Model	REV.	CHANGE LIST
CHAMELEON M/B	1B	2014/04/17 [Page 03] Add Q22,Q23,R517,R518 and Un-stuff R60,R62 for I2C leakage issue. [Page 03] Modified U1.86 netname to DP1_SINK_HPD for IT6506E HPD issue. [Page 03] Modified C22,C23,R334 and R335 netnames to DP1_SINK_RXAUXP and DP1_SINK_RXAUXN for IT6506E AUX bypass switch issue. [Page 03] Modified CN1.15, CN1.17, U3.1, U3.2, U3.9 and U3.10 netnames to DP1_SOURCE_RXAUXP and DP1_SOURCE_RXAUXNfor IT6506E AUX bypass switch issue. [Page 03] Changed U54 symbol to FRAM FM24CL04B. [Page 03] Changed C46 and C47 from 22pF to 15pF for finetune crystal matching. [Page 04] Add Q24,Q25,R519,R520 and Un-stuff R221,R237 for I2C leakage issue. [Page 04] Modified U5.86 netname to DP2_SINK_HPD for IT6506E HPD issue. [Page 04] Modified C72,C73,R345 and R346 netnames to DP2_SINK_RXAUXP and DP2_SINK_RXAUXN for IT6506E AUX bypass switch issue. [Page 04] Modified CN1.15, CN1.17, U3.1, U3.2, U3.9 and U3.10 netnames to DP2_SOURCE_RXAUXP and DP2_SOURCE_RXAUXN for IT6506E AUX bypass switch issue. [Page 04] Changed U56 symbol to FRAM FM24CL04B. [Page 04] Changed C110 and C111 from 22pF to 15pF for finetune crystal matching. [Page 05] Add Q26,Q27,R521,R522 and Un-stuff R185,R186 for I2C leakage issue. [Page 06] Add Q30,Q31,R525,R526 and Un-stuff R433,R434 for I2C leakage issue. [Page 06] Modified R364 netname to HDMI_SINK_HPD for IT6803TE HPD issue. [Page 06] Add Q28,Q29,R523,R524 for IT6803TE DDC switch level shift issue. [Page 06] Changed C267 and C268 from 22pF to 15pF for finetune crystal matching. [Page 07] Swapped HDMI_QA(R/G/B) lvttl signals to MUX RX_A for HDMI output issue. [Page 08] Swapped HDMI_QB(R/G/B) lvttl signals to MUX RX_B for HDMI output issue. [Page 09] Changed CN7 symbol to 3-pin header for Debug test. [Page 09] Add U58 for HDMI DDC bypass switch. [Page 09] Swapped U47 symbol netnames for DP1 AUX/HPD bypass switch. [Page 09] Swapped U45 symbol netnames for DP2 AUX/HPD bypass switch. [Page 09] Add C286~C293,R527~R542 for IT6506E finetune AUX issue. 2014/04/25 [Page 03] Change DP1 connector CN1 [Page 04] Change DP2 connector CN2 2014/04/28 [Page 06] Change HDMI connector CN6 2014/04/29 [Page 09] Swap U58.8/9 and U58.11/12 2014/05/06 [Page 02] Correct I2C address. [Page 03] Tie Q22.2, Q23.2, R517 and R518 to PP3300_DP1. [Page 03] Swap U55.7/9 to U55.4/2 [Page 04] Tie Q24.2, Q25.2, R519 and R520 to PP3300_DP2. [Page 04] Swap U57.7/9 to U57.4/2 [Page 07] Tie R498 to PP3300 [Page 10] Reserve R156 0 ohm from PU1.C2 to PU1.A2, un-mount as default [Page 11] Change PR16 from 10K to 12K for increasing voltage of PP1200 from 1.2V to 1.3V [Page 11] Add PC197 22uF capacitor in output side of PP1200 2014/05/07 [Page 03] Remvoe R332, R333 [Page 04] Remvoe R343, R344 [Page 06] Add 4.7K R543 pull Hi to PP3300 on net of HDMI_SINK_DDC_SCL Add 4.7K R544 pull Hi to PP3300 on net of HDMI_SINK_DDC_SDA 2014/05/08 [Page 03] Modify HPD topology of DP1(add R546 1K un-mount) [Page 04] Modify HPD topology of DP2(add R545 1K un-mount) [Page 05] Add U59 ,C294 to block RGB detection [Page 06] Modify HPD topology of HDMI(change R364 from 33ohm to 1k ohm) [Page 06] Remove Q28, Q29, R523 and R524 [Page 09] Remove TP8 , Add net CRT_PLUG_L on U43.1 [Page 09] Rmove U58 and C285 , move HDMI DDC signal from U58 to U47 2014/05/09 [Page 03] Unmount R336 as default [Page 04] Unmount R347 as default [Page 06] Add 27K R547 pull to PP3300 on net of HDMI_CEC_1 and add diode D6 to prevent current leakage [Page 09] Swap CRT_PLUG_L U43.4 and U44.19 2014/05/11 [Page 03] Add diode D7 between U55.8 to PP3300 to prevent current leakage from I2C to PP3300. [Page 04] Add diode D8 between U57.8 to PP3300 to prevent current leakage from I2C to PP3300. [Page 09] Modify PH source on R358,R359 and R494 from PP3300_DSW to PP3300. 2014/05/13 [Page 03] Tie U1.37 from DP1_SINK_RXAUXN to DP1_SOURCE_RXAUXN [Page 03] Tie U1.38 from DP1_SINK_RXAUXP to DP1_SOURCE_RXAUXP [Page 04] Tie U5.37 from DP2_SINK_RXAUXN to DP2_SOURCE_RXAUXN [Page 04] Tie U5.38 from DP2_SINK_RXAUXP to DP2_SOURCE_RXAUXP 2014/06/30 [Page 03] Change U55 power source from PP3300_DP1 to PP3300_DSW and remove D7 [Page 04] Change U57 power source from PP3300_DP2 to PP3300_DSW and remove D8 [Page 06] Swap net HDMI_SINK_DDC_SDA and HDMI_SINK_DDC_SCL [Page 10] Mount JP11 and JP12 [Page 10] Unmount PR4 2015/03/16 [Page 09] R253,R263,R264,R493 from 274-ohm change to 510-ohm. [Page 10] Add PC198 330uF at PP3300 and Remove JP11 and Unstuff PU1,PR5,PC6. [Page 11] Add PC199 330uF at PP1200 and Remove JP1,JP3. 2015/03/20 [Page 10] Mount PU1,PR5,PC6 as default.

MODEL	CHAMELEON	
	FROM	To
Page 01		1C
Page 02		1C
Page 03		1C
Page 04		1C
Page 05		1C
Page 06		1C
Page 07		1C
Page 08		1C
Page 09		1C
Page 10		1C
Page 11		1C

DOC NO.				
PROJECT MODEL :	Chameleon B1	APPROVED BY :	Alex Lin	DATE : 2015/03/20
PART NUMBER :		DRAWING BY :	Cyber Chang	REVISON : 1C

