


**Schematic modified for
CY8CKIT-062S2-43012 PSoC 62S2 Wi-Fi BT Pioneer Kit**

CYW9-BASE-01 Pioneer Baseboard

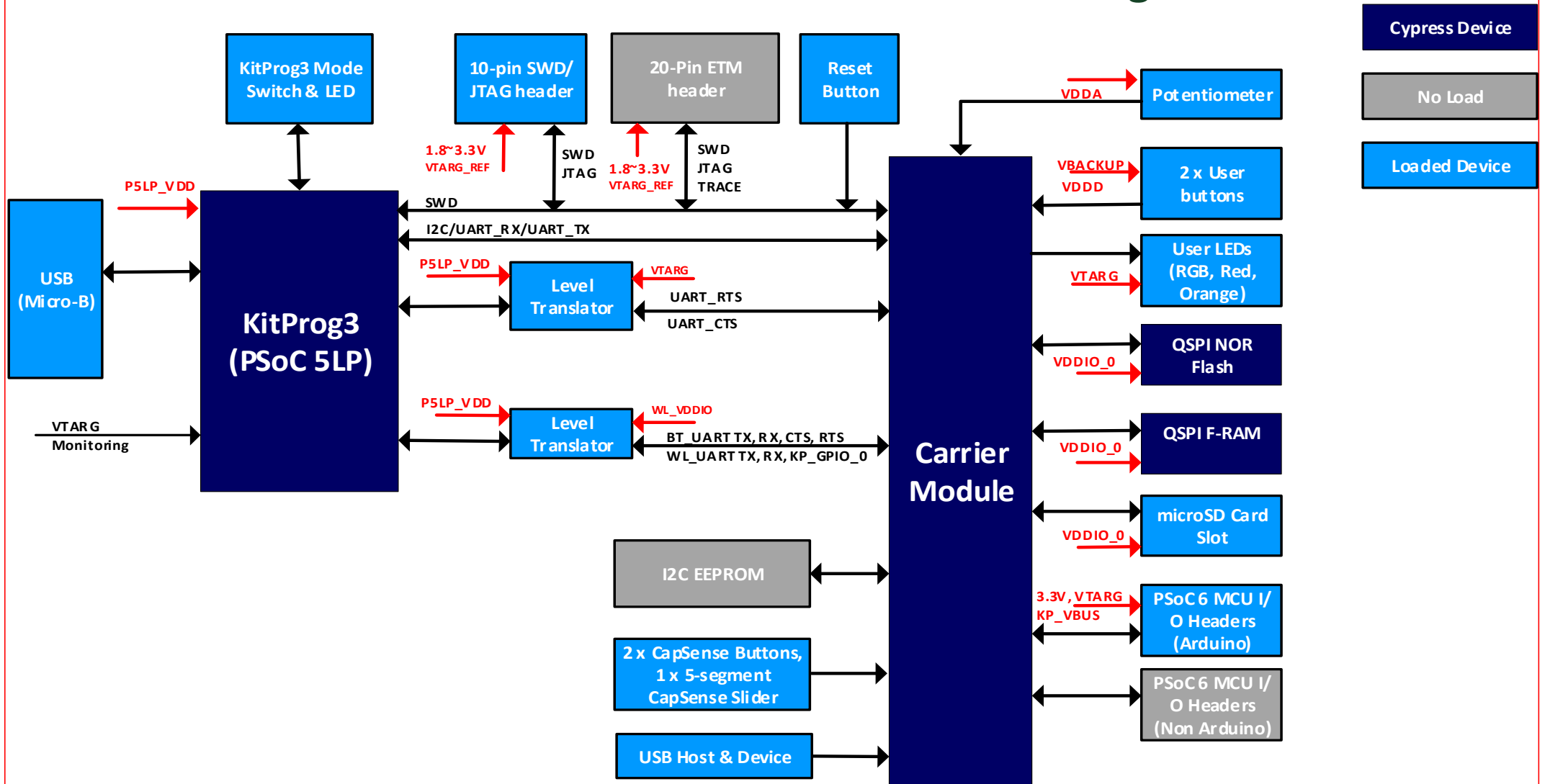
CONTENTS	
PAGE	DESCRIPTION
01	Title Page
02	Functional Block Diagram
03	Power Supply Block Diagram
04	Power Supply (1)
05	Power Supply (2)
06	KitProg3 Controller
07	KitProg3 Power and Headers
08	Carrier Module Power
09	Carrier Module Signals
10	Peripherals
11	Expansion Headers & Memory
12	microSD card and Accessories
13	Revision History

Drawing Numbers

PCBA	121-60552-01
PCB	600-60552-01
FAB DRW	610-60552-01
ASSY DRW	620-60552-01
SCH DRW	630-60552-01

		CYPRESS SEMICONDUCTOR 198 CHAMPION COURT SAN JOSE, CA 95134 (408) 943-2600					
CYPRESS SEMICONDUCTOR © 2019							
SCH Title : CYW9-BASE-01 Pioneer Baseboard							
Page Title : Title Page							
Size A4	Document Number 630-60552-01	Drawn By TARE	Approved By RKAD	Rev 05			
Date:	Wednesday, September 18, 2019	Sheet	1	of 13			

CYW9-BASE-01 Architecture Block Diagram



CYPRESS
EMBEDDED IN TOMORROW™

CYPRESS SEMICONDUCTOR
198 CHAMPION COURT
SAN JOSE, CA 95134
(408) 943-2600

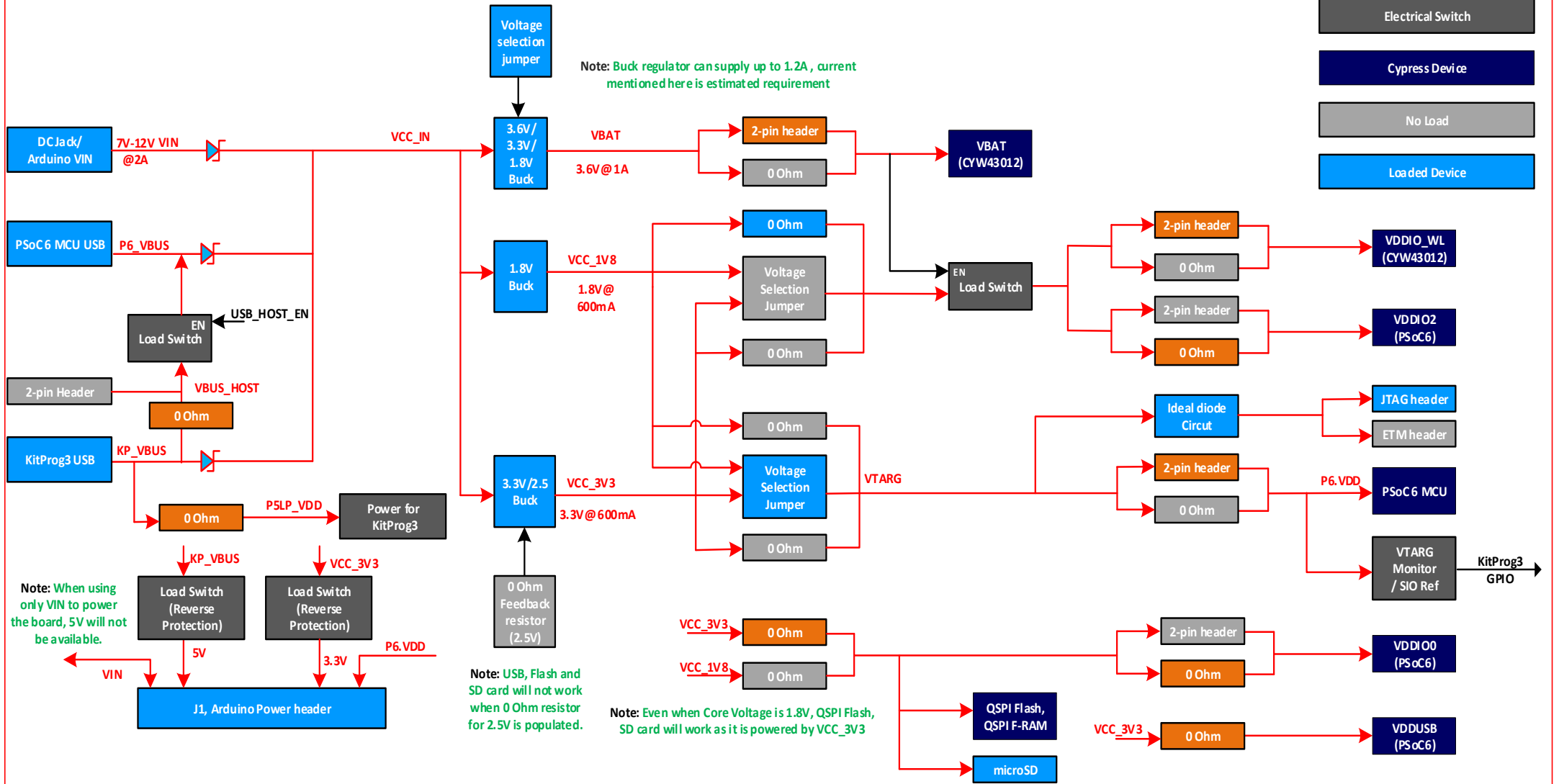
CYPRESS SEMICONDUCTOR © 2019

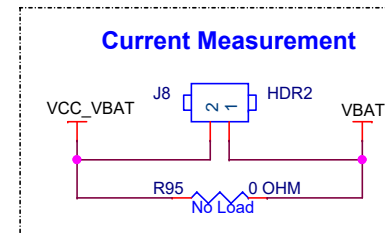
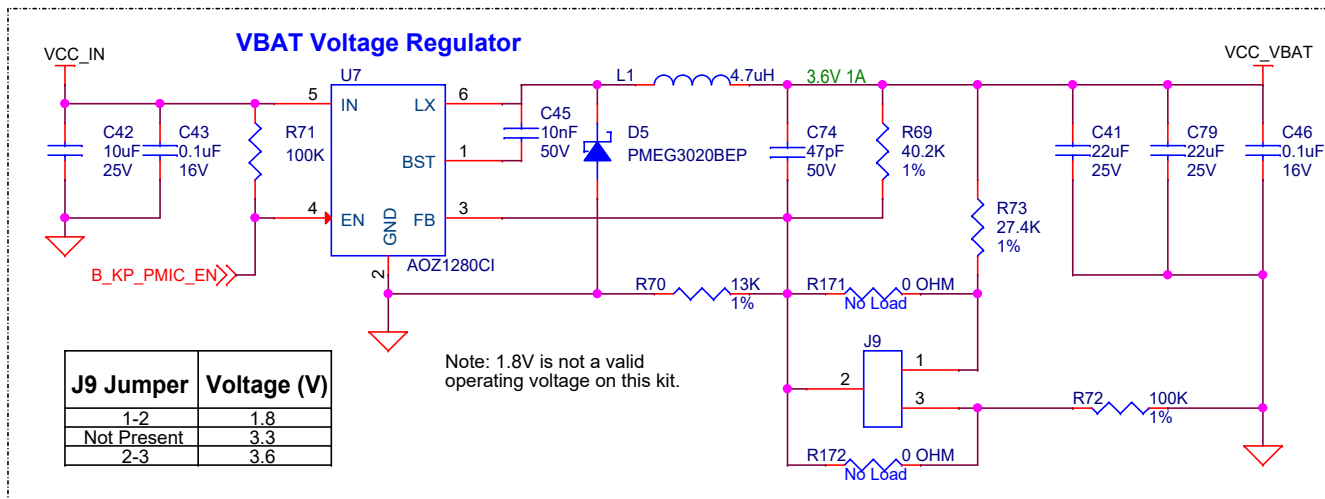
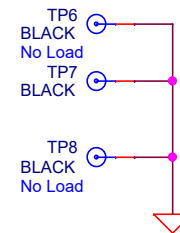
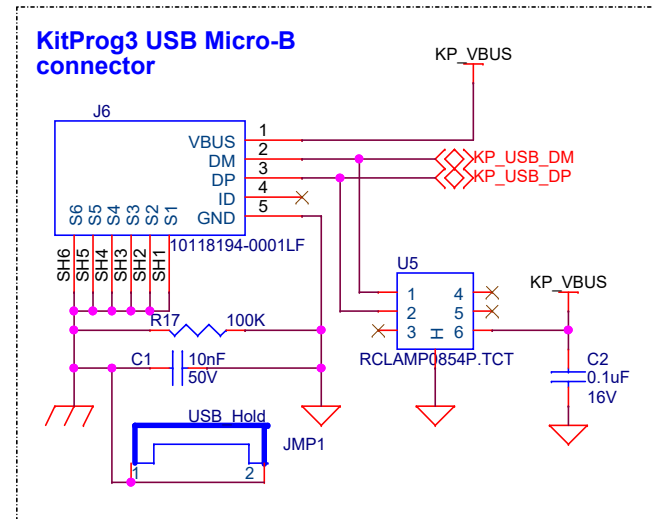
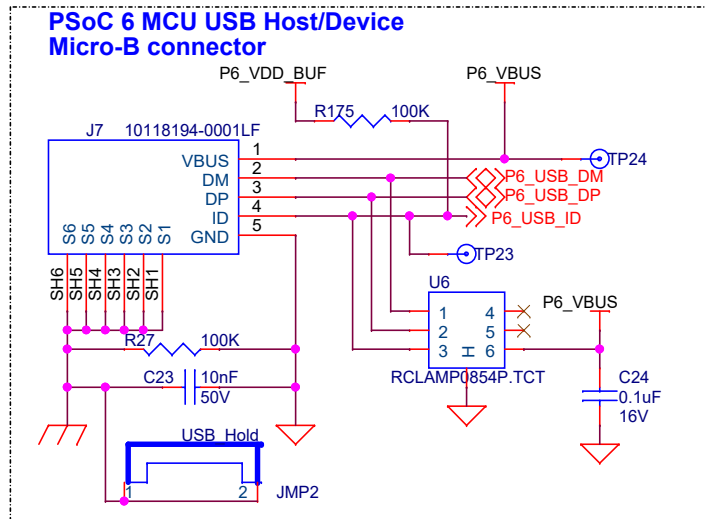
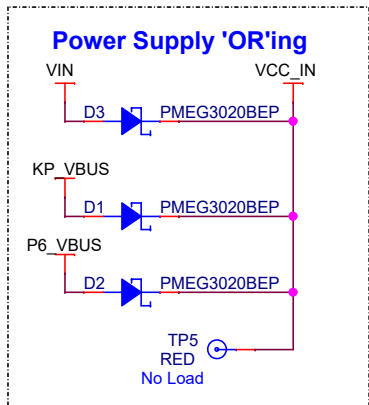
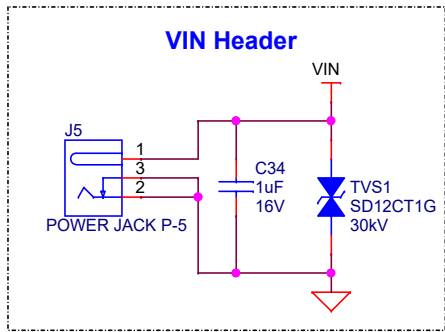
SCH Title : CYW9-BASE-01 Pioneer Baseboard

Page Title : Functional Block Diagram

Size A4	Document Number 630-60552-01	Drawn By TARE	Approved By RKAD	Rev 05
Date:	Wednesday, September 18, 2019	Sheet	2 of 13	

Power Supply Section





CYPRESS SEMICONDUCTOR
198 CHAMPION COURT
SAN JOSE, CA 95134
(408) 943-2600

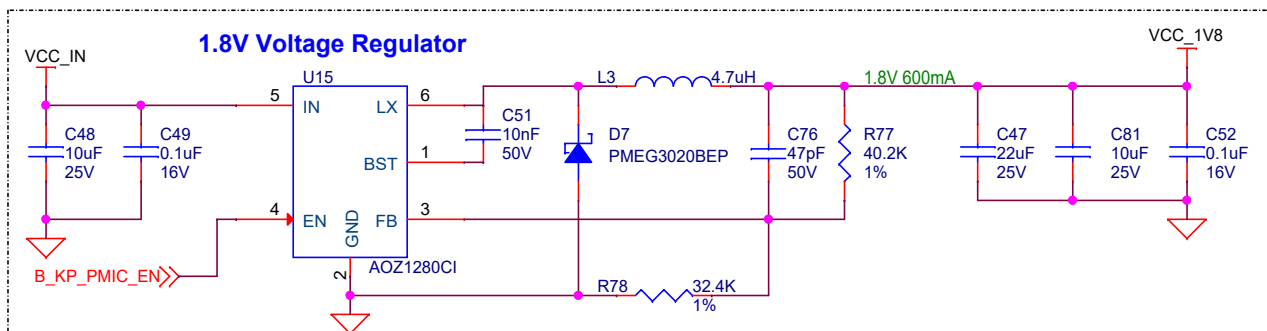
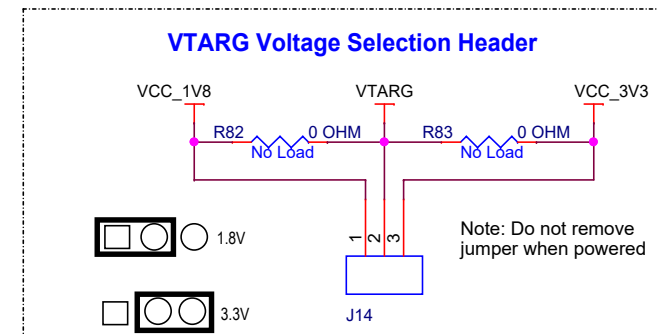
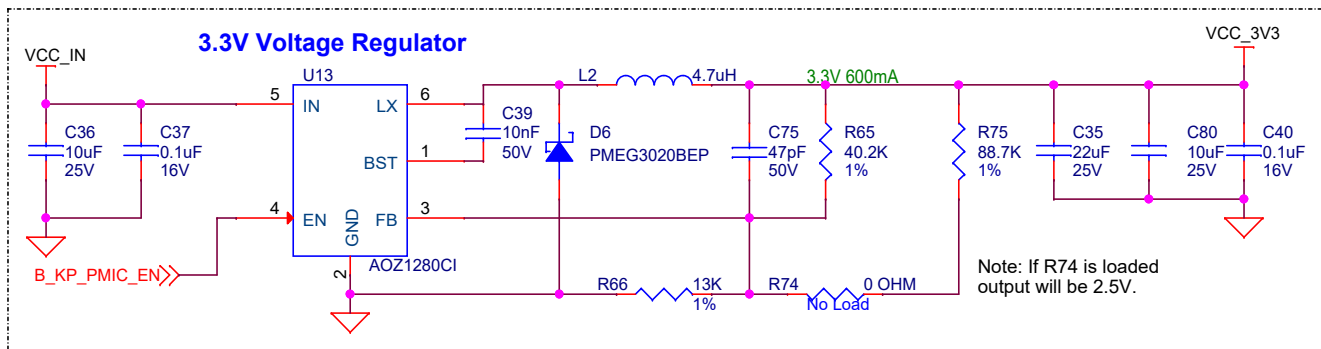
CYPRESS SEMICONDUCTOR © 2019

SCH Title : CYW9-BASE-01 Pioneer Baseboard

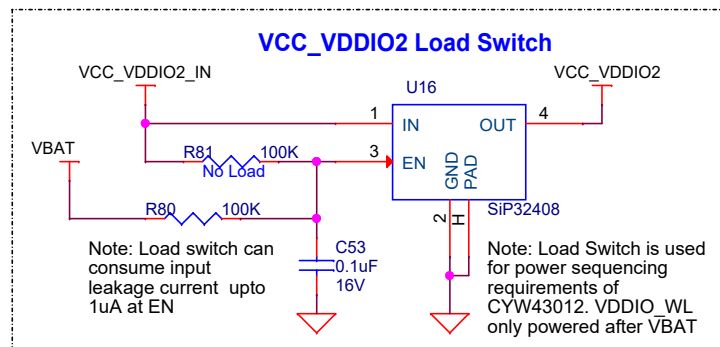
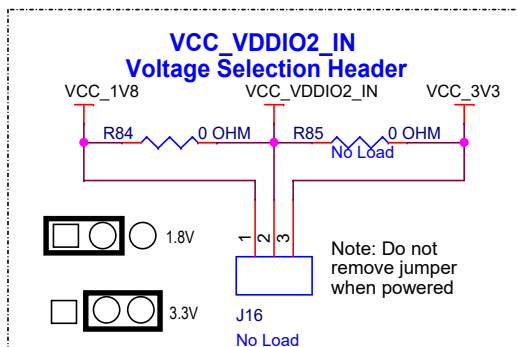
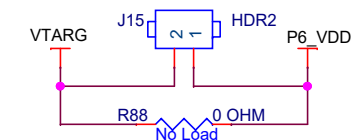
Page Title : Power Supply (1)

Size A4	Document Number 630-60552-01	Drawn By TARE	Approved By RKAD	Rev 05
------------	--	-------------------------	----------------------------	------------------

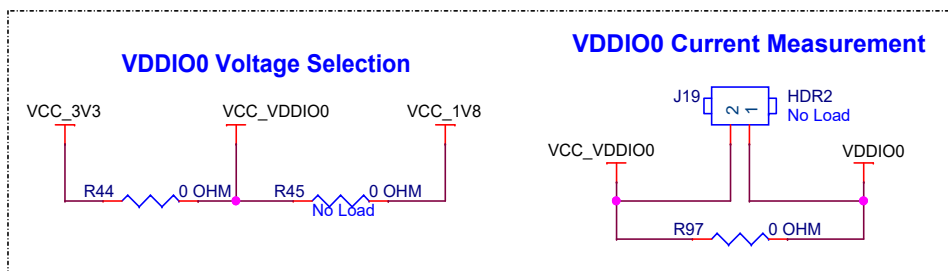
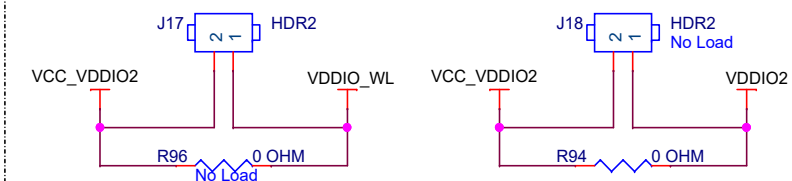
Date: Thursday, December 05, 2019 Sheet 4 of 13



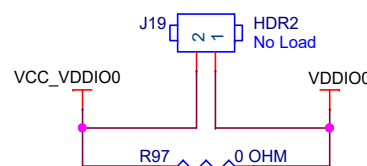
P6_VDD Current Measurement




VDDIO_WL & VDDIO2 Current Measurement



VDDIO0 Current Measurement





CYPRESS SEMICONDUCTOR
 198 CHAMPION COURT
 SAN JOSE, CA 95134
 (408) 943-2600

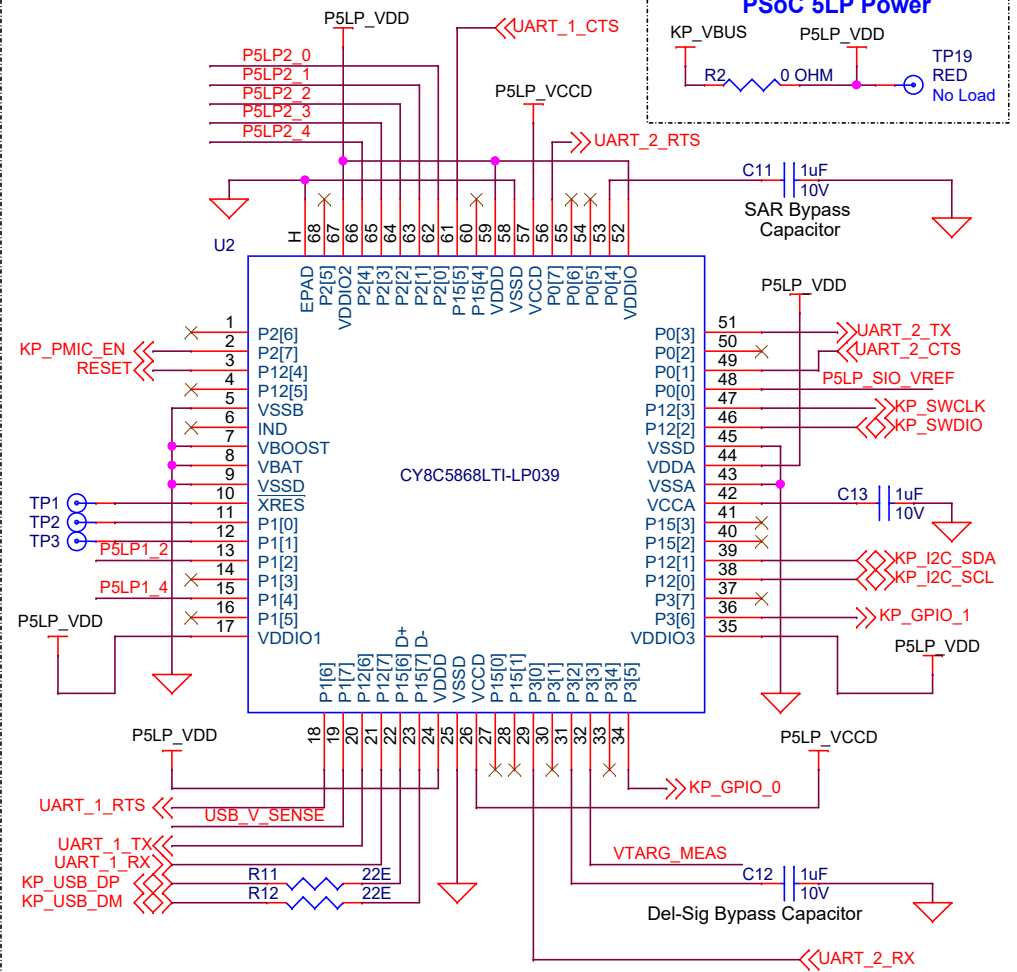
CYPRESS SEMICONDUCTOR © 2019

SCH Title : CYW9-BASE-01 Pioneer Baseboard

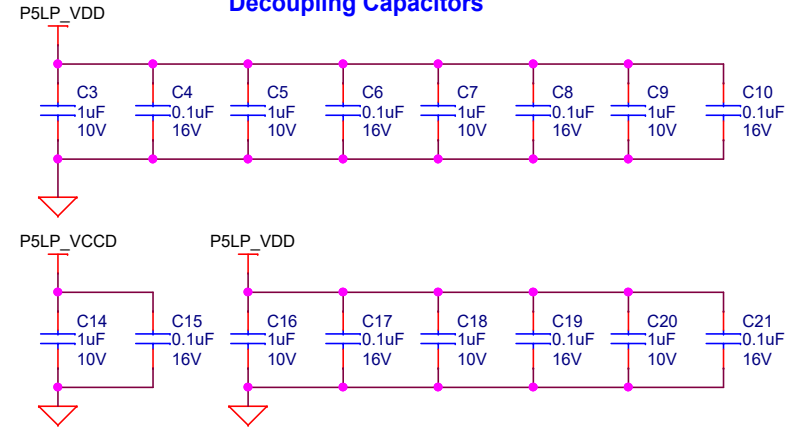
Page Title : Power Supply (2)

Size A4	Document Number 630-60552-01	Drawn By TARE	Approved By RKAD	Rev 05
Date: Wednesday, September 18, 2019		Sheet 5 of 13		

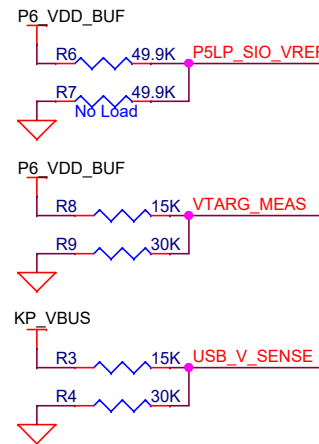
PSoC 5LP based KitProg3



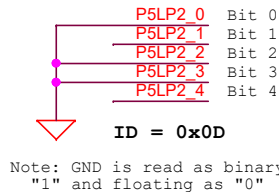
Decoupling Capacitors



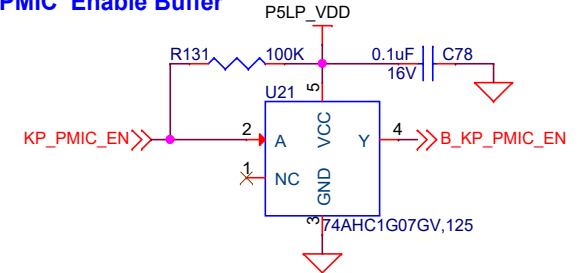
Voltage Monitoring



KitProg3 H/W Revision



PMIC Enable Buffer



CYPRESS SEMICONDUCTOR
198 CHAMPION COURT
SAN JOSE, CA 95134
(408) 943-2600

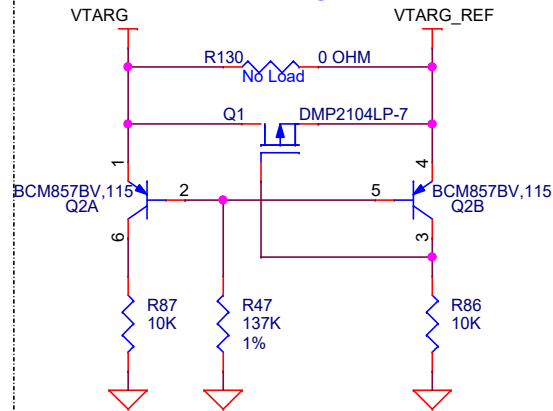
CYPRESS SEMICONDUCTOR © 2019

SCH Title : CYW9-BASE-01 Pioneer Baseboard

Page Title : KitProg3 Controller

Size	Document Number	Drawn By	Approved By	Rev
A4	630-60552-01	TARE	RKAD	05
Date:	Wednesday, September 18, 2019	Sheet	6 of 13	

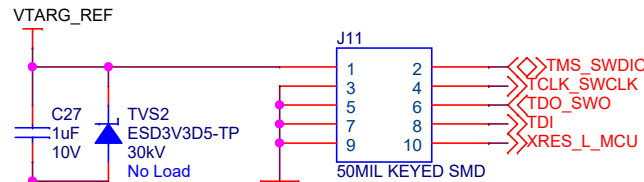
VTARG Reverse Voltage Protection



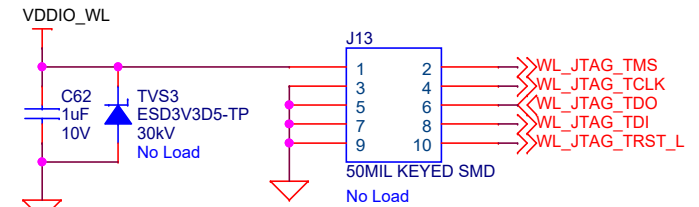
Note: VTARG_REF is only output voltage sense line for external debuggers. PSoC 6 can't be powered using external debugging headers J11 and J12

Note: If R130 is loaded and external power is used, make sure to remove jumper shunt from J14 to prevent reverse voltage to on-board regulator

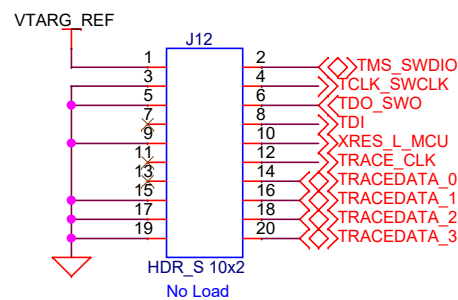
MCU 10-pin SWD/JTAG Header



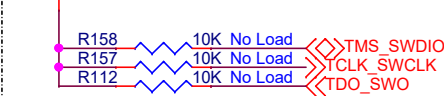
CYW43012 10-pin SWD/JTAG Header



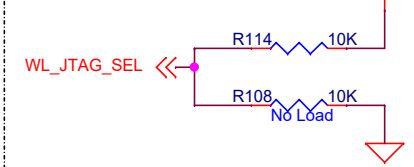
MCU 20-pin ETM Header



MCU JTAG Pull-ups



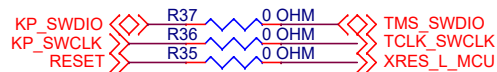
JTAG SEL Selection



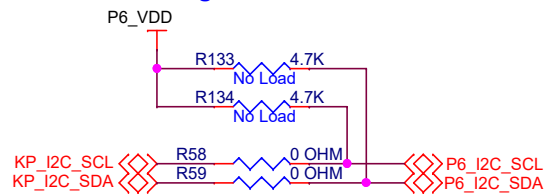
WL JTAG Pull-ups



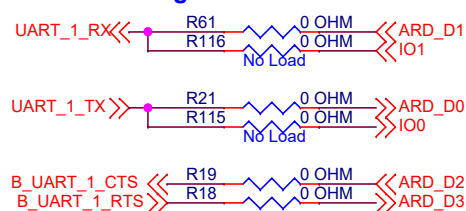
MCU SWD KitProg3 Interface



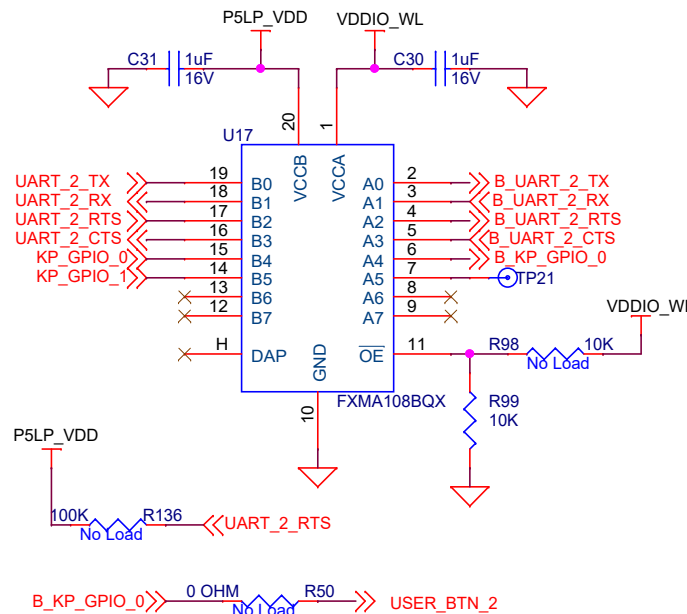
KitProg3 I2C Interface



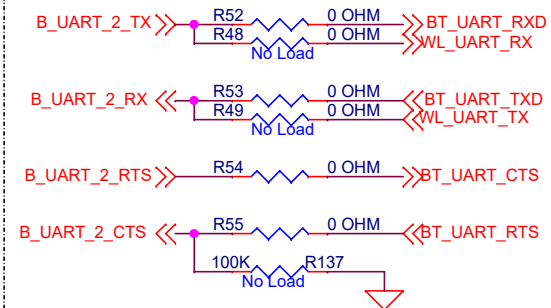
KitProg3 UART Interface



KitProg3 Level Translator for Secondary UART and GPIO



KitProg3 Secondary UART Multiplexing



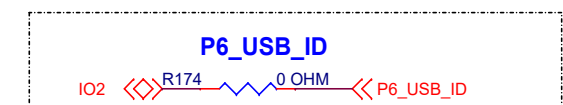
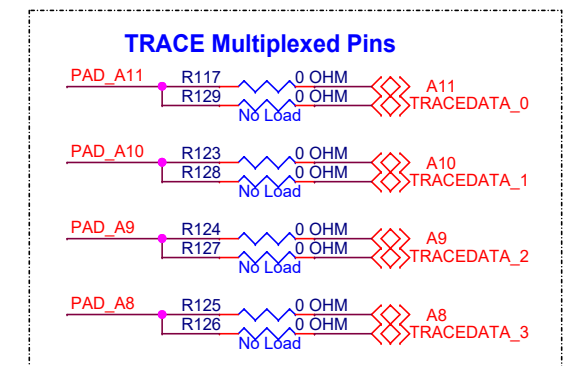
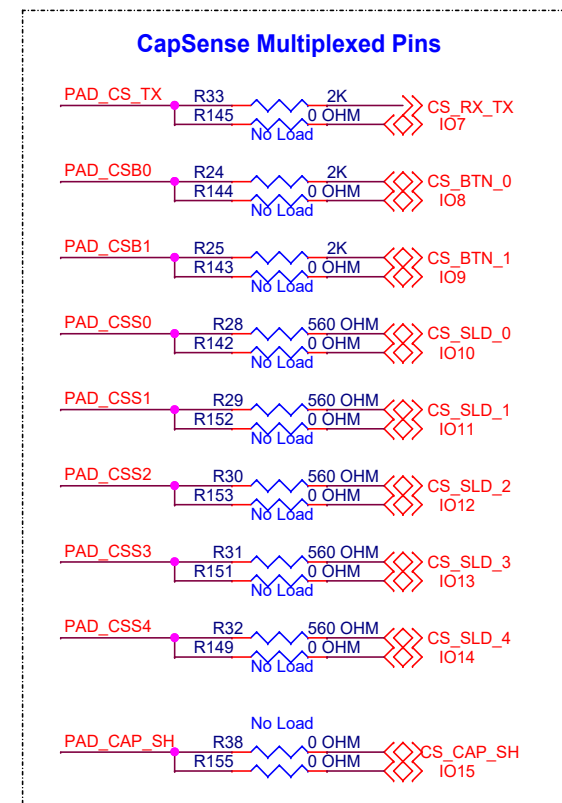
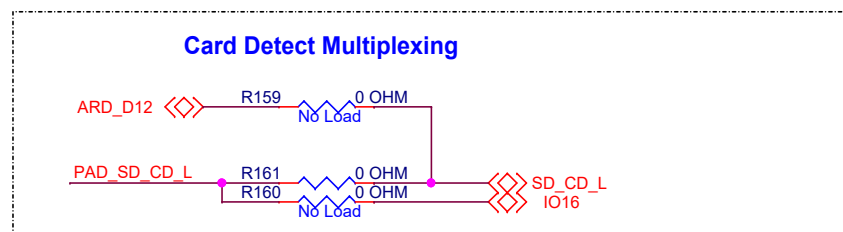
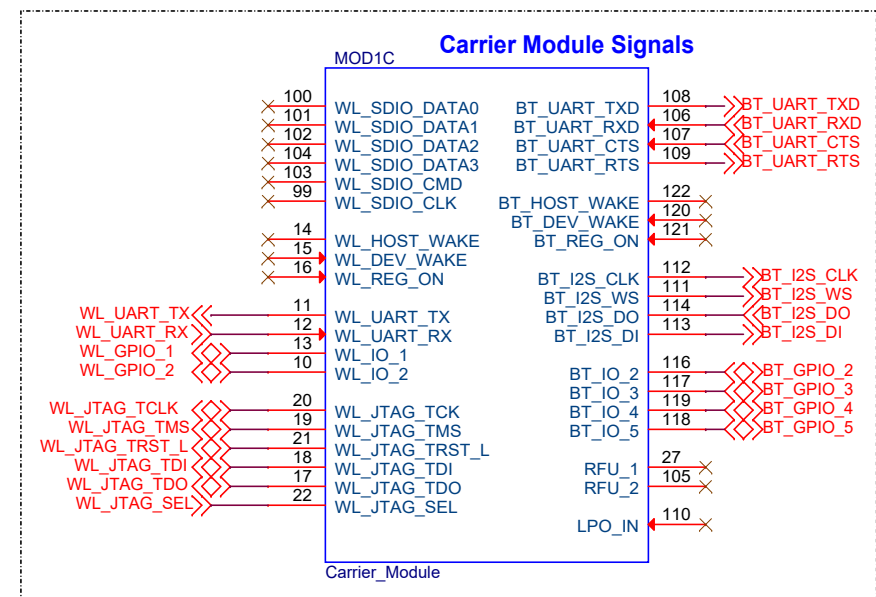
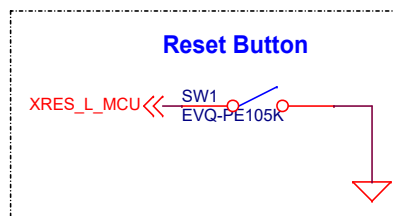
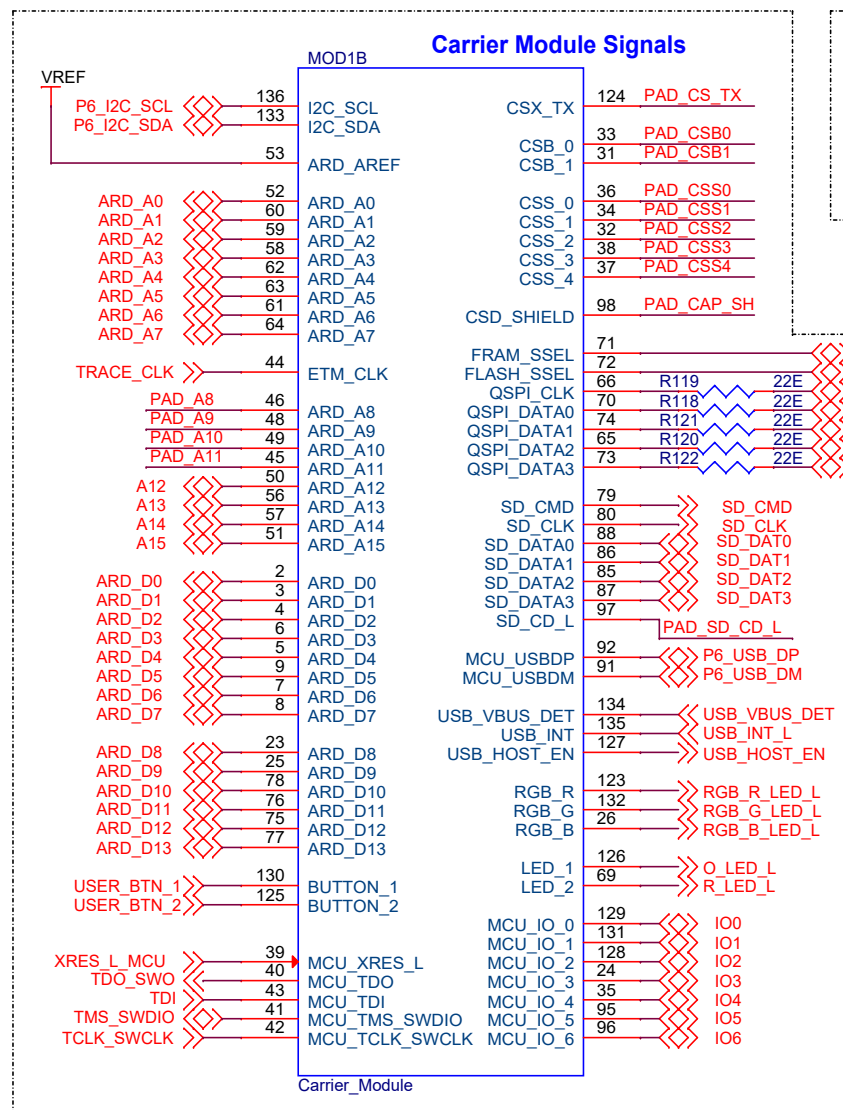
CYPRESS SEMICONDUCTOR
198 CHAMPION COURT
SAN JOSE, CA 95134
(408) 943-2600

CYPRESS SEMICONDUCTOR © 2019

SCH Title : CYW9-BASE-01 Pioneer Baseboard

Page Title : KitProg3 Power and Headers

Size	Document Number	Drawn By	Approved By	Rev
A4	630-60552-01	TARE	RKAD	05
Date:	Wednesday, September 18, 2019	Sheet	7	of 13



CYPRESS SEMICONDUCTOR
198 CHAMPION COURT
SAN JOSE, CA 95134
(408) 943-2600

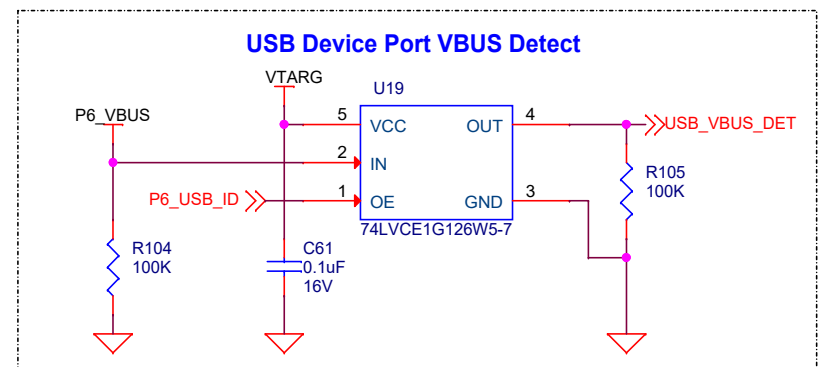
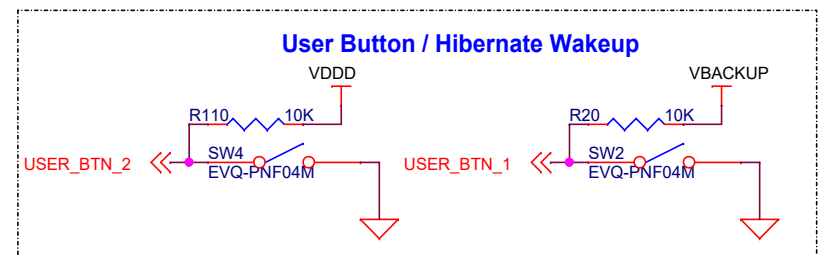
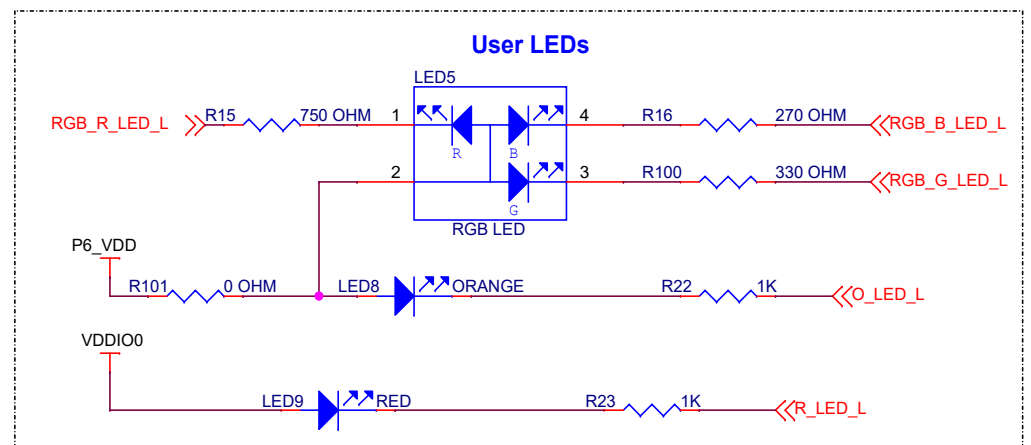
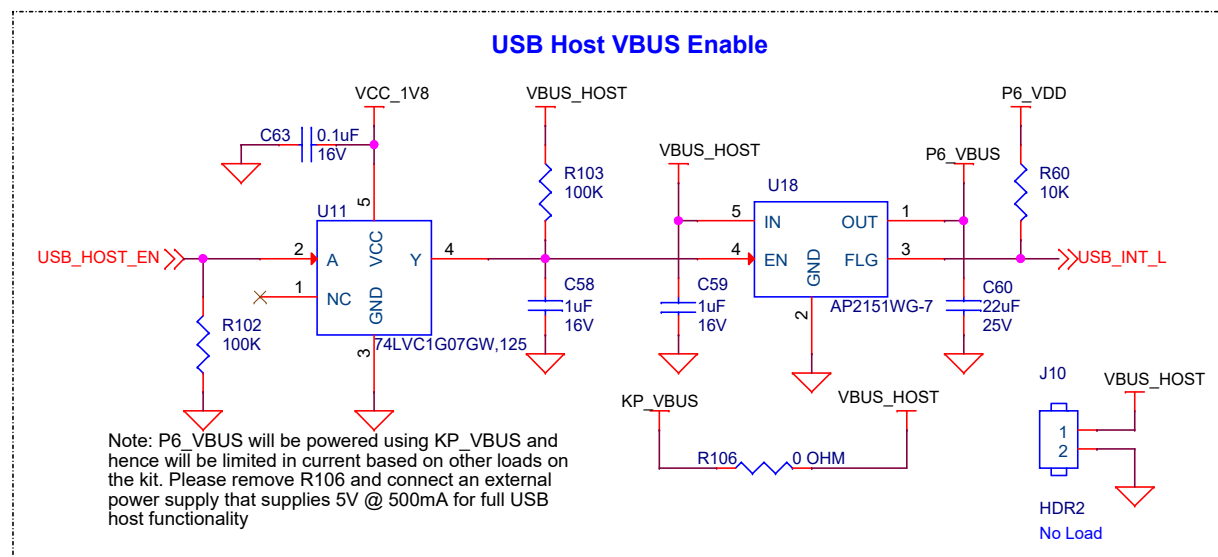
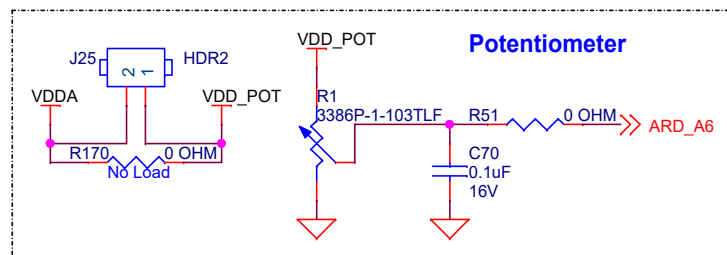
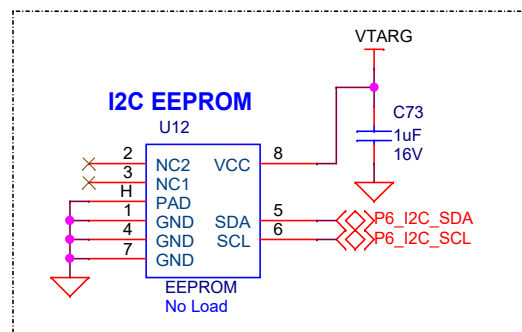
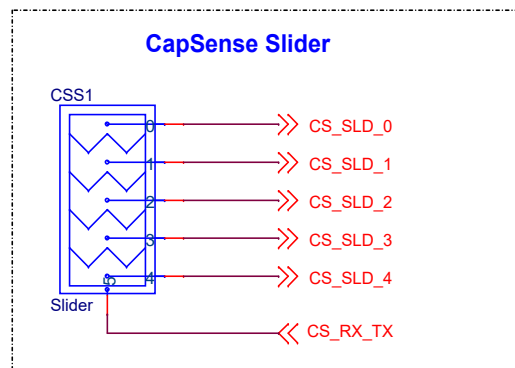
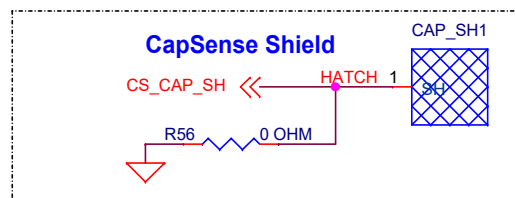
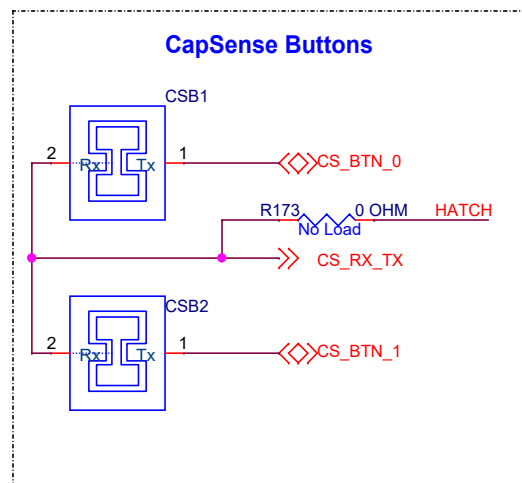
CYPRESS SEMICONDUCTOR © 2019

SCH Title : CYW9-BASE-01 Pioneer Baseboard

Page Title : PSoc 6 Module Signals

Size A4	Document Number 630-60552-01	Drawn By TARE	Approved By RKAD	Rev 05
------------	--	-------------------------	----------------------------	------------------

Date: Wednesday, September 18, 2019 Sheet 9 of 13



CYPRESS SEMICONDUCTOR
198 CHAMPION COURT
SAN JOSE, CA 95134
(408) 943-2600

CYPRESS SEMICONDUCTOR © 2019

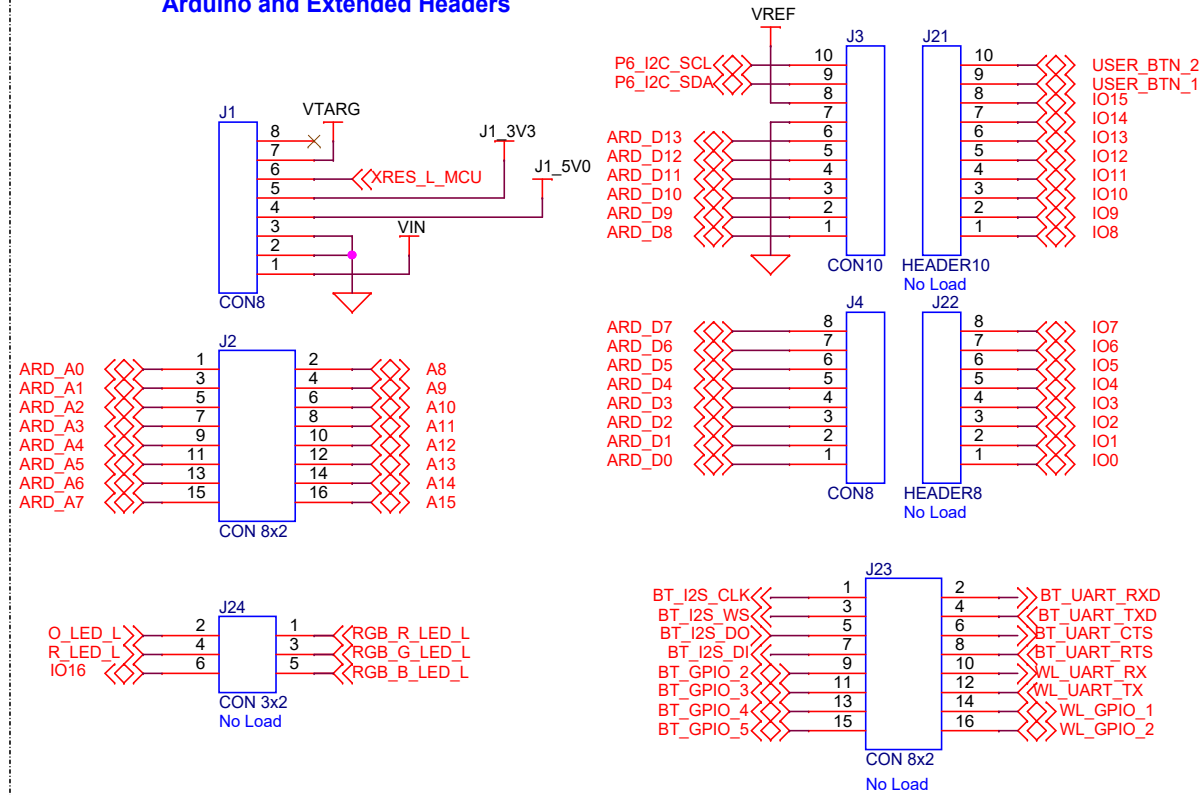
SCH Title : CYW9-BASE-01 Pioneer Baseboard

Page Title : Peripherals

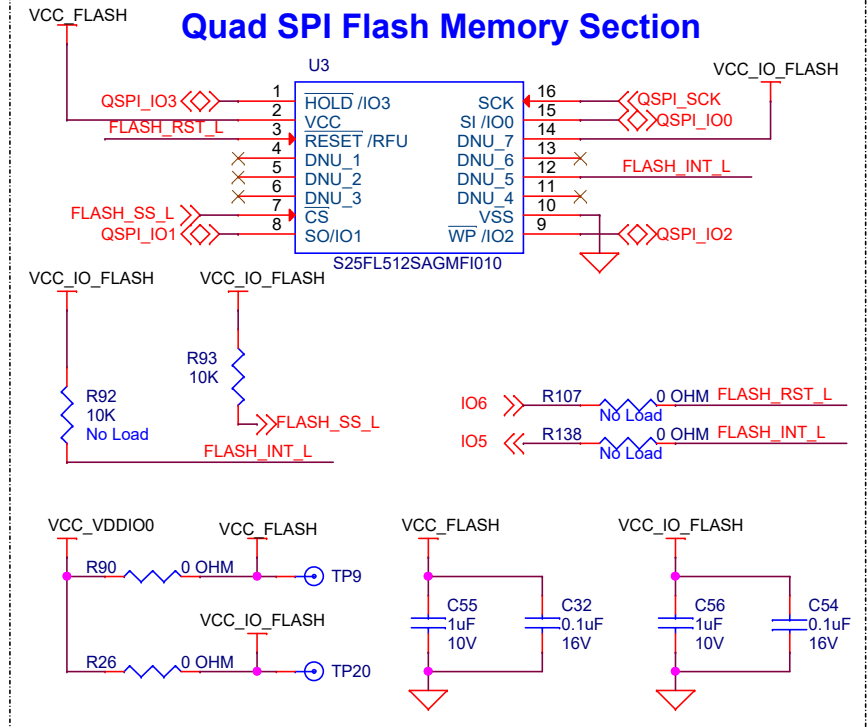
Size A4	Document Number 630-60552-01	Drawn By TARE	Approved By RKAD	Rev 05
------------	--	-------------------------	----------------------------	------------------

Date:	Wednesday, September 18, 2019	Sheet	10	of	13
-------	-------------------------------	-------	----	----	----

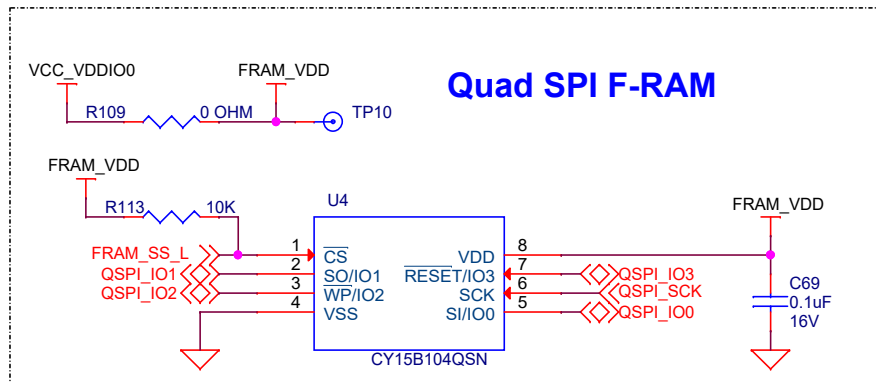
Arduino and Extended Headers



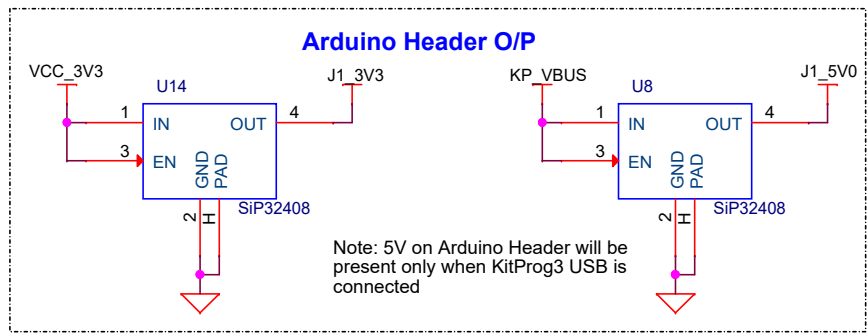
Quad SPI Flash Memory Section



Quad SPI F-RAM



Arduino Header O/P



CYPRESS SEMICONDUCTOR
198 CHAMPION COURT
SAN JOSE, CA 95134
(408) 943-2600

CYPRESS SEMICONDUCTOR © 2019

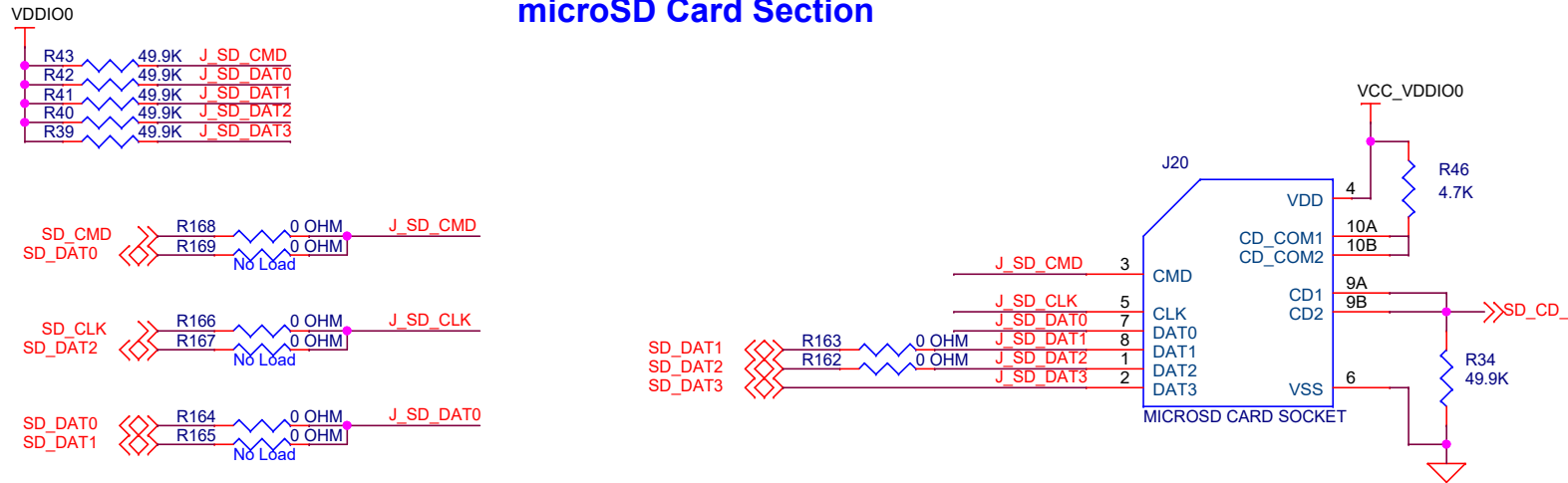
SCH Title : CYW9-BASE-01 Pioneer Baseboard

Page Title : Expansion Headers & Memory

Size A4	Document Number 630-60552-01	Drawn By TARE	Approved By RKAD	Rev 05
------------	--	-------------------------	----------------------------	------------------

Date: Wednesday, September 18, 2019 Sheet 11 of 13

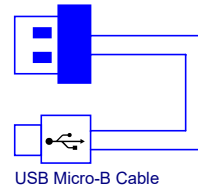
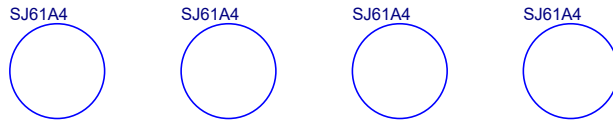
microSD Card Section



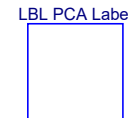
Note: Load R165, R167 and R169 and remove R162, R163, R164, R166 and R168 to change from SDHC to SPI interface for microSD card

Accessories

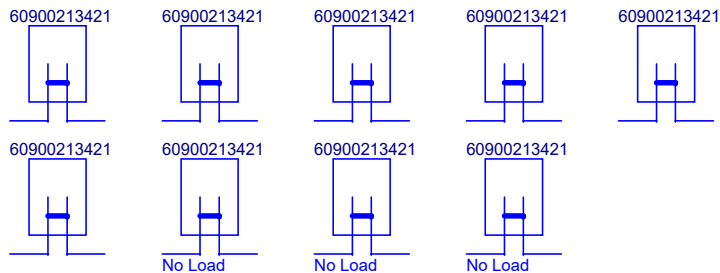
Cylindrical Bumper



PCBA label



Jumper Shunt



Acrylic Overlay

Overlay

Color: Clear, Transparent
Finish: Matt

Dimensions:
45.21mm - length
36.93mm - height
1mm - thickness



CYPRESS SEMICONDUCTOR
198 CHAMPION COURT
SAN JOSE, CA 95134
(408) 943-2600

CYPRESS SEMICONDUCTOR © 2019

SCH Title : CYW9-BASE-01 Pioneer Baseboard

Page Title : microSD card & Accessories

Size A4	Document Number 630-60552-01	Drawn By TARE	Approved By RKAD	Rev 05
Date:	Thursday, December 05, 2019		Sheet	12 of 13

REVISION HISTORY

REV	DESCRIPTION OF CHANGE	DATE
01	Initial Internal Release	2019/05/13
02	Internal Release	2019/05/21
03	Internal Release	2019/07/23
04	Internal Release	2019/08/08
05	Initial Release	2019/09/18



CYPRESS
EMBEDDED IN TOMORROW™

CYPRESS SEMICONDUCTOR
198 CHAMPION COURT
SAN JOSE, CA 95134
(408) 943-2600

CYPRESS SEMICONDUCTOR © 2019

SCH Title : CYW9-BASE-01 Pioneer Baseboard

Page Title : Revision History (1)

Size A4	Document Number 630-60552-01	Drawn By TARE	Approved By RKAD	Rev 05
Date:	Wednesday, September 18, 2019	Sheet	13	of 13