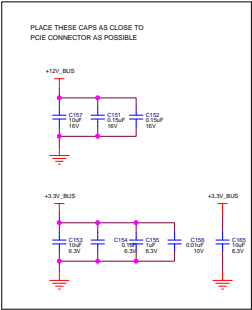
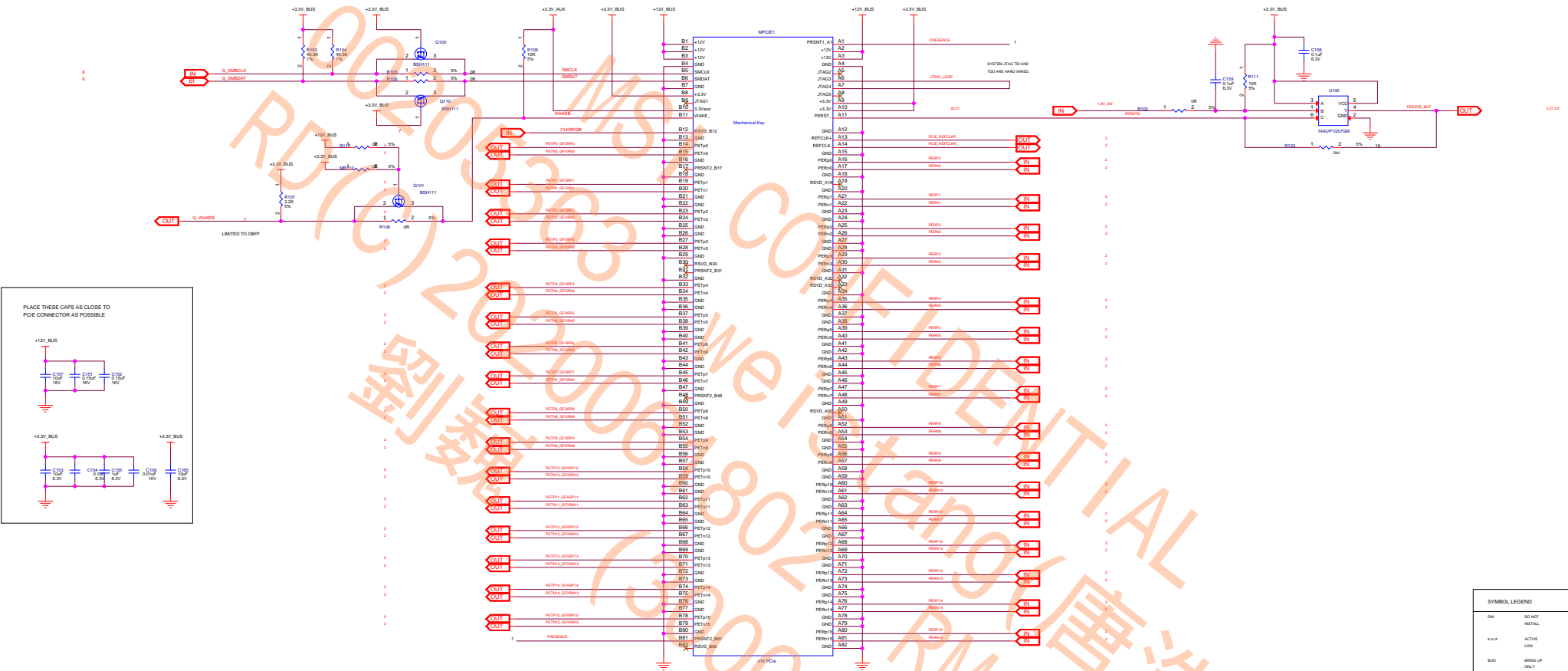
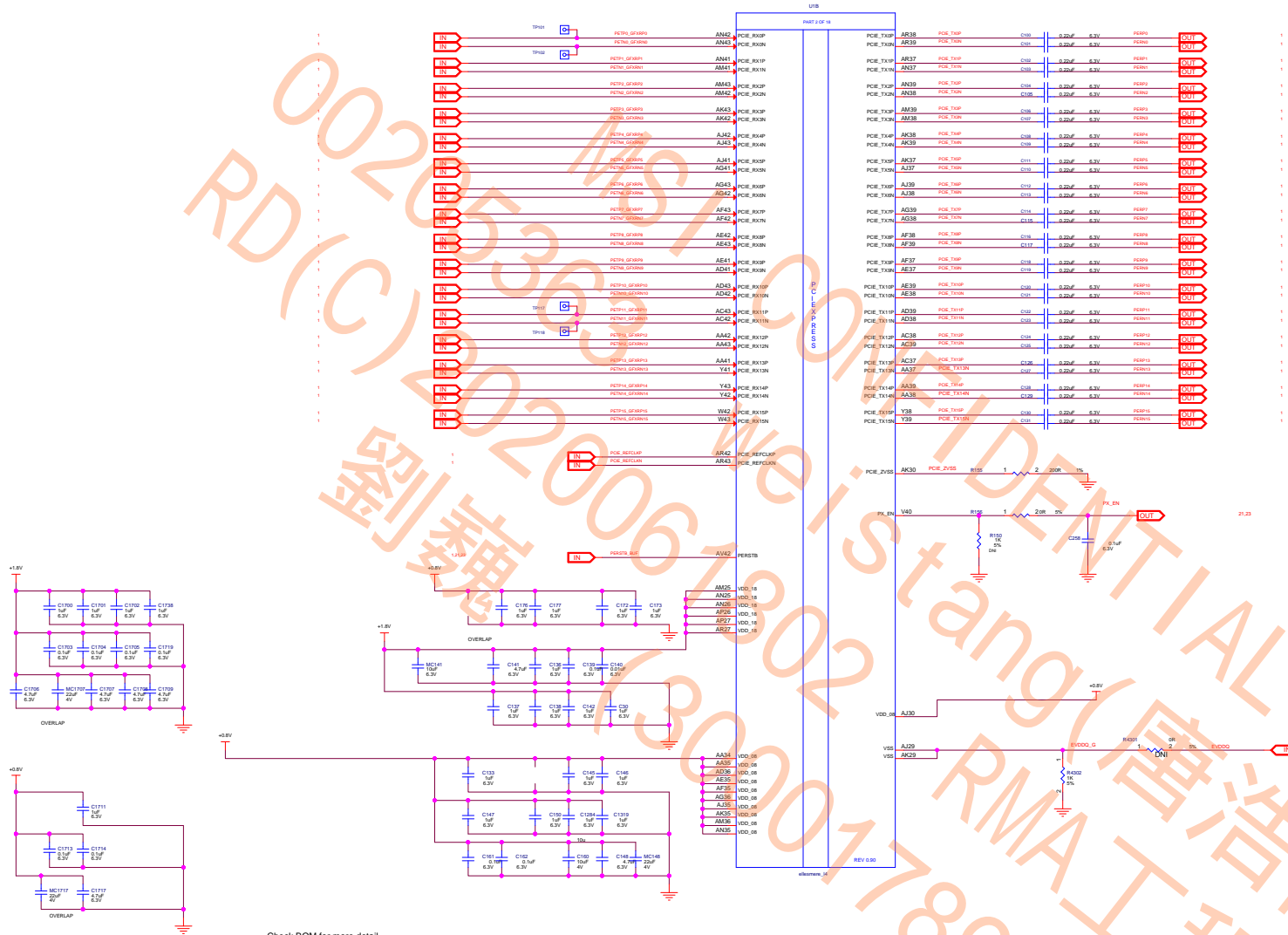


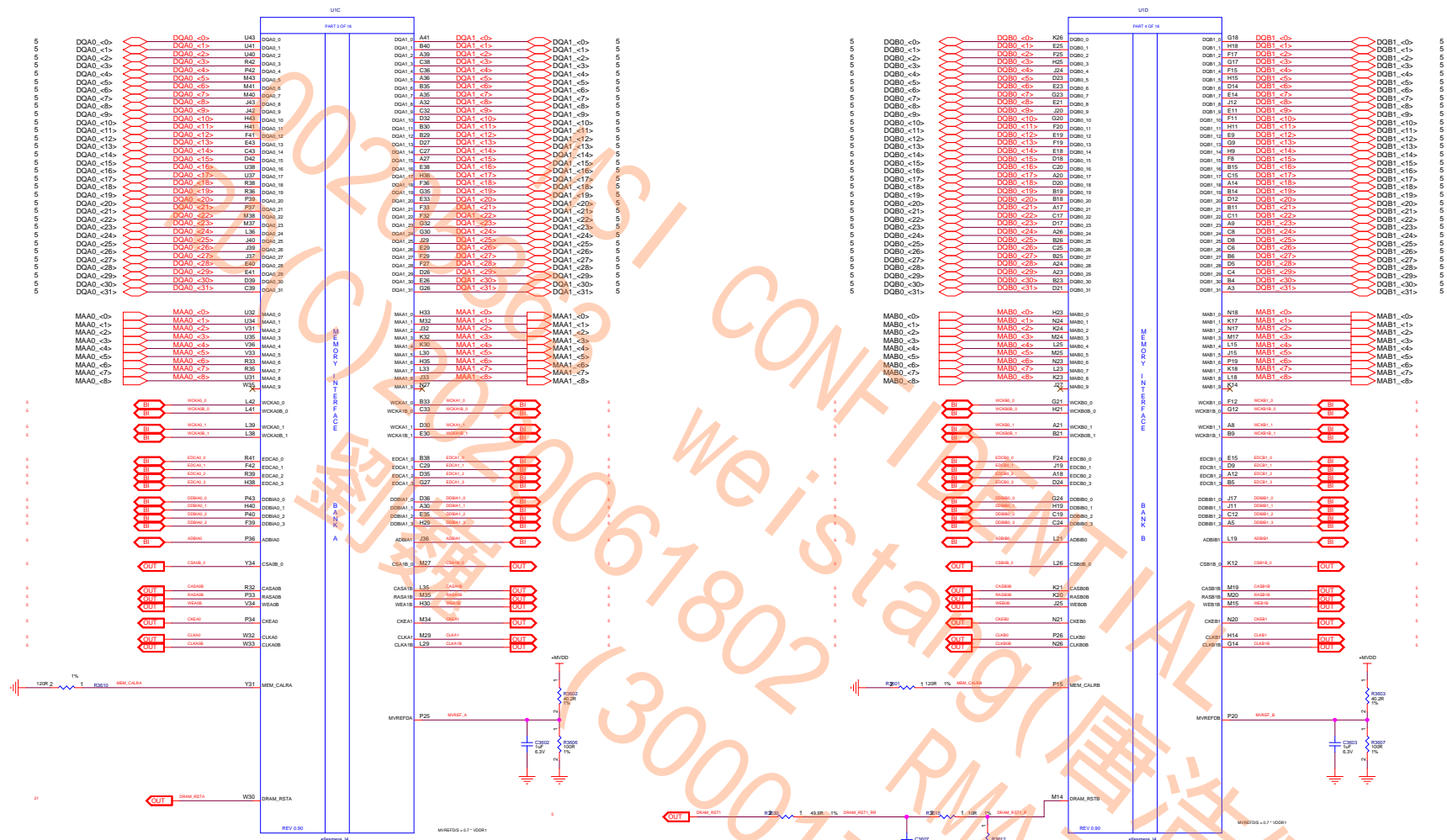
(1) PCI-EXPRESS EDGE CONNECTOR



(2) ELLESMERE PCIE INTERFACE



(3) ELLESMERE MEM INTERFACE CH A/B

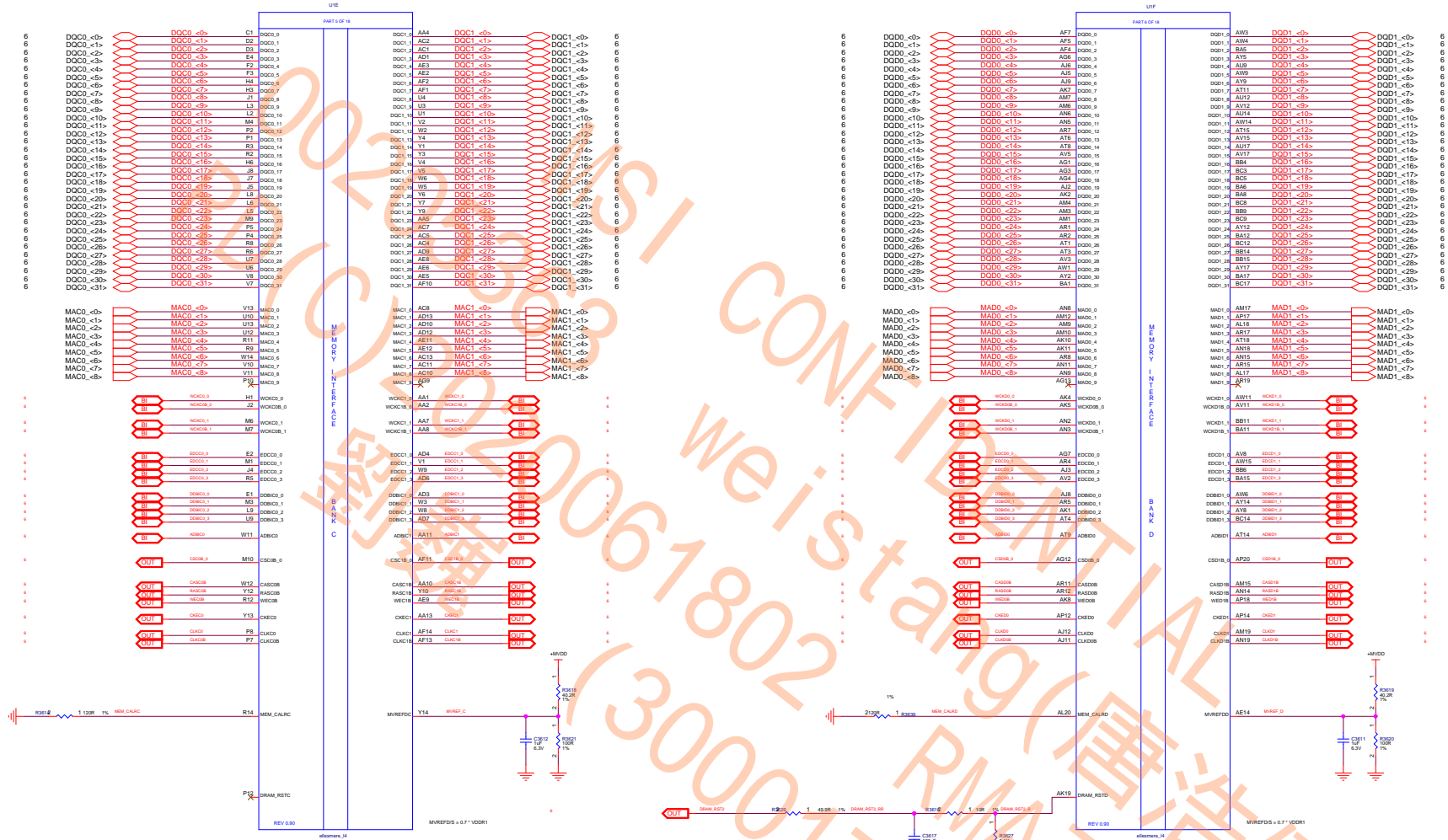


MICRO-STAR INT'L CO.,LTD

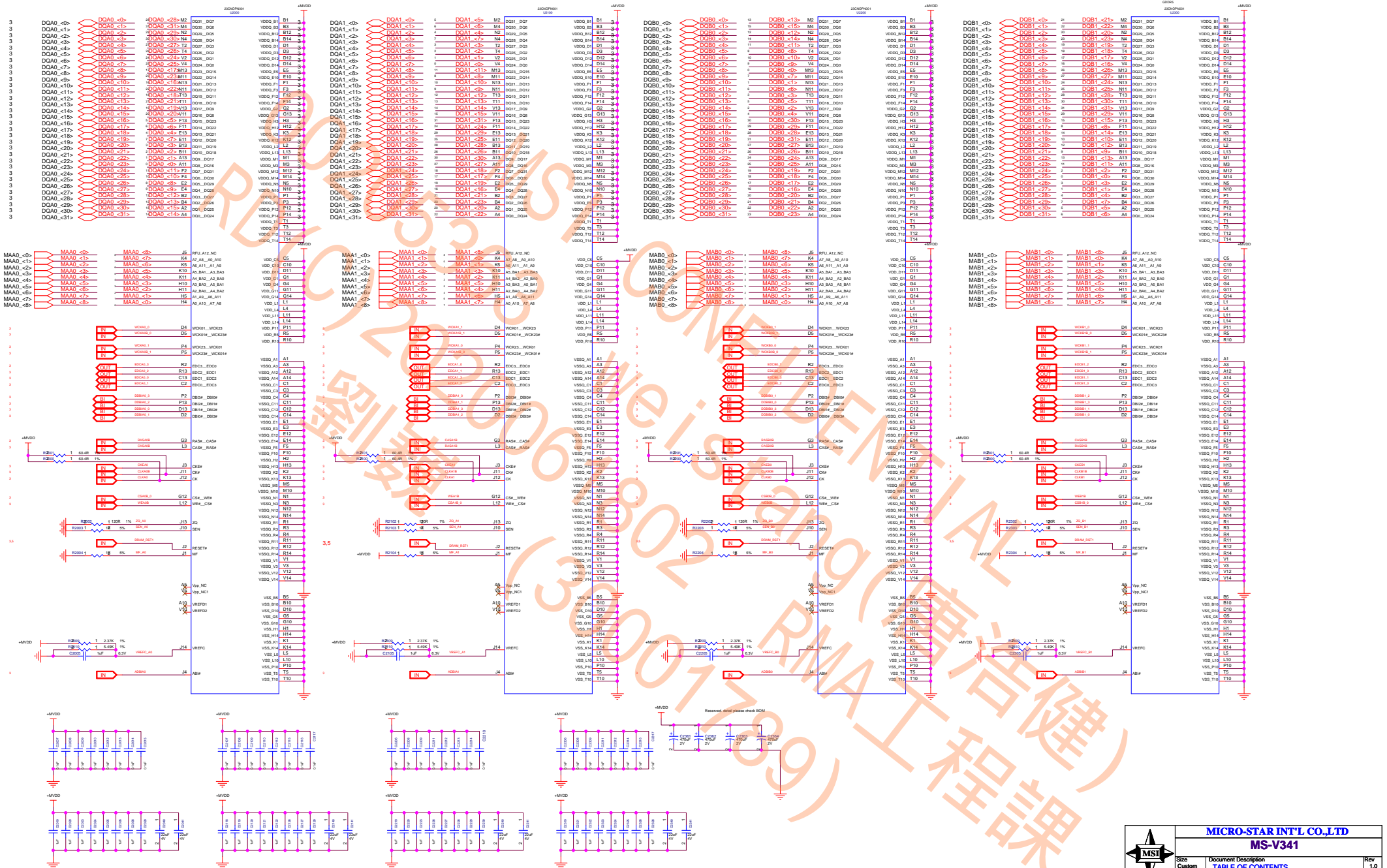
MS-V341

Size Custom	Document Description TABLE OF CONTENTS	Rev 1.0
Date: Wednesday, May 04, 2016	Sheet 3 of 26	

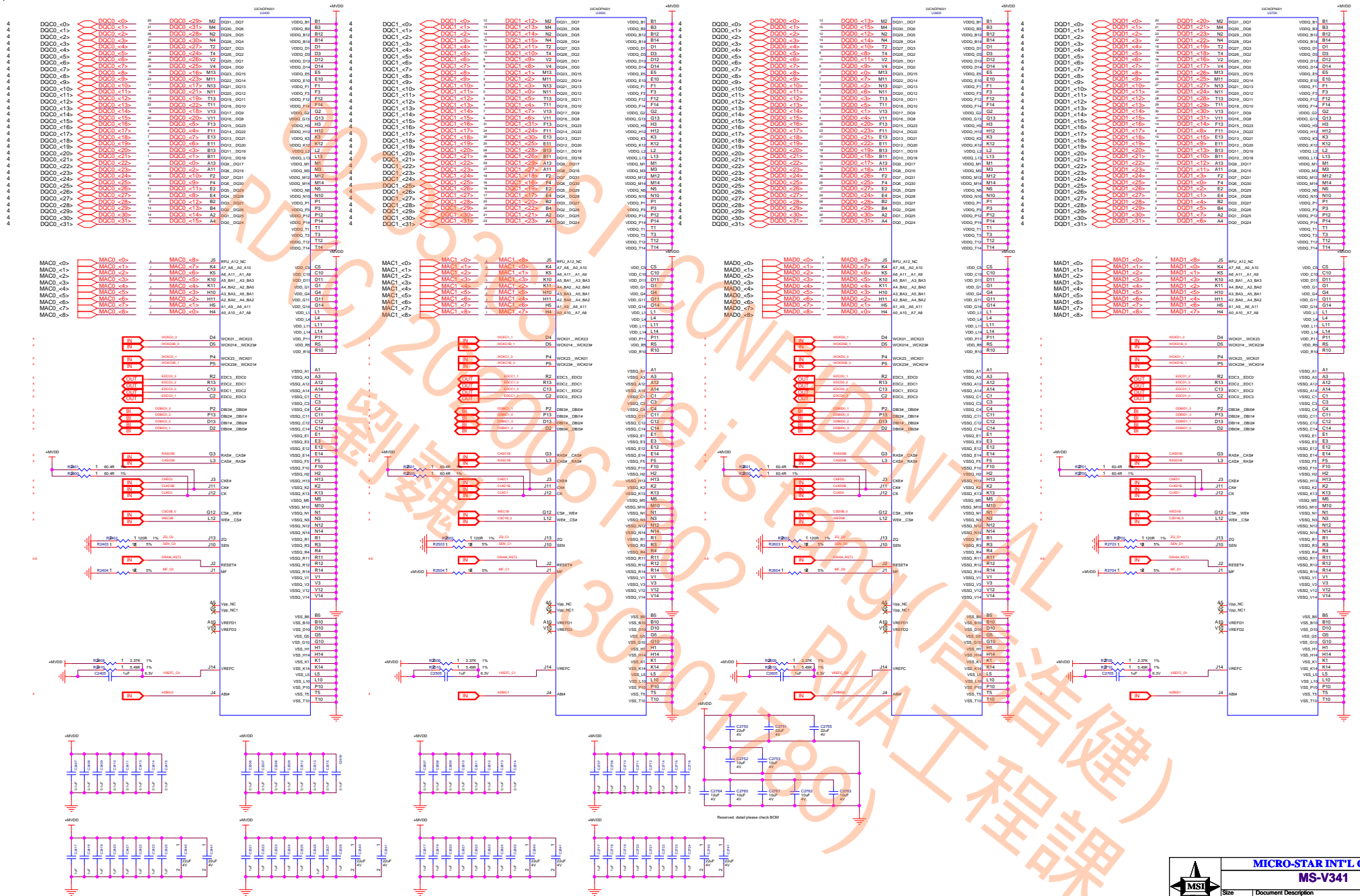
(4) ELLESMERE MEM INTERFACE CH C/D



(5) GDDR5 MEMORY CH A/B



(6) GDDR5 MEMORY CH C/D



MICRO-STAR INT'L CO.,LTD

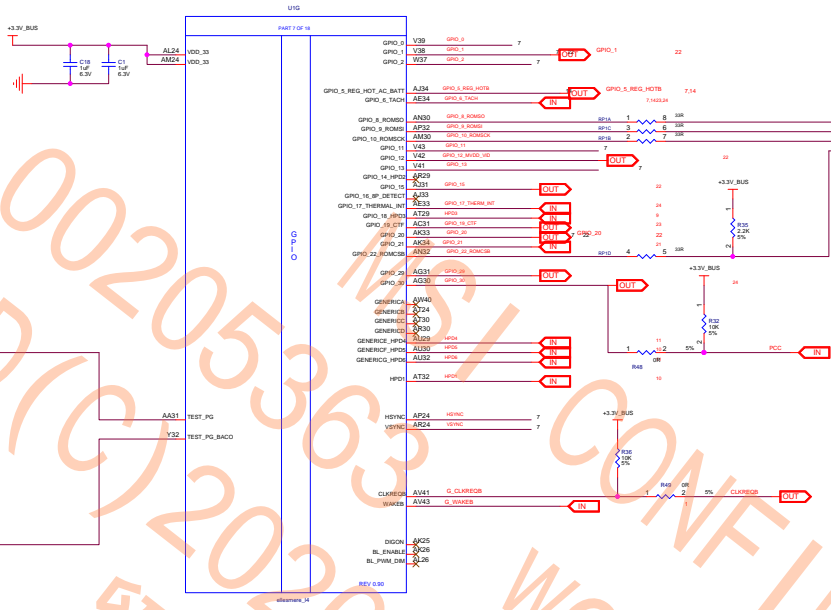
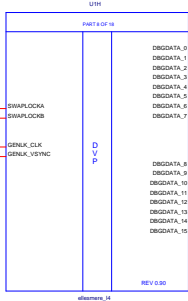
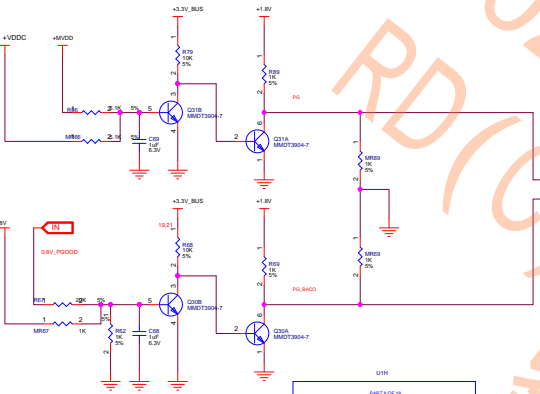
MS-V341

Size Custom	Document Description TABLE OF CONTENTS	Rev 1.0
Date: Wednesday, May 04, 2016		Sheet 6 of 26

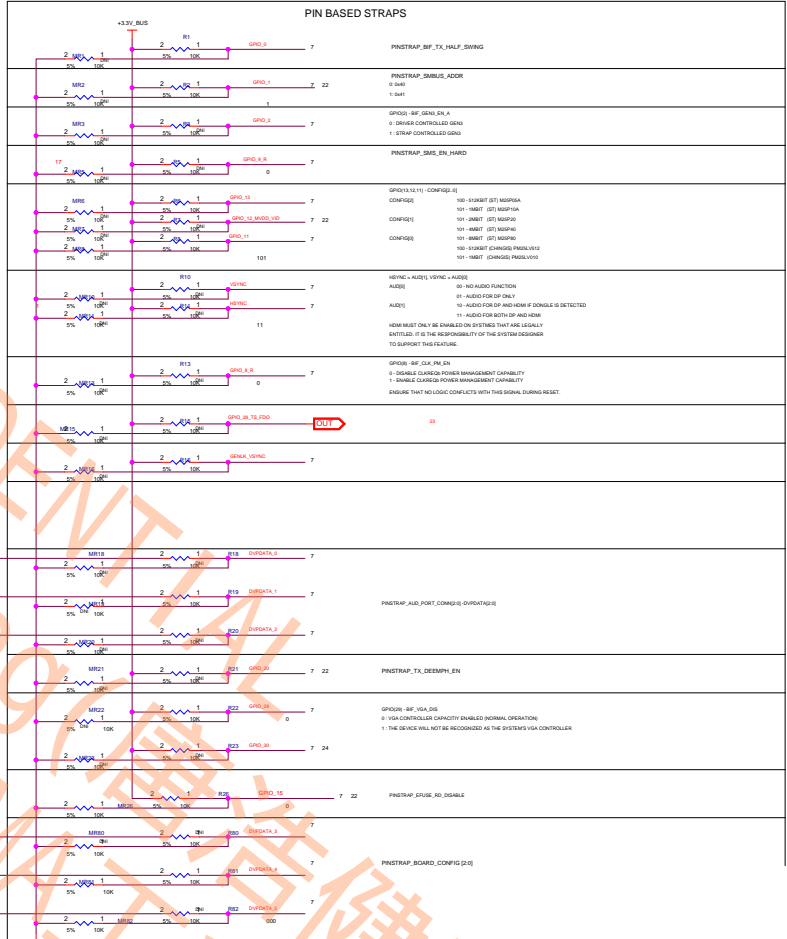
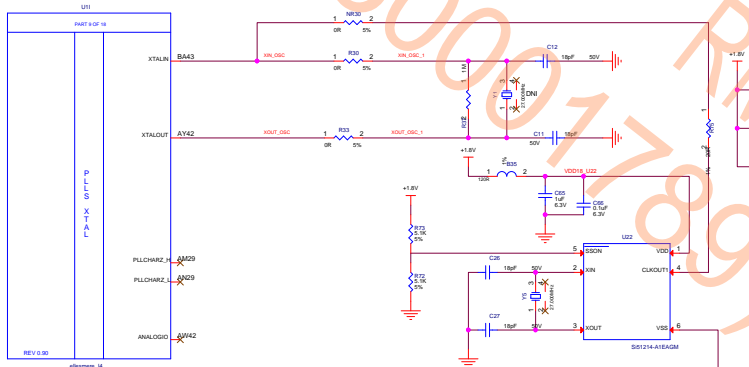
(7) ELLESMERE GPIO STRAP CF XTAL

SLIC8DA BUS		
IC ADDRESS	FUNCTION	DEVICE

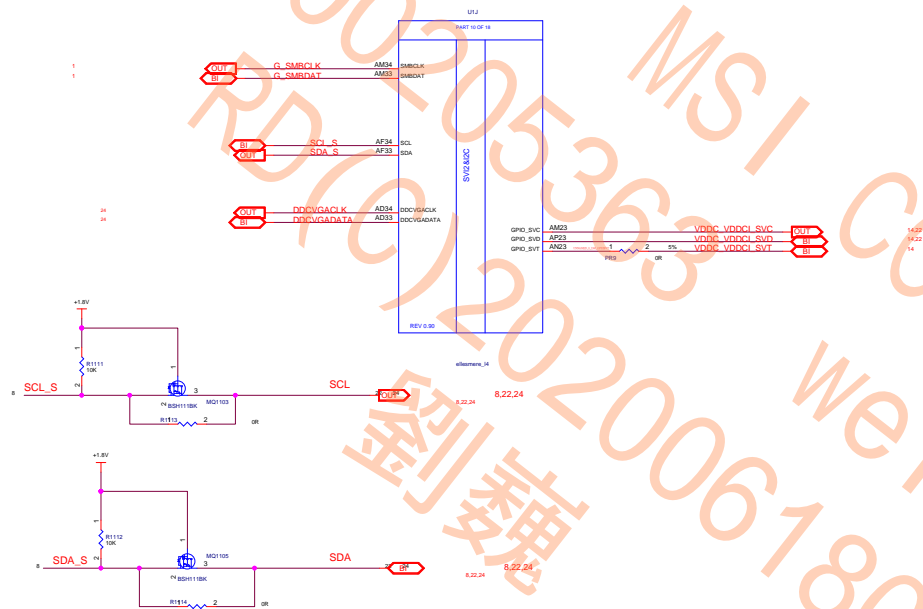
DDCVGA BUS		
IC ADDRESS	FUNCTION	DEVICE
0x00	EXT TEMP SENSOR	LM8003



remove J2/J3

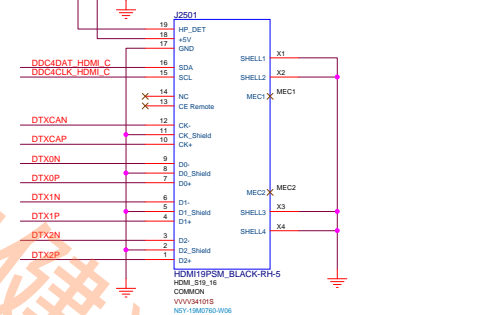
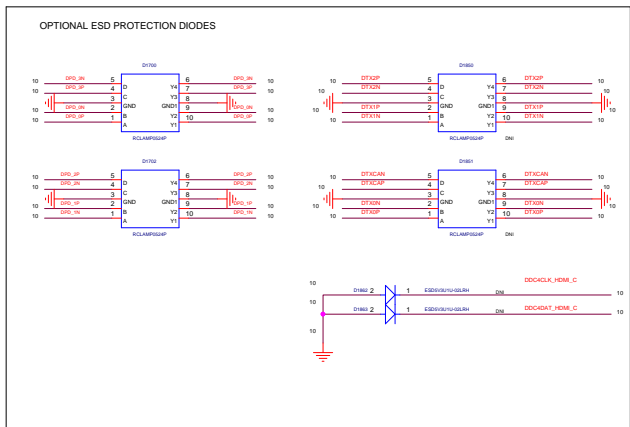
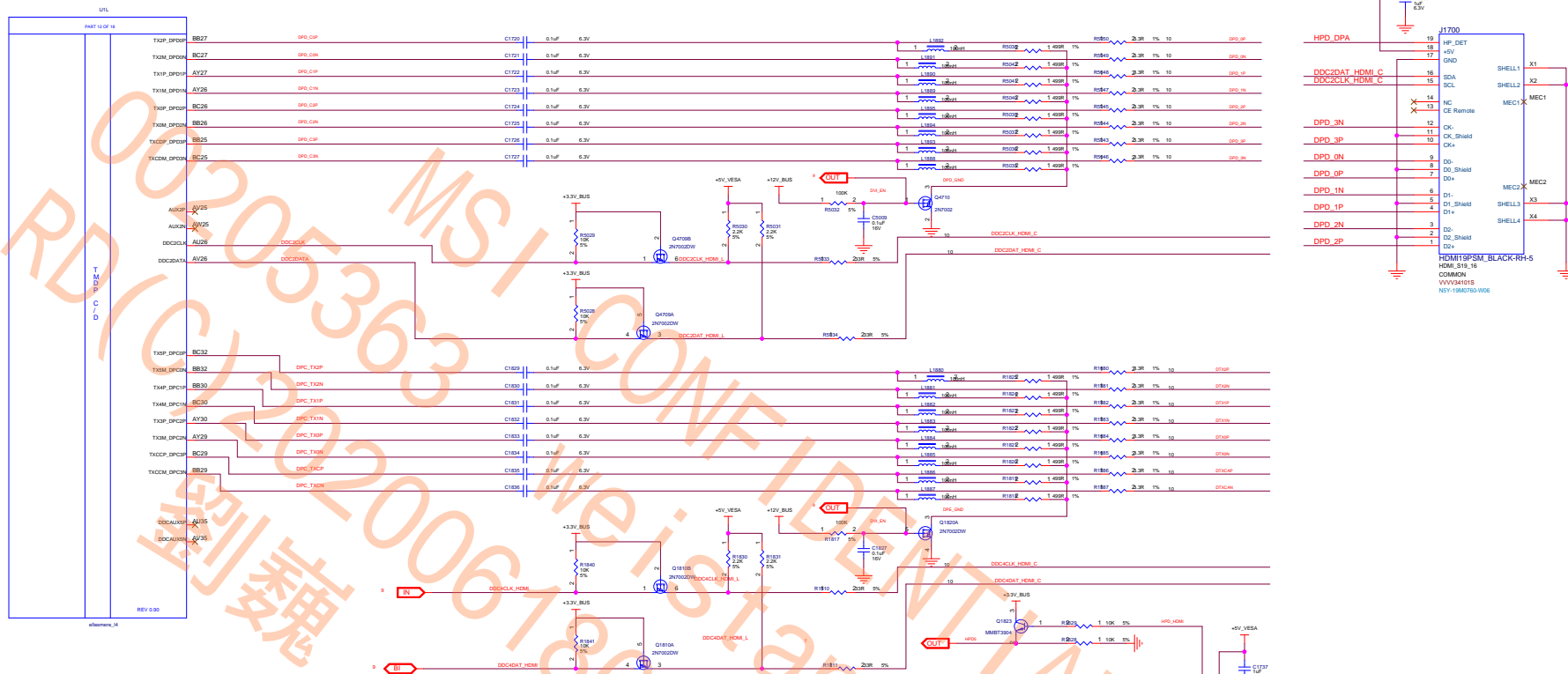


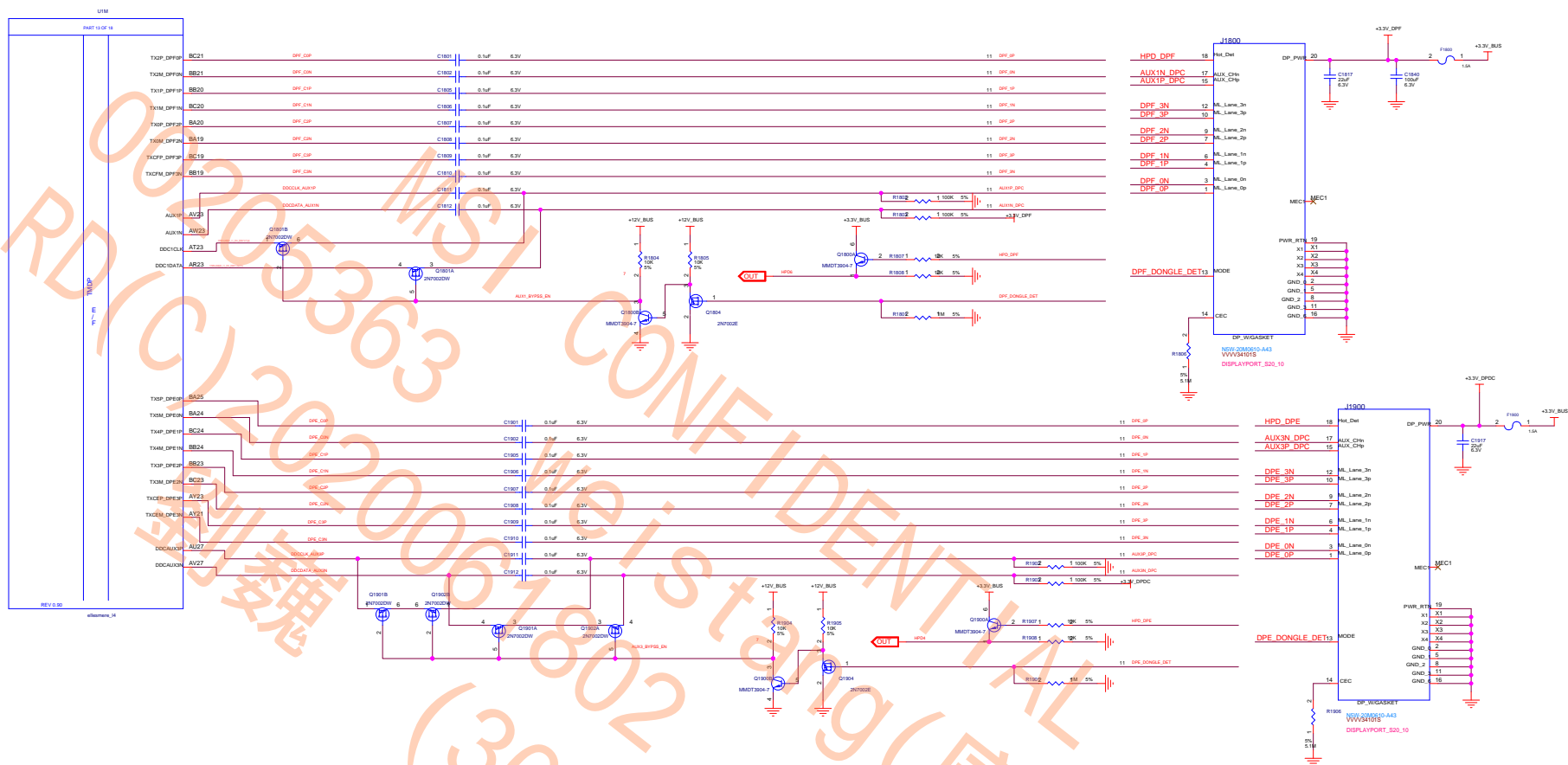
(8) ELLESMERE DAC1 LOCK



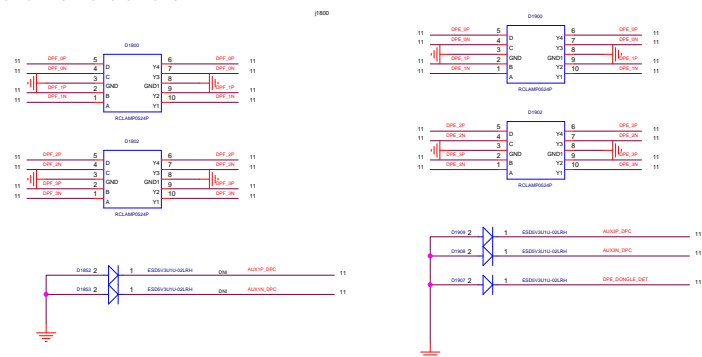


Pin	IO	Signal	Function
D1900	2	1: ESDIO[0] to USB0	UTX0P
D1901	2	1: ESDIO[0] to USB0	UTX0M
D1902	2	1: ESDIO[0] to USB0	UTX0N
D1903	2	1: ESDIO[1] to USB0	UTX1P
D1904	2	1: ESDIO[1] to USB0	UTX1M
D1905	2	1: ESDIO[1] to USB0	UTX1N
D1906	2	1: ESDIO[2] to USB0	UTX2P
D1907	2	1: ESDIO[2] to USB0	UTX2M
D1908	2	1: ESDIO[2] to USB0	UTX2N
D1909	2	1: ESDIO[3] to USB0	UTX3P
D1910	2	1: ESDIO[3] to USB0	UTX3M
D1911	2	1: ESDIO[3] to USB0	UTX3N
D1912	2	1: ESDIO[4] to USB0	UTX4P
D1913	2	1: ESDIO[4] to USB0	UTX4M
D1914	2	1: ESDIO[4] to USB0	UTX4N
D1915	2	1: ESDIO[5] to USB0	UTX5P
D1916	2	1: ESDIO[5] to USB0	UTX5M
D1917	2	1: ESDIO[5] to USB0	UTX5N
D1918	1	ESDIO[6] to USB0	DOCDATA_DRV_C
D1919	1	ESDIO[6] to USB0	DOCDATA_DRV_D

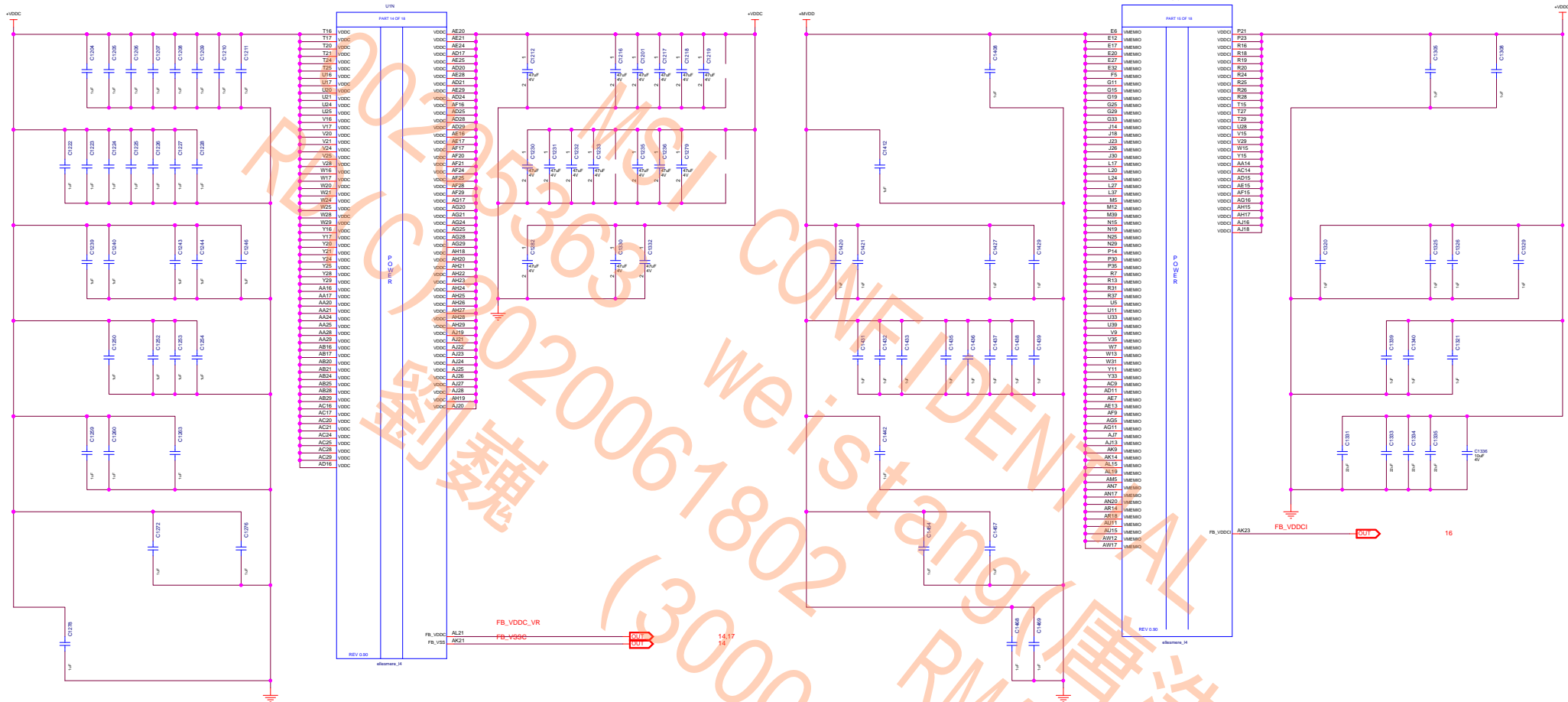


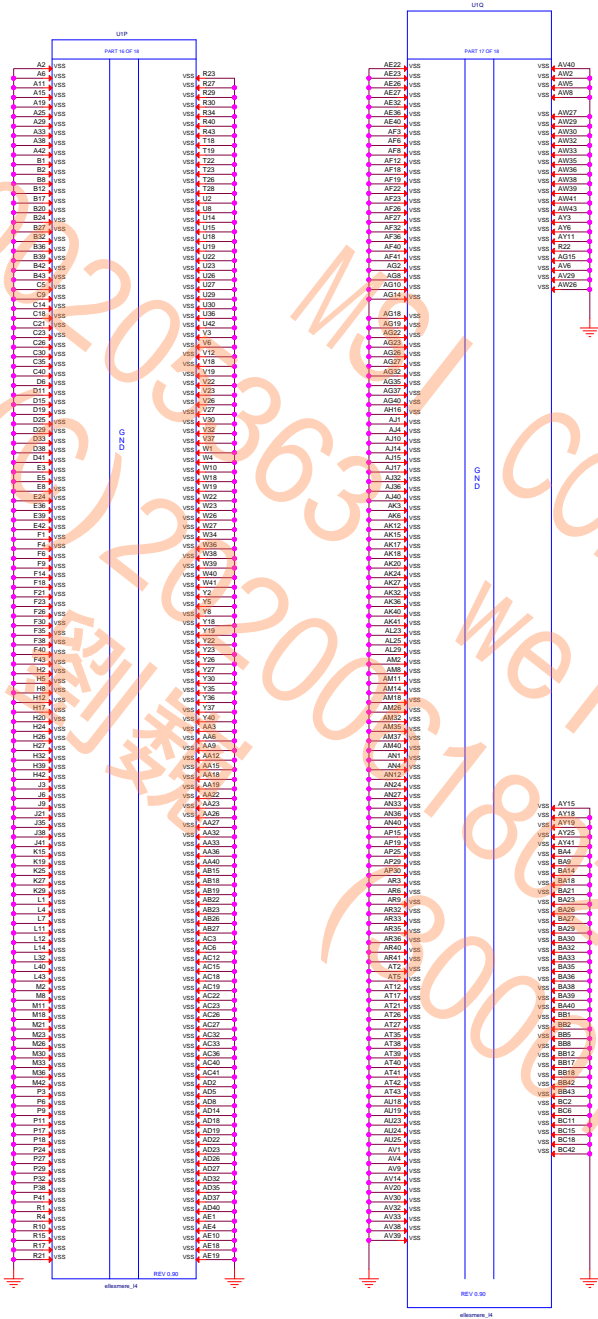


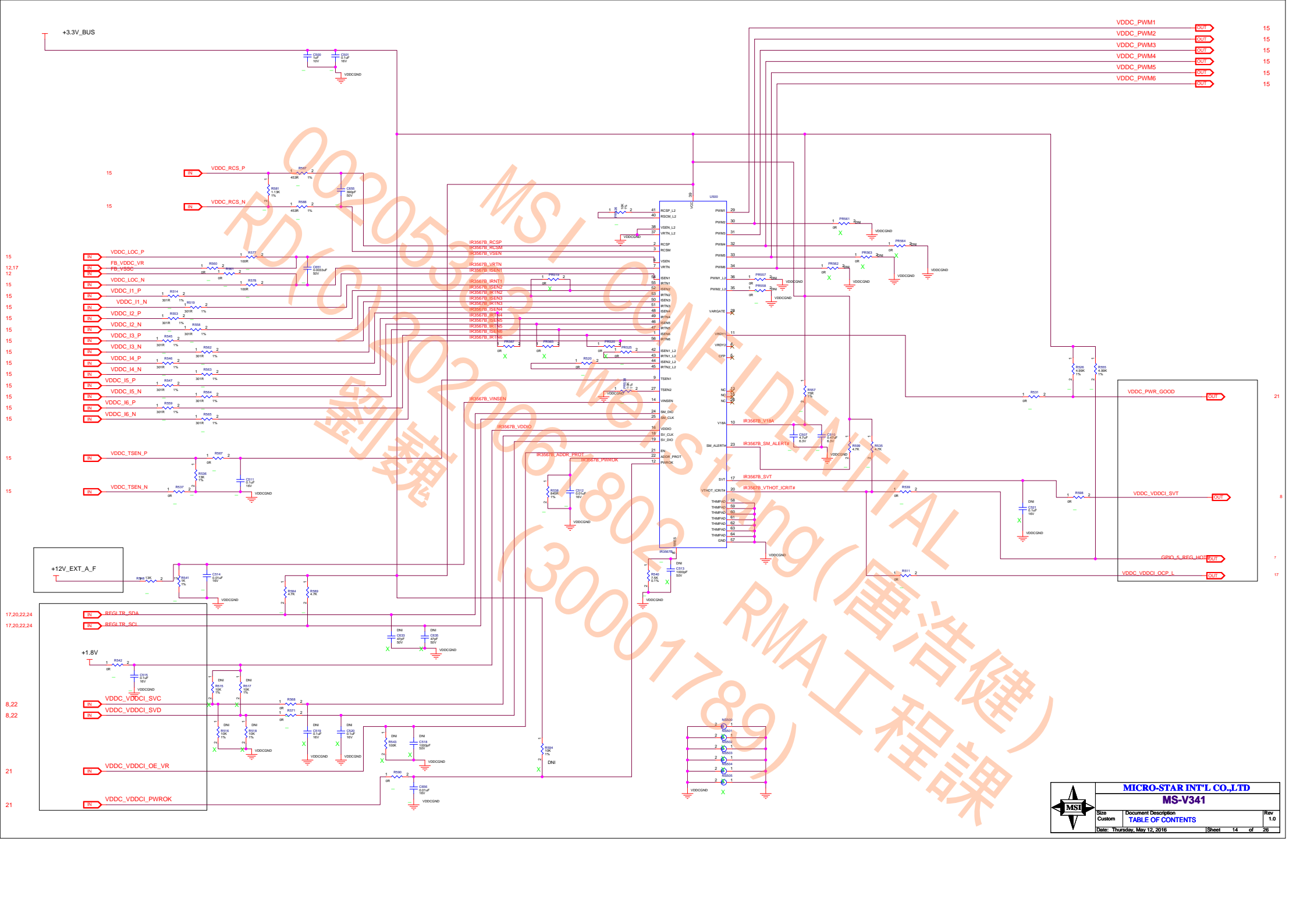
OPTIONAL ESD PROTECTION DIODES



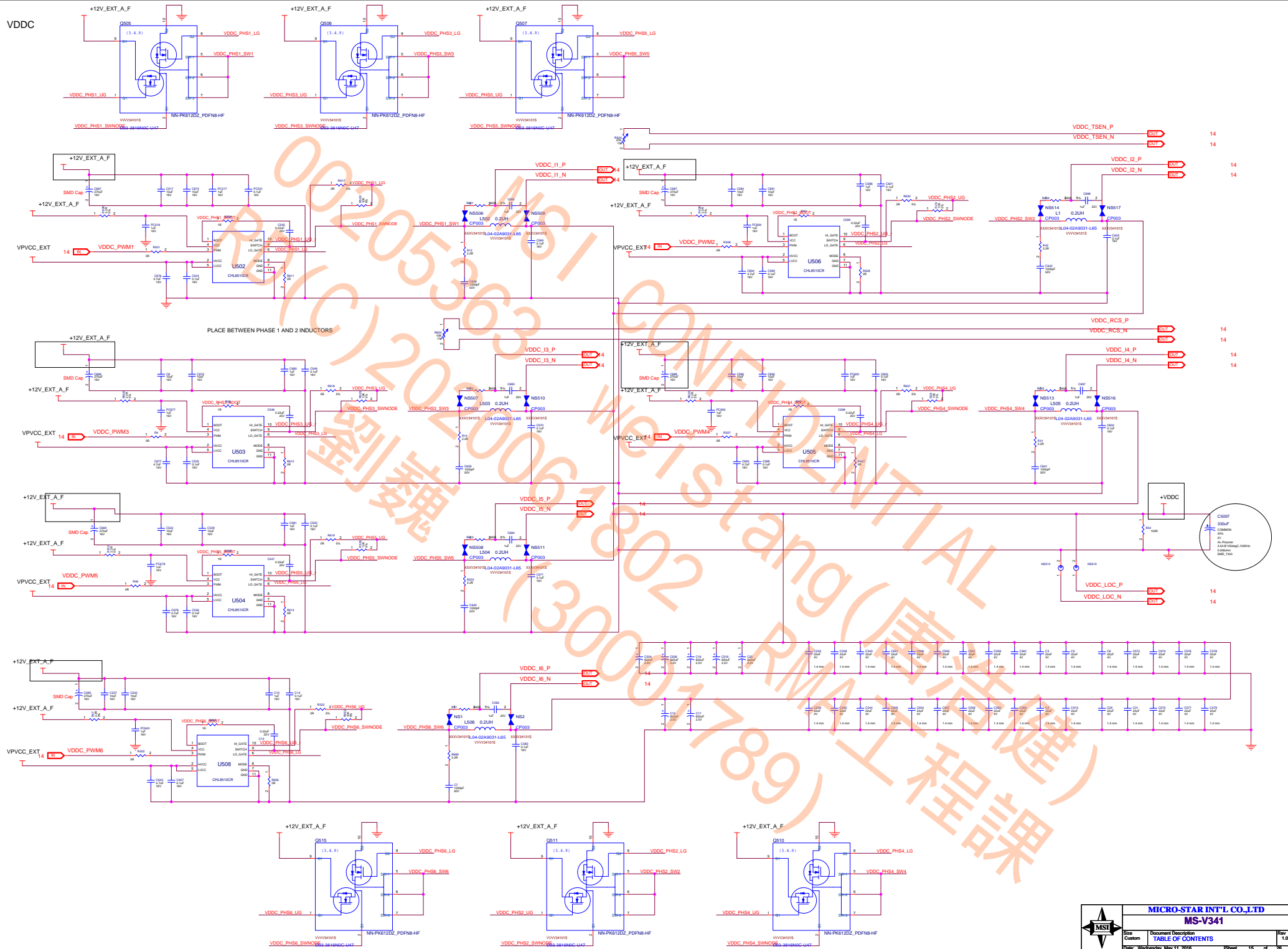
(12) ELLESMERE POWER

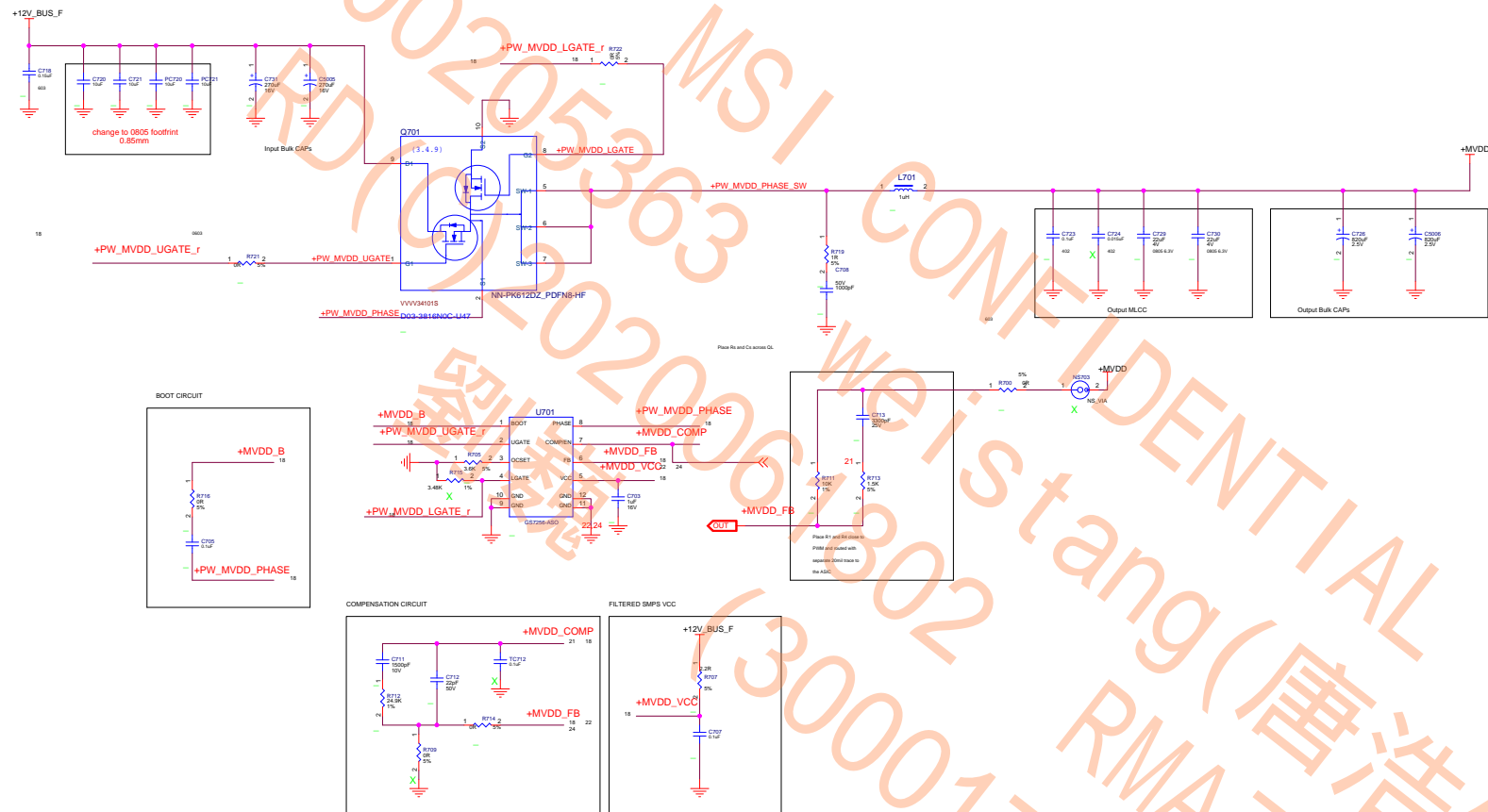


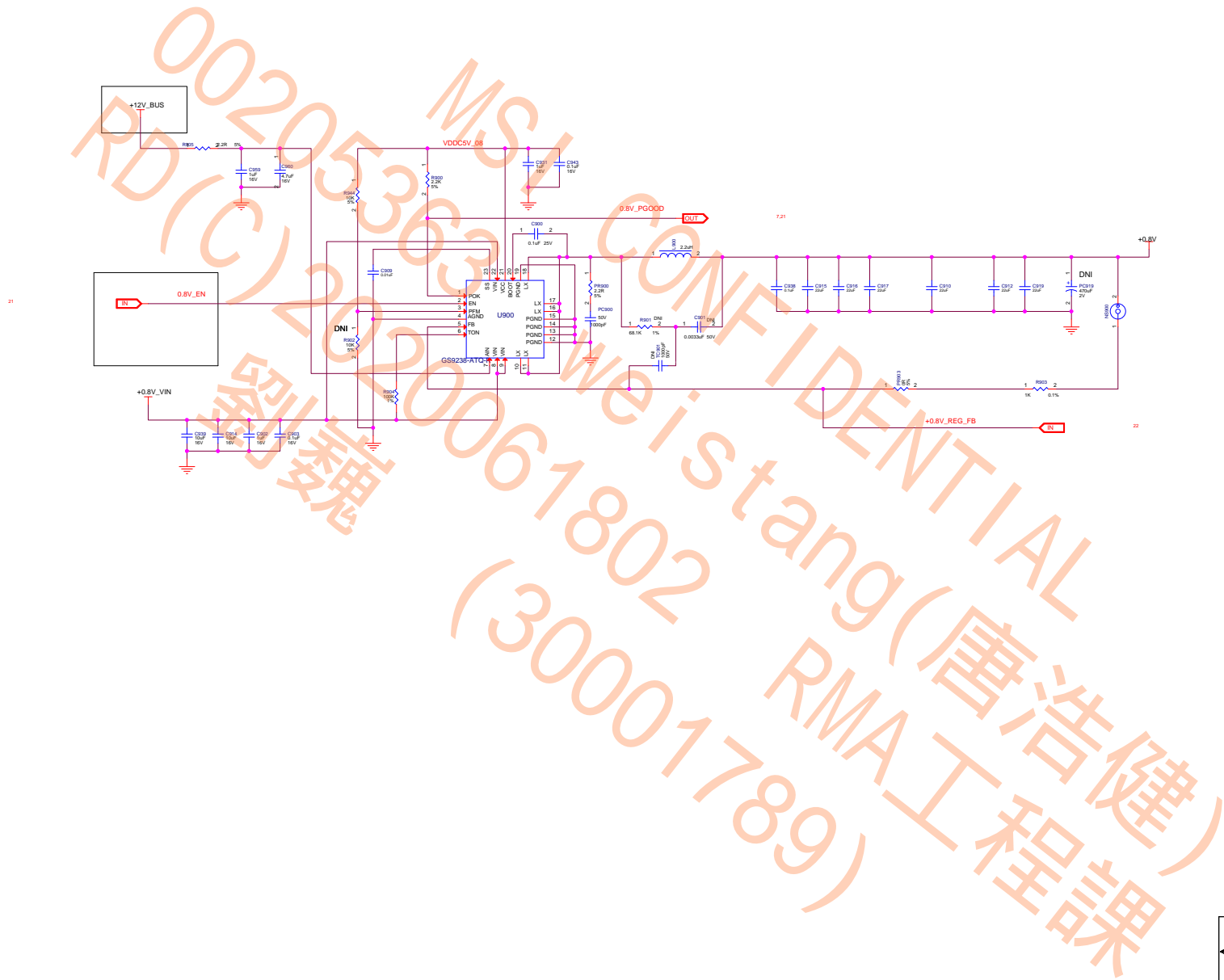




VDDC



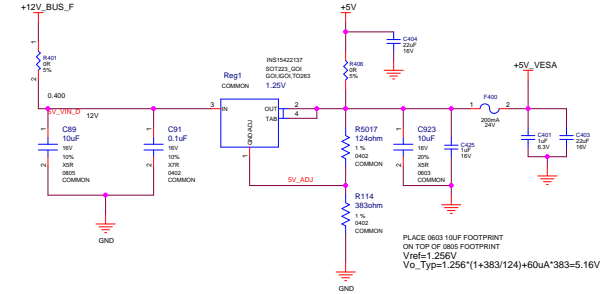
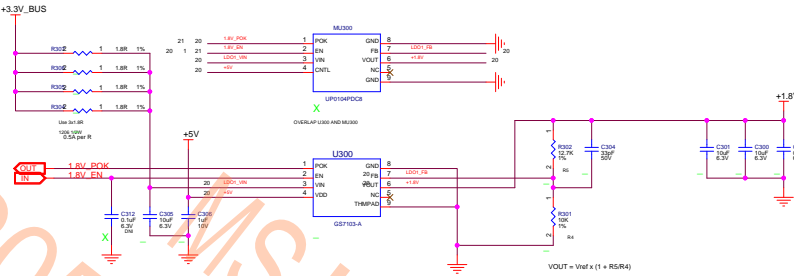




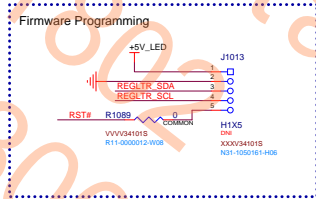
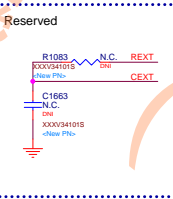
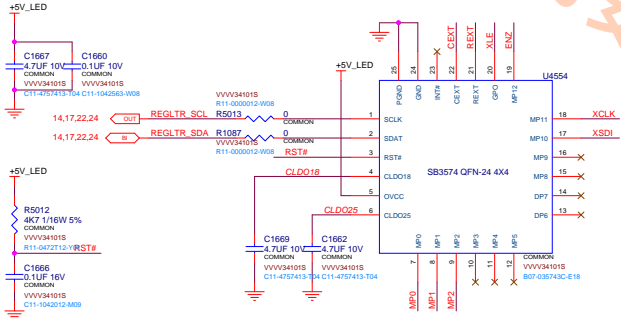
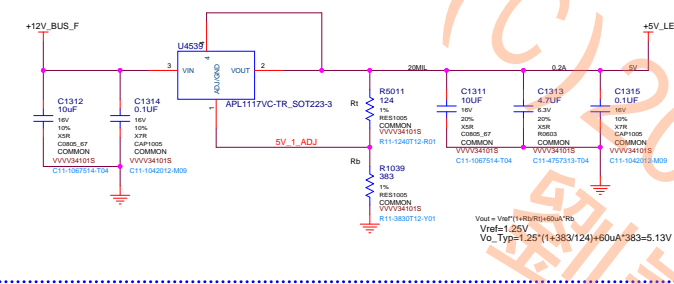
(18) SMALL RAIL REGULATORS , LED_CONTROLLER_ENE3574

LDO #1: VIN = 3.0V TO 3.6V MAX VOUT = +1.8V +/- 2% IOUT = 1.3A RMS MAX
PCB: 50 TO 70mm SQ. COPPER AREA FOR COOLING

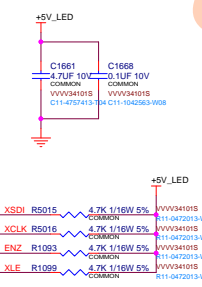
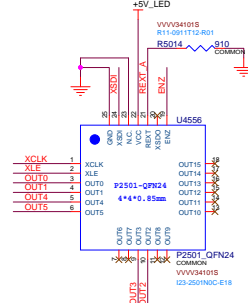
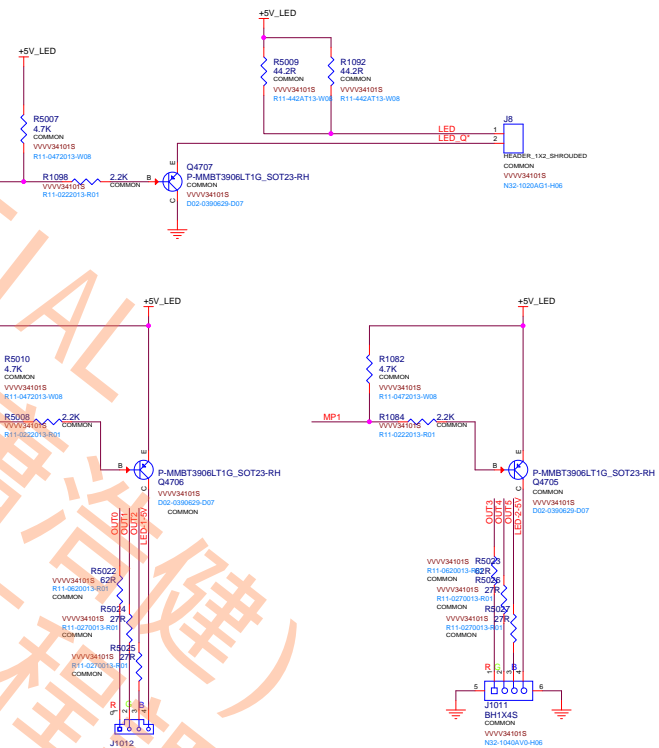
REGULATOR FOR +5V RAILS
IOUT MAX = 150mA



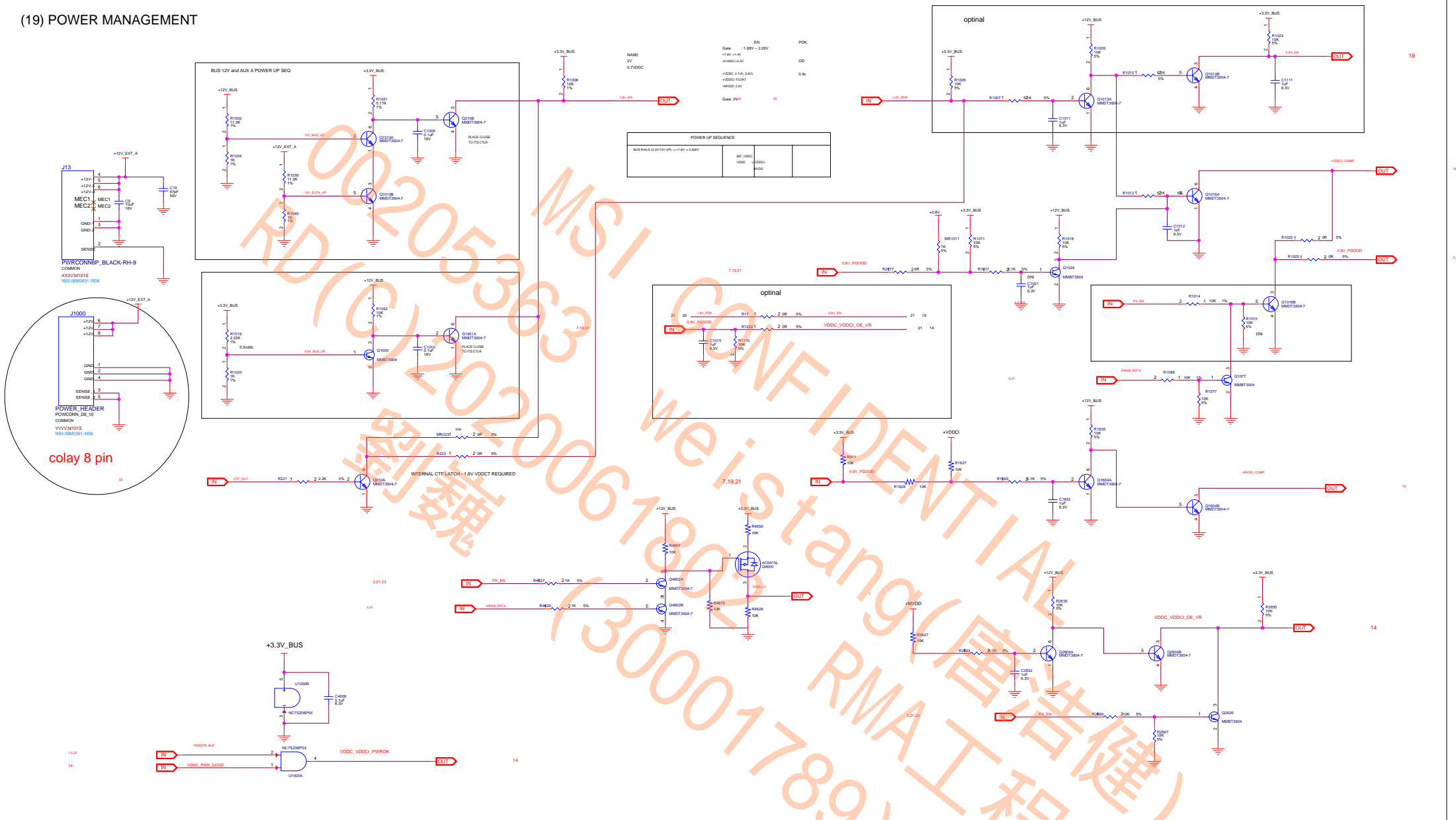
Regulators for +5V_LED

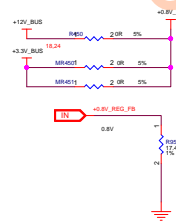
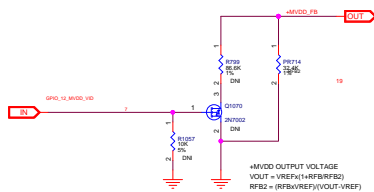
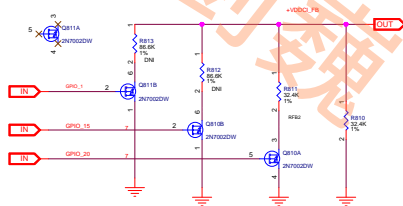
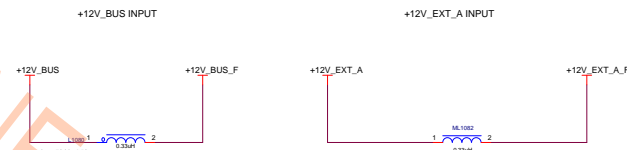
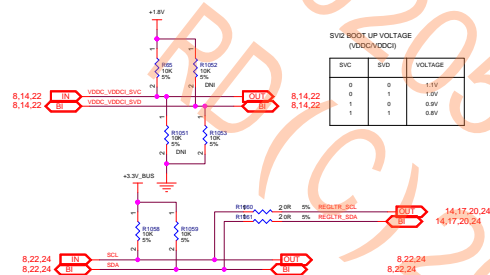


LED Connector

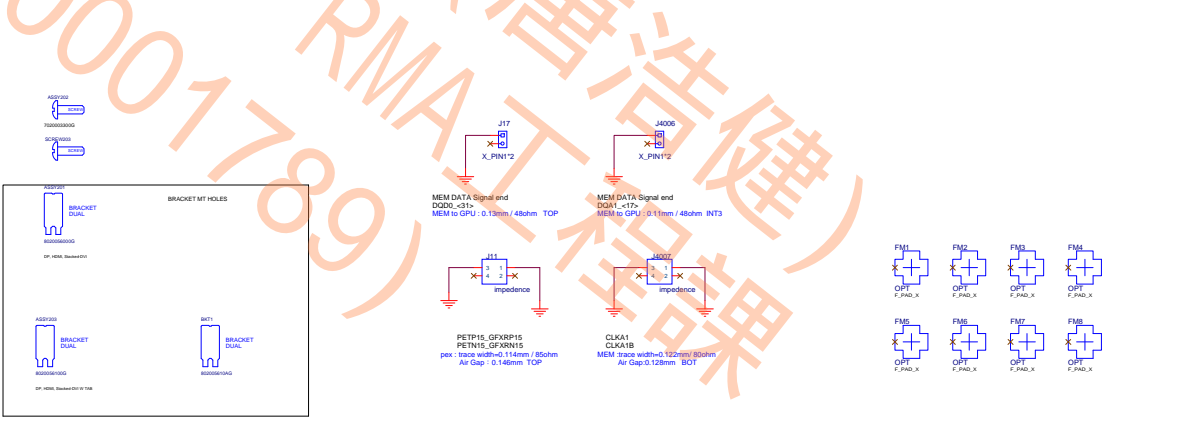