PAGE TITLE: Chameleon B1
DESIGN:
DOC NUMBER: Change History
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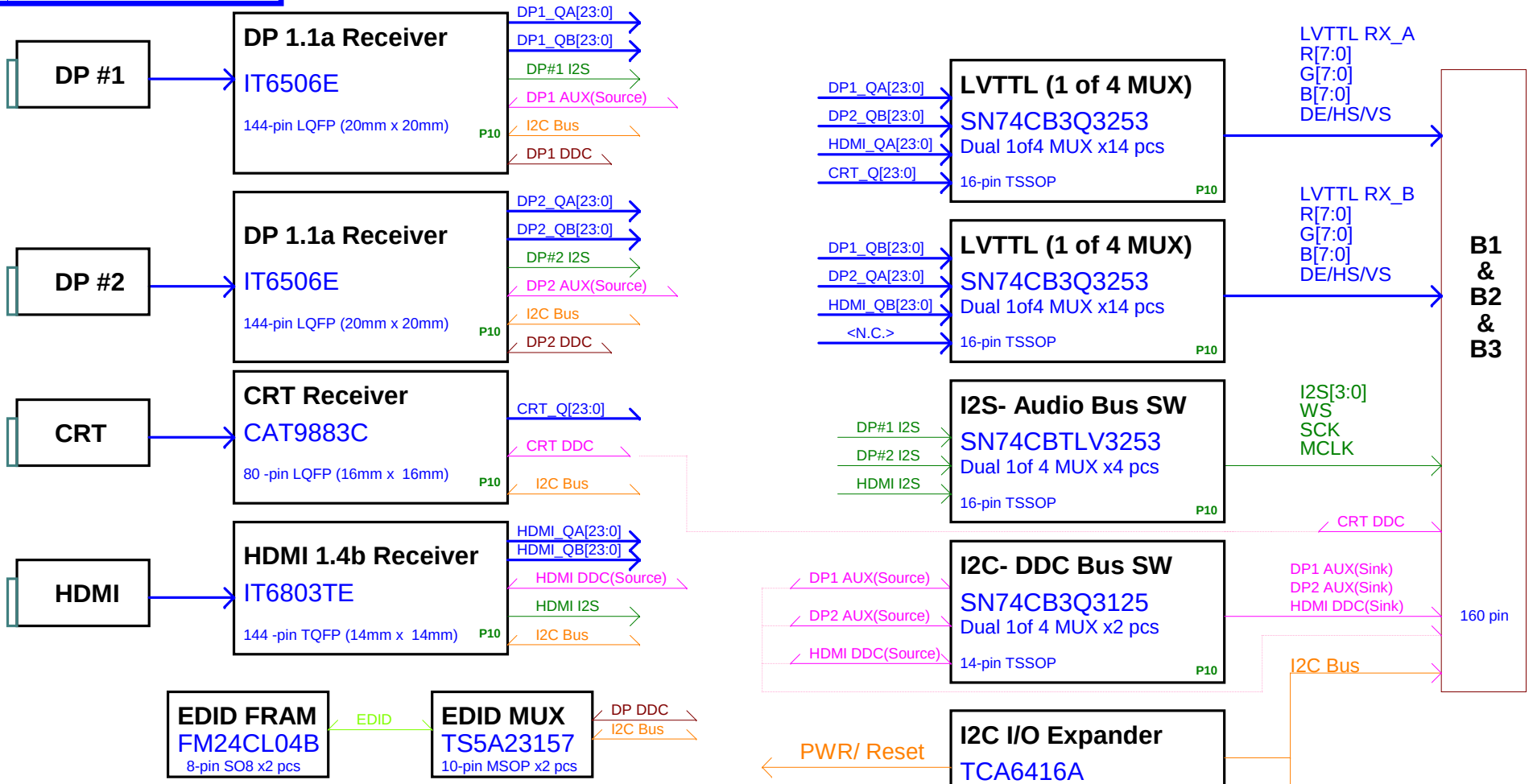
VER : 1B	
BOM P/N	**Description**
310C1MB00S0	Chameleon M/B(???)

Block Diagram: Chameleon/ HSMC Display 3 to 1 Board

LVTTL (HDMI support up to 4K2K @30Hz; DP up to 2560*1600 @60Hz; CRT support up to 1920*1080P)



I2C Address Map

Components	Speed (Hz)	Address	Description
IO_Expander #1	400K	0x20h	PWR/ Reset
IO_Expander #2	400K	0x21h	GPIOs
ITE IT6803TE	100K	0x48h	Rx of HDMI
ITE IT6506(DP1)	100K	0x58h	Rx of DP1
ITE IT6506(DP2)	100K	0x59h	Rx of DP2
ITE CAT9883C	100K	0x4Ch	Rx of CRT
M24C02	400K	0x54h	Board's info.
FM24CL04B	100K	0xA0h-0xAFh	EDID of DP

Configuration

Config	Rx_A [24:0]	Rx_B [24:0]
1	DP1 (QA)	DP1(QB)
2	DP1 (QA)	DP2(QA)
3	DP1(QA)	HDMI(QB)
4	DP2(QB)	DP2(QA)
5	HDMI(QA)	HDMI(QB)
6	CRT	DP2 (QA)
7	CRT	HDMI(QB)

PAGE TITLE: Chameleon B1
DESIGN:
DOC NUMBER: Block Diagram
REV: 1C
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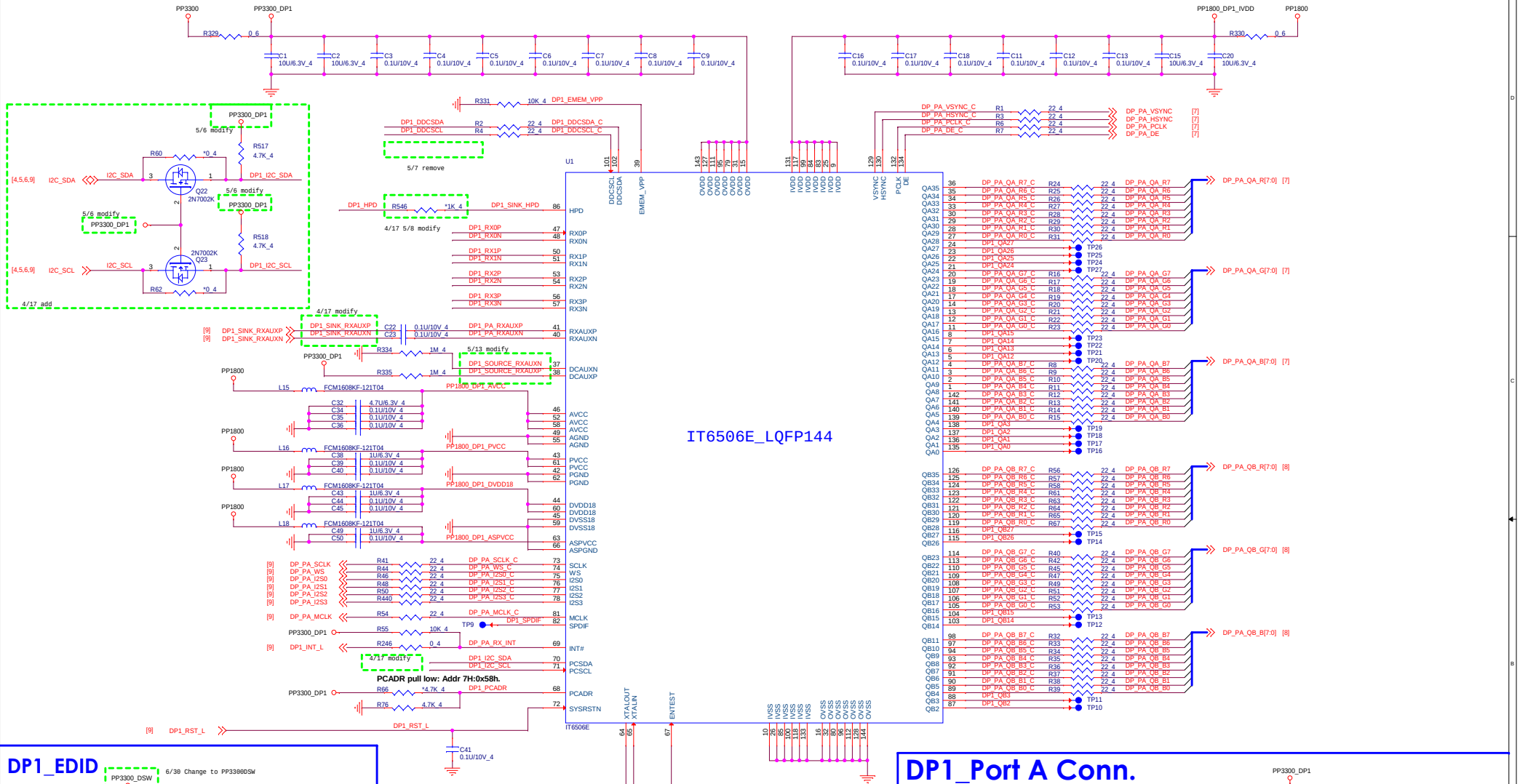
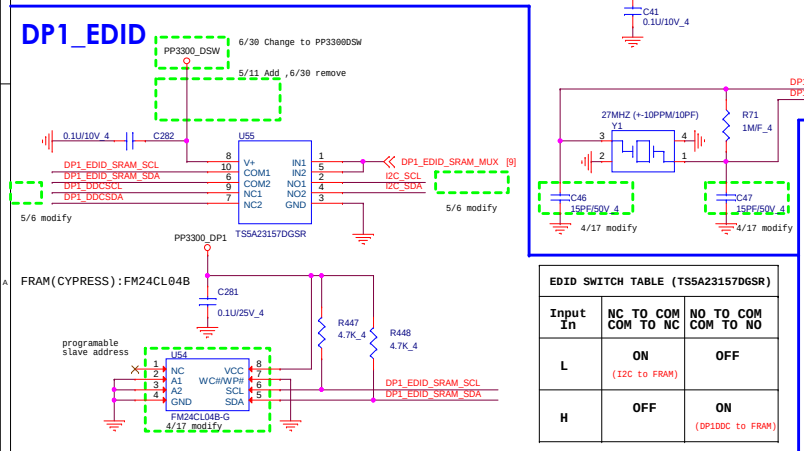
DP1_Port A Receiver (IT6506E)

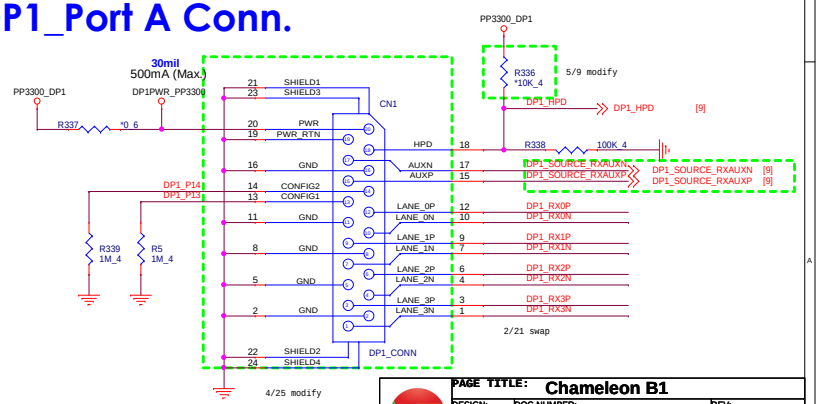


DP1_EDID



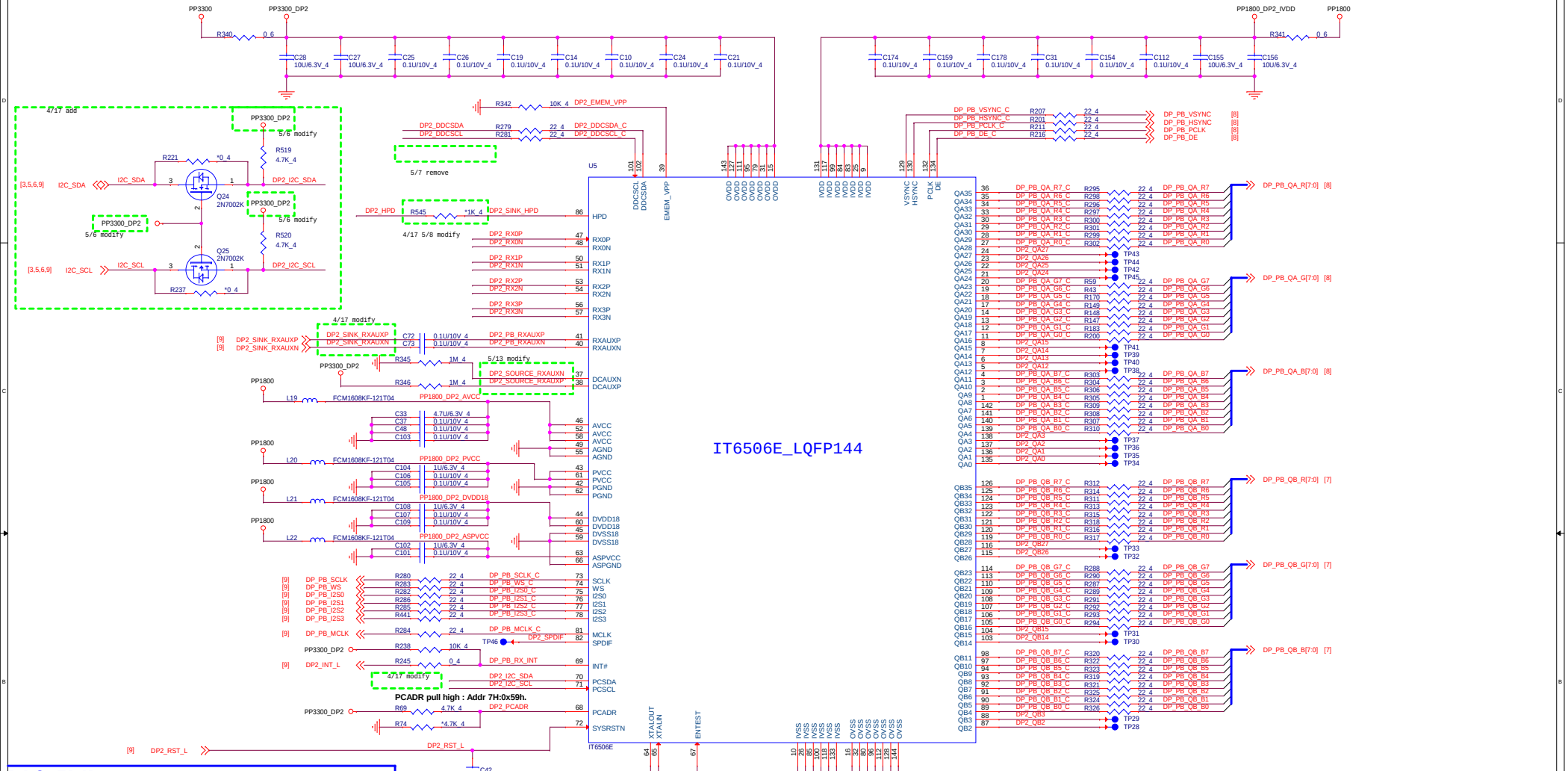
EDID SWITCH TABLE (TS5A23157DGSR)		
Input In	NC TO COM COM TO NC	NO TO COM COM TO NO
L	ON (I2C to FRAM)	OFF
H	OFF	ON (DP1DDC to FRAM)

DP1_Port A Conn.



PAGE TITLE:	Chameleon B1		
DESIGN:	DOC NUMBER: DP1_Port A Receiver (IT6506E)	REV:	1C
MODIFIED: Tuesday, October 27, 2015		PAGE: 3 OF 11	FLAT:

DP2_Port B Receiver (IT6506E)



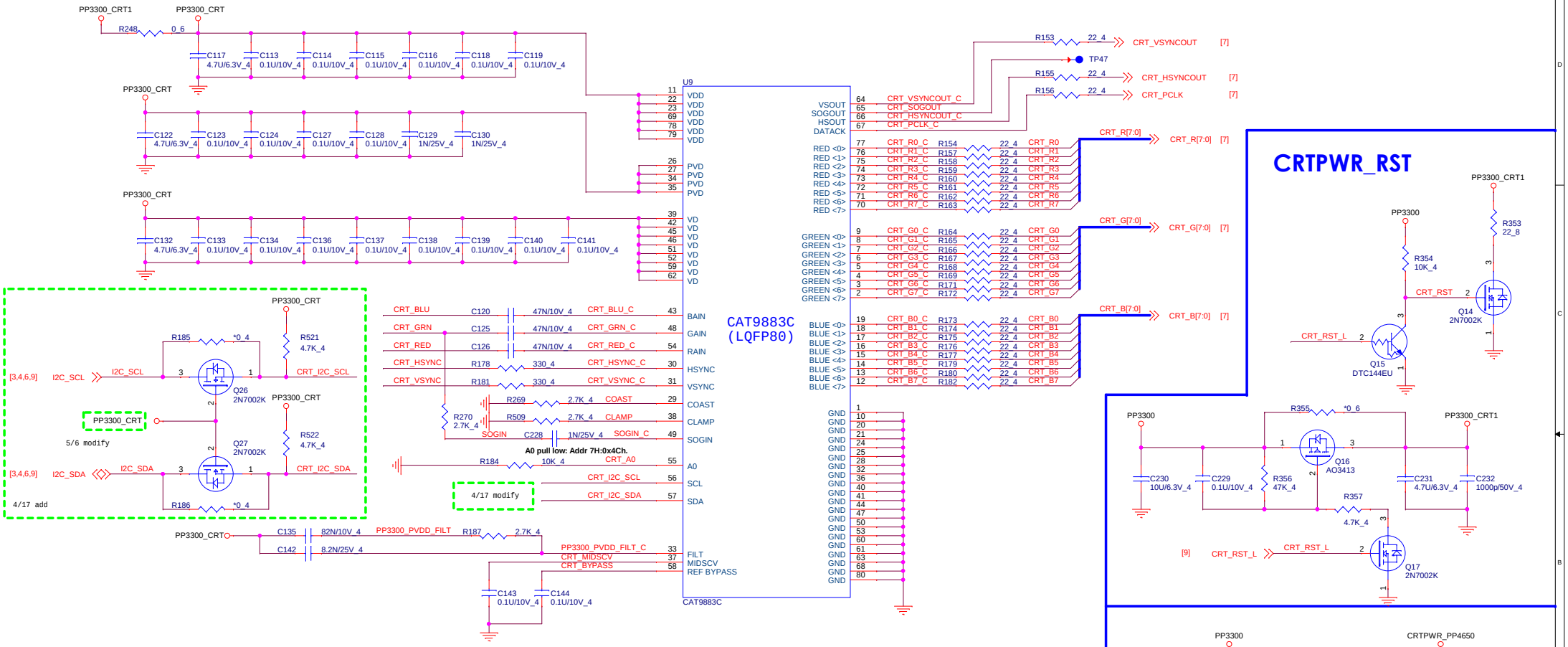
DP2_EDID

EDID SWITCH TABLE (TS5A23157DGSR)		
Input In	NC_TO_COM COM TO NC	NO_TO_COM COM TO NO
L	ON (I2C to FRAM)	OFF
H	OFF	ON (DP2DDC to FRAM)

DP2_Port B Conn.

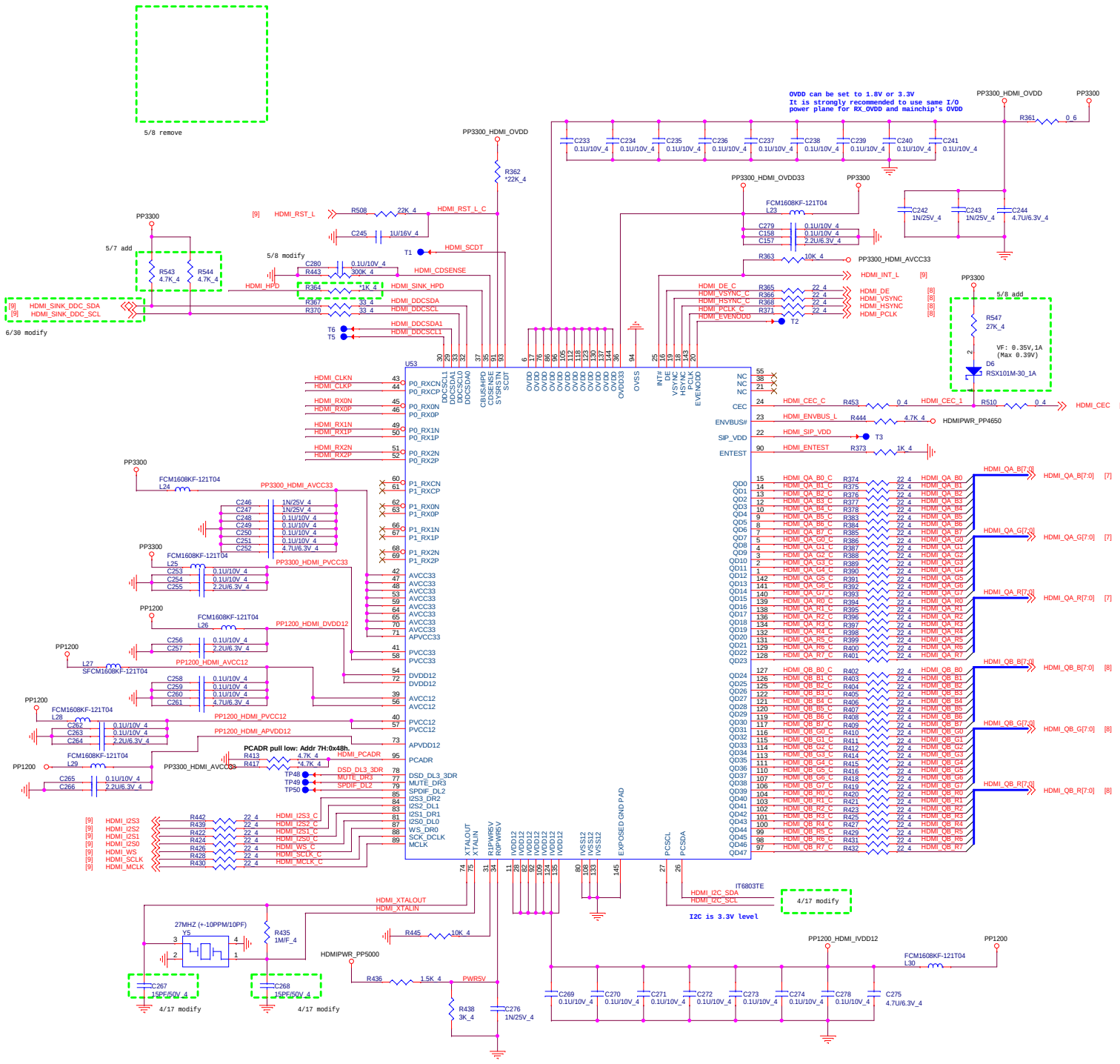
PAGE TITLE:	Chameleon B1
DESIGN:	DOC NUMBER: DP2_Port B Receiver (IT6506E) REV: 1C
MODIFIED: Tuesday, October 27, 2015	PAGE: 4 OF 11 FLAT:

CRT to RGB (CAT9883C)

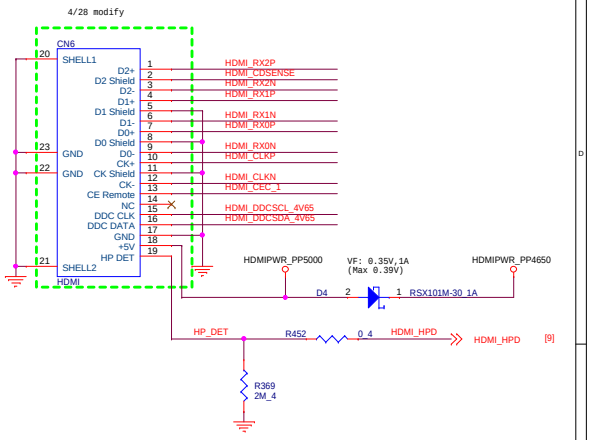


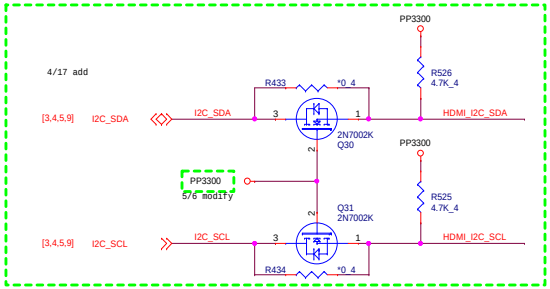
PAGE TITLE: Chameleon B1		
DESIGN:	DOC NUMBER: CRT to RGB (CAT9883C)	REV: 1C
MODIFIED: Tuesday, October 27, 2015		PAGE: 5 OF 11
		FLAT:

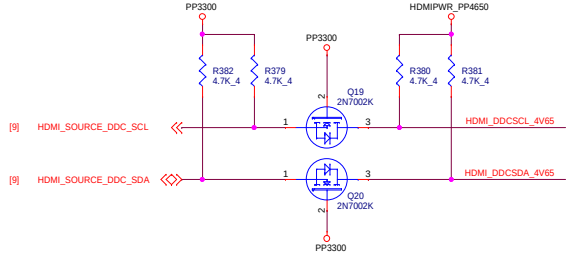
HDMI Receiver (IT6803TE)

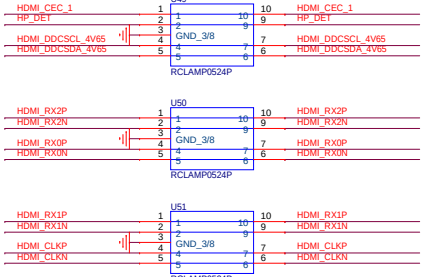


HDMI Conn.









PAGE TITLE: **Chameleon B1**
DESIGN:
DOC NUMBER: HDMI Receiver (IT6803TE)
REV: 1C
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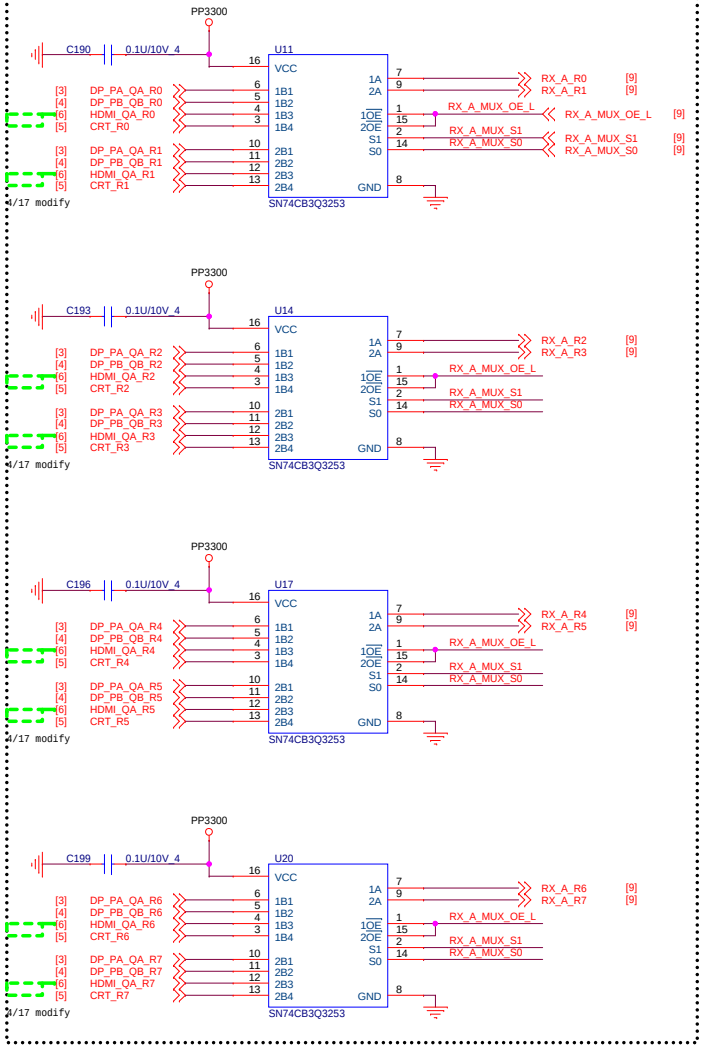
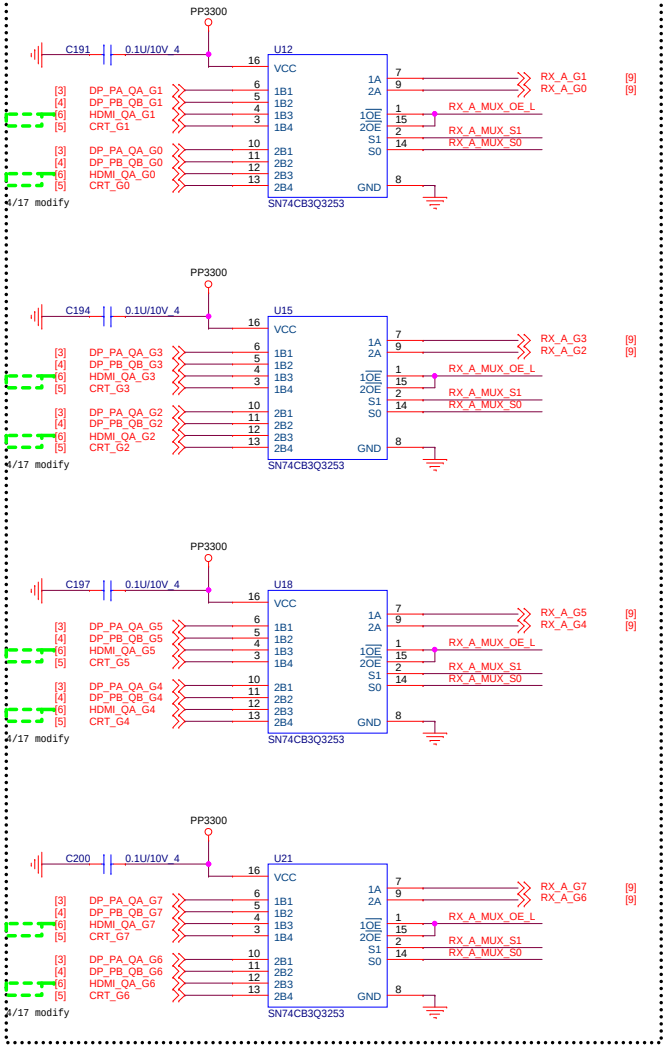
LVTTL MUX RX_A

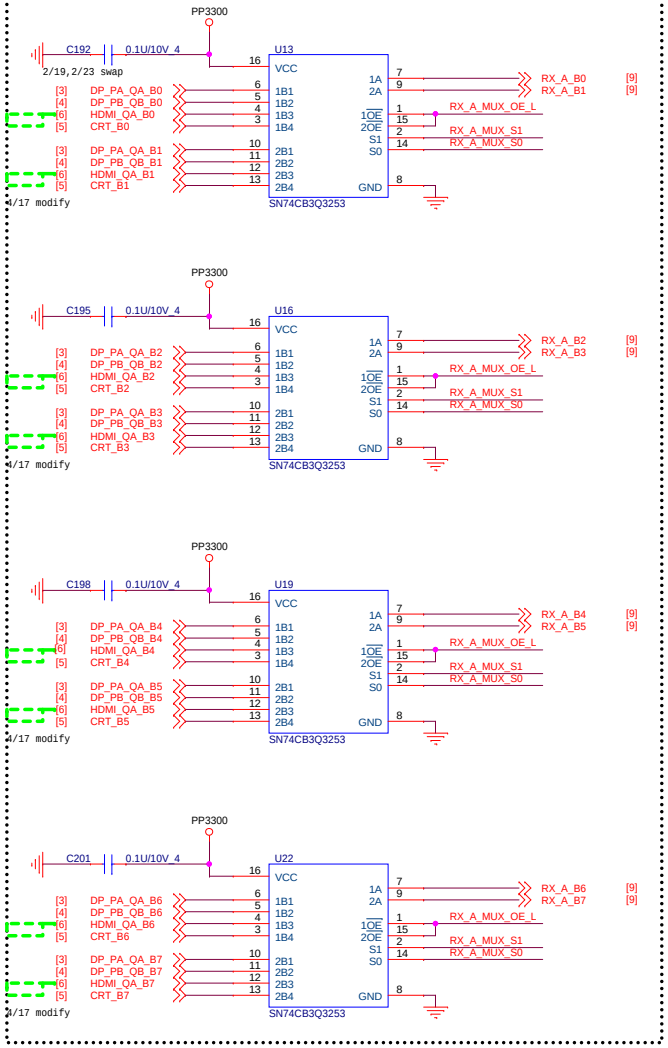
RX_A_R



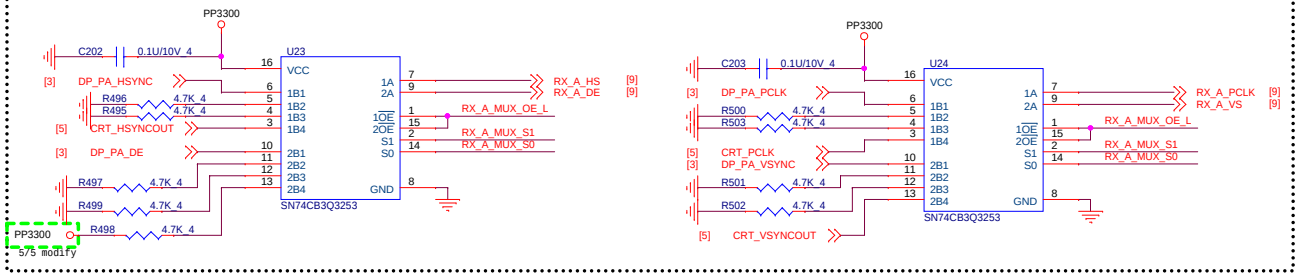
RX_A_G



RX_A_B



H/VSYNC Bus RX_A_SW



Output Config

Configuration	RX_A	RX_B
1	DP1(QA)	DP1(QB)
2	DP1(QA)	DP2(QA)
3	DP1(QA)	HDMI(QB)
4	DP2(QB)	DP2(QA)
5	HDMI(QA)	HDMI(QB)
6	CRT	DP2(QA)
7	CRT	HDMI(QB)

MUTIPLEXER FUNCTION TABLE (SN74CB3Q3253)

INPUTS			INPUT/OUTPUT	FUNCTION
OE#	S1	S0	A	
L	L	L	B1	A port = B1 port
L	L	H	B2	A port = B2 port
L	H	L	B3	A port = B3 port
L	H	H	B4	A port = B4 port
H	X	X	Z	Disconnect

PAGE TITLE: Chameleon B1

DESIGN:

DOC NUMBER: LVTTL MUX RX_A

REV: 1C

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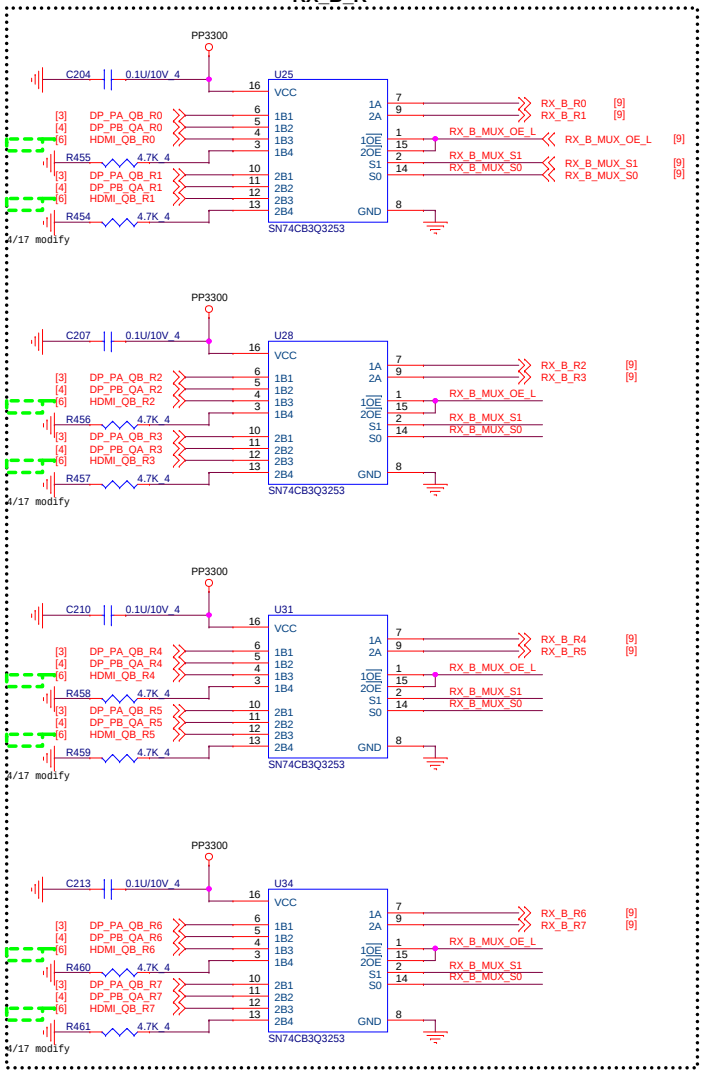
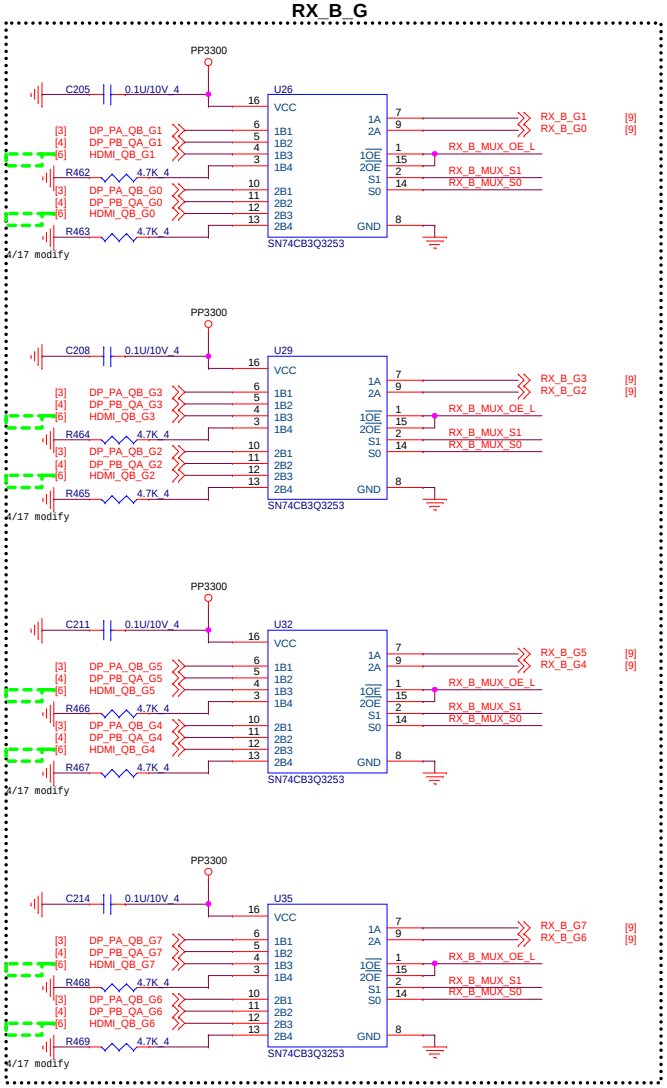
LVTTL MUX RX_B

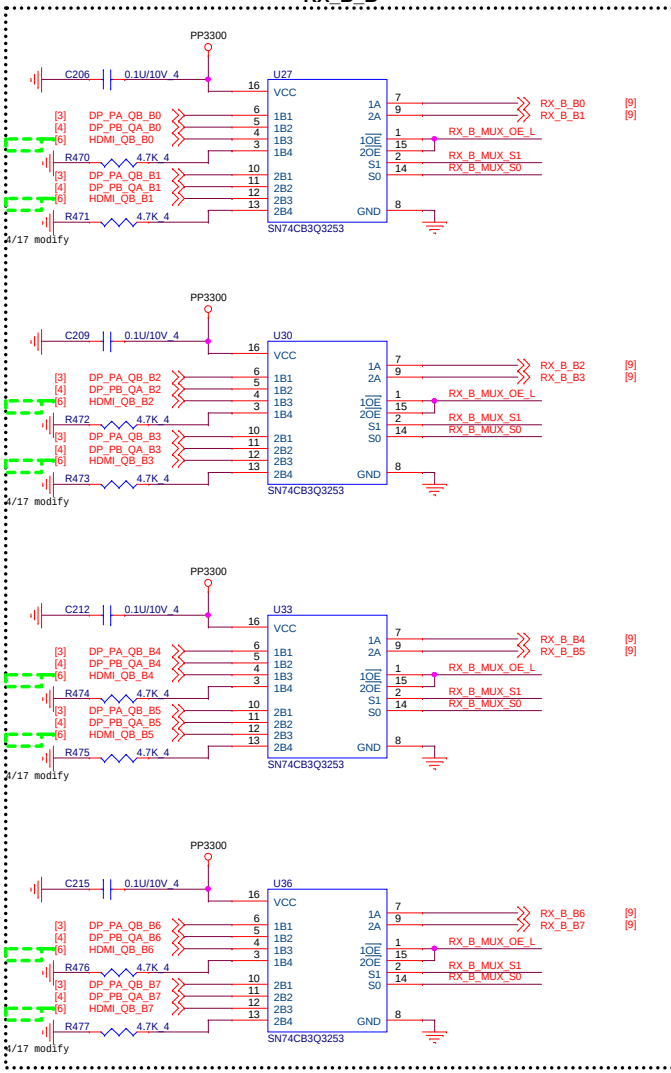
RX_B_R



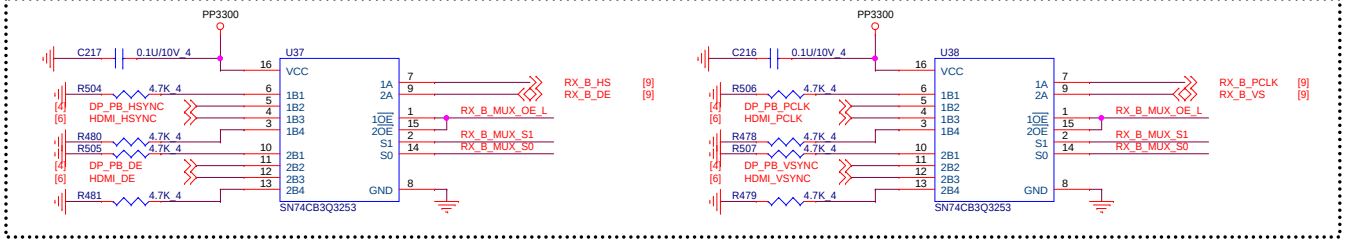
RX_B_G



RX_B_B



H/VSYSNC Bus RX_B_SW



Output Config

Configuration	RX_A	RX_B
1	DP1(QA)	DP1(QB)
2	DP1(QA)	DP2(QA)
3	DP1(QA)	HDMI(QB)
4	DP2(QB)	DP2(QA)
5	HDMI(QA)	HDMI(QB)
6	CRT	DP2(QA)
7	CRT	HDMI(QB)

4/17 modify

MUTIPLEXER FUNCTION TABLE (SN74CB3Q3253)

INPUTS			INPUT/OUTPUT	FUNCTION
OE#	S1	S0	A	
L	L	L	B1	A port = B1 port
L	L	H	B2	A port = B2 port
L	H	L	B3	A port = B3 port
L	H	H	B4	A port = B4 port
H	X	X	Z	Disconnect

PAGE TITLE: Chameleon B1
DESIGN:
DOC NUMBER: LVTTL MUX RX_B
REV: 1C
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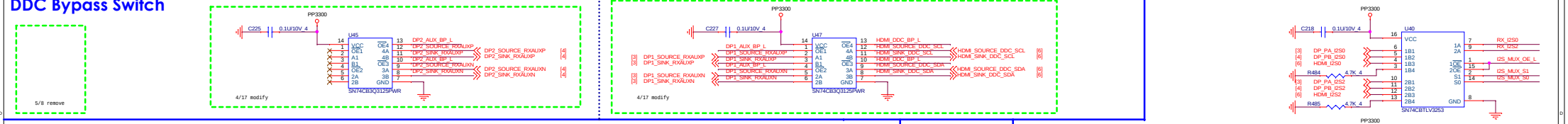
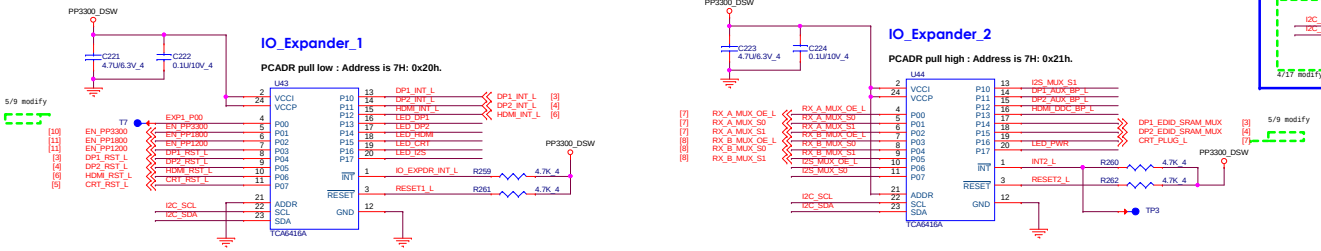
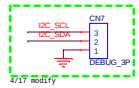
DDC Bypass Switch



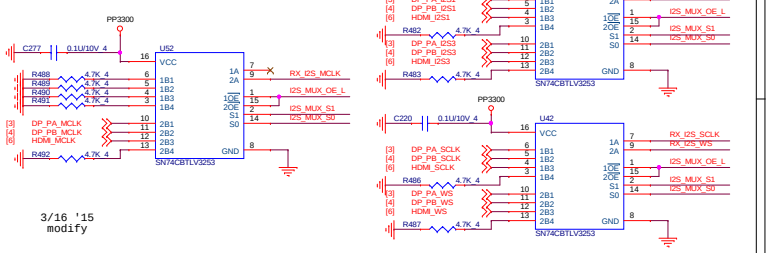
I2C I/O Expander



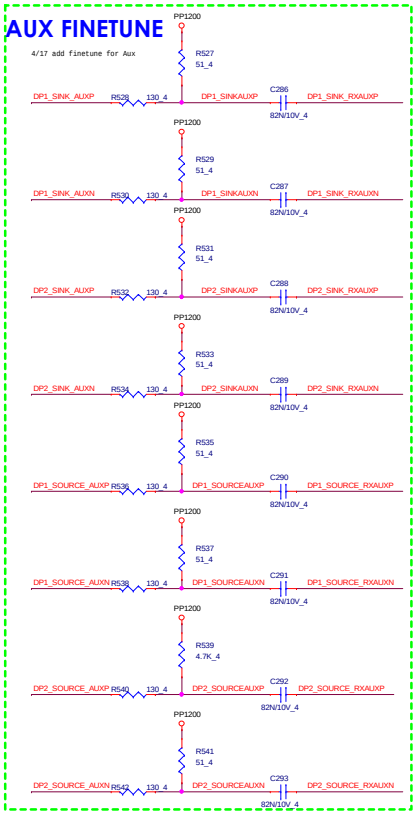
I2C DEBUG



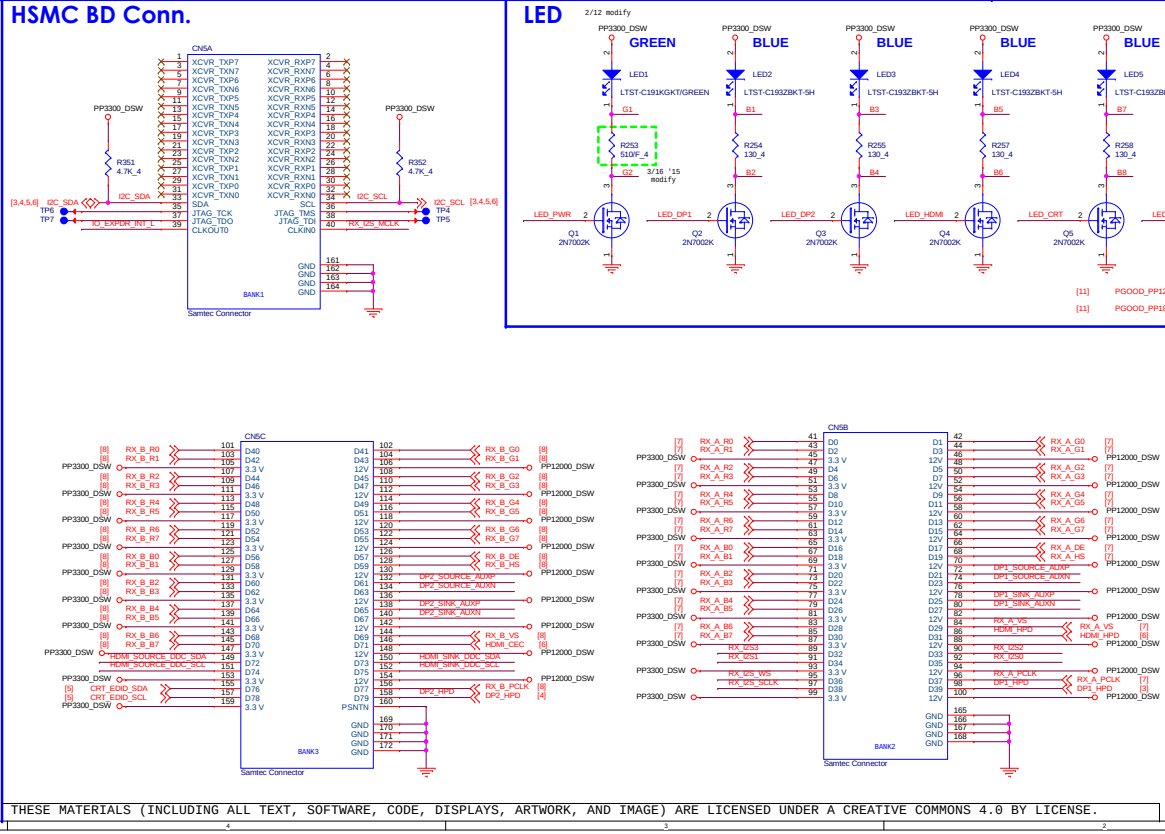
I2S Switch



AUX FINETUNE

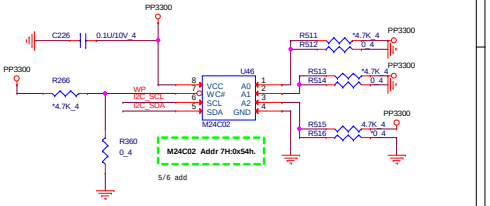


HSMC BD Conn.



LED

Board Information EEPROM



PAGE TITLE: Chameleon B1		
DESIGN:	DOC NUMBER: HSMC & Expander & EEPROM	REV: 1C
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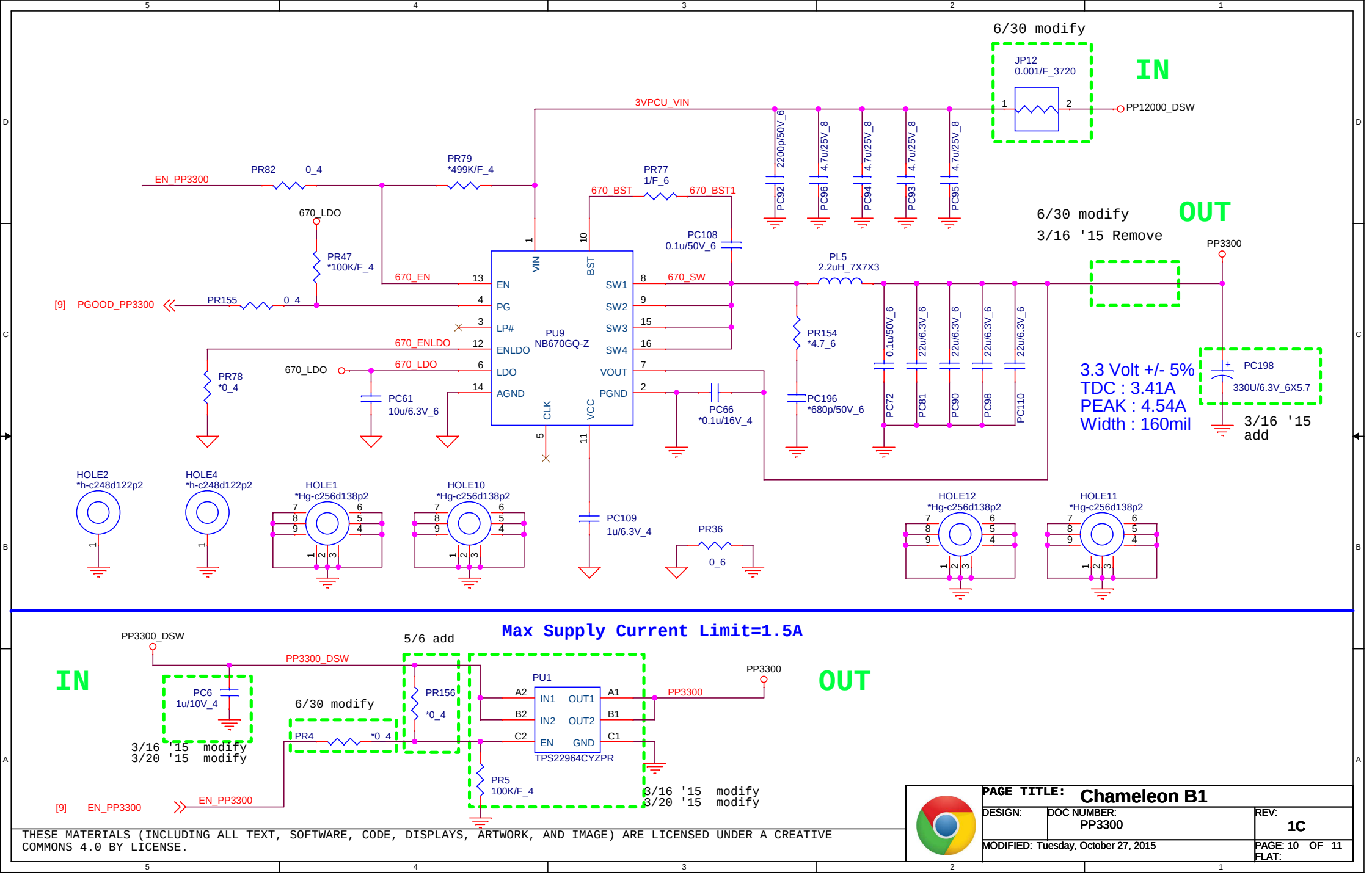
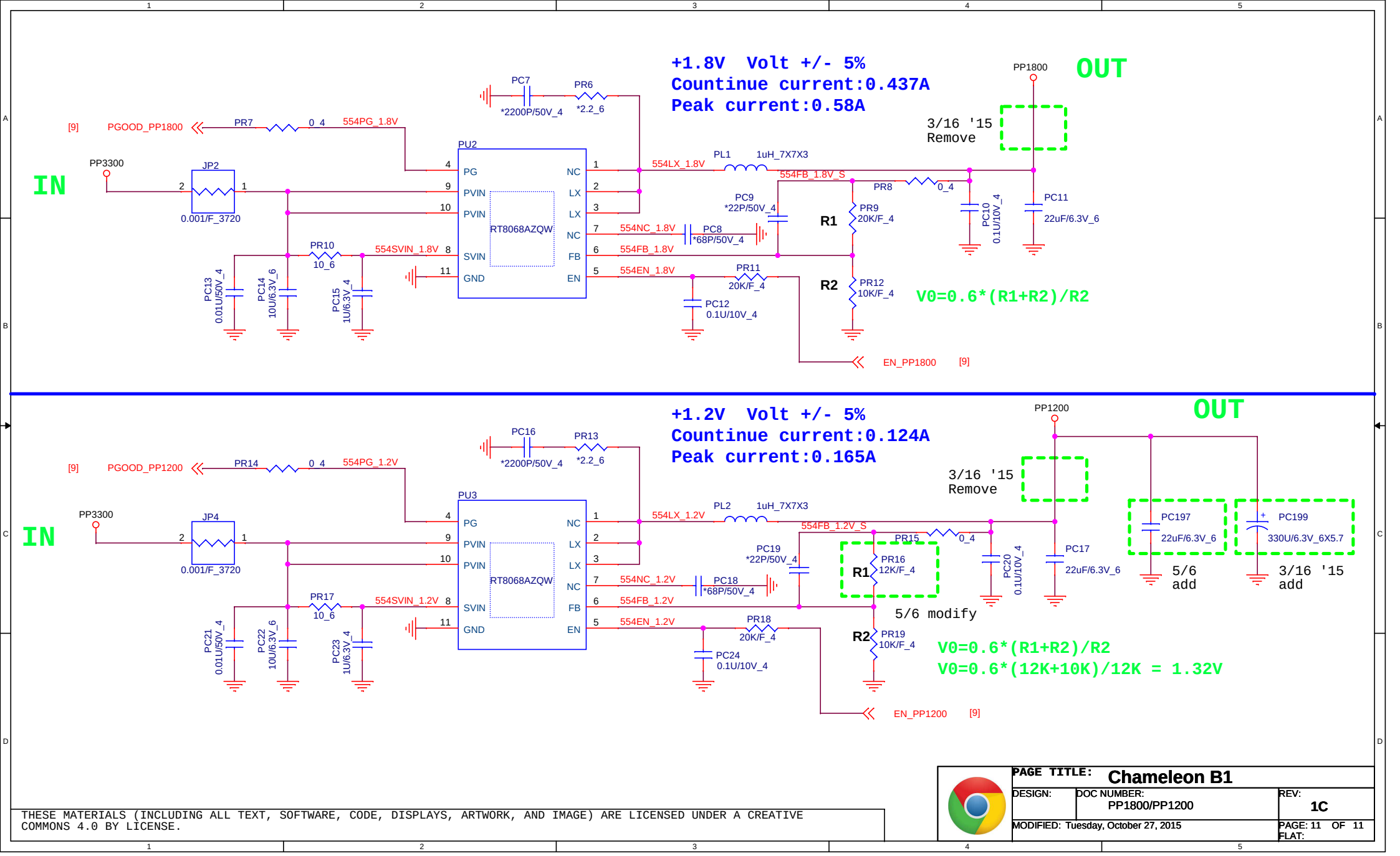


PAGE TITLE: Chameleon B1		
DESIGN:	DOC NUMBER: PP3300	REV: 1C
MODIFIED: Tuesday, October 27, 2015		PAGE: 10 OF 11
		FLAT:



PAGE TITLE: Chameleon B1		
DESIGN:	DOC NUMBER: PP1800/PP1200	REV: 1C
MODIFIED: Tuesday, October 27, 2015		PAGE: 11 OF 11 FLAT: