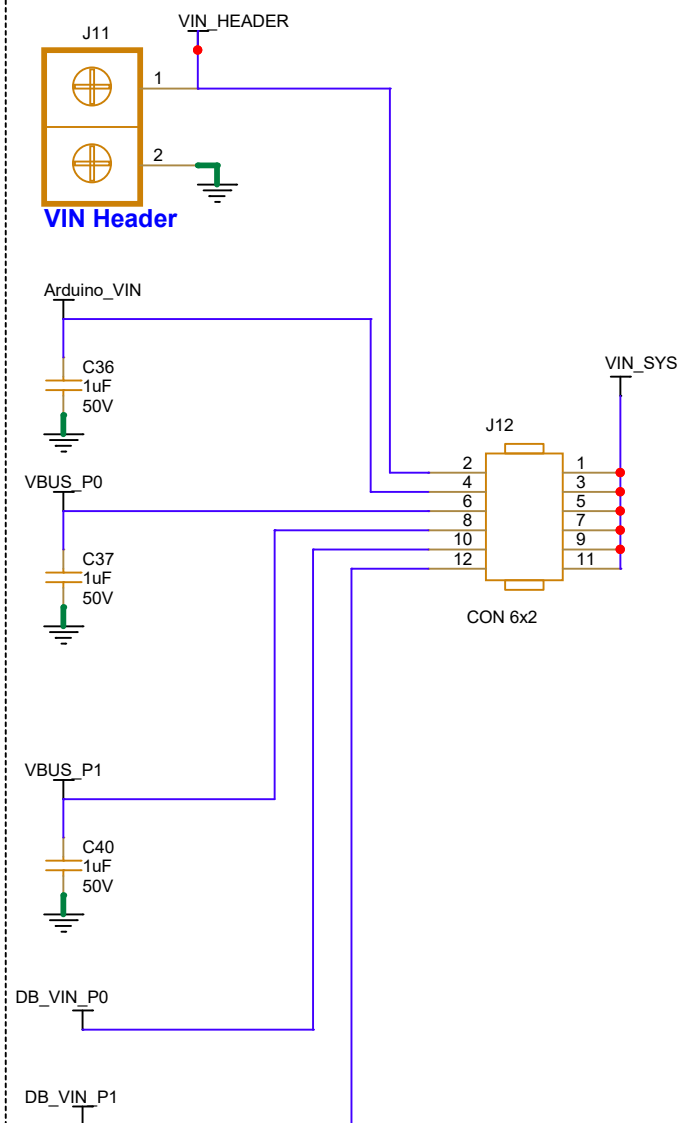
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TYPE-C Connector



## Power Source Selection



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Page Title: Power System

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REVISION HISTORY

REV	DESCRIPTION OF CHANGE	Orig. of Change	DATE
01	Initial Release	Asurada Ko	2023/05/16
02	Change power design (consumer& provider), change buck boost converter to buck converter, change Pin assignment *7	Karen Hsu	2023/09/22
03	Remove By-pass circuit and revise USB-C connector naming.	Karen Hsu	2024/09/12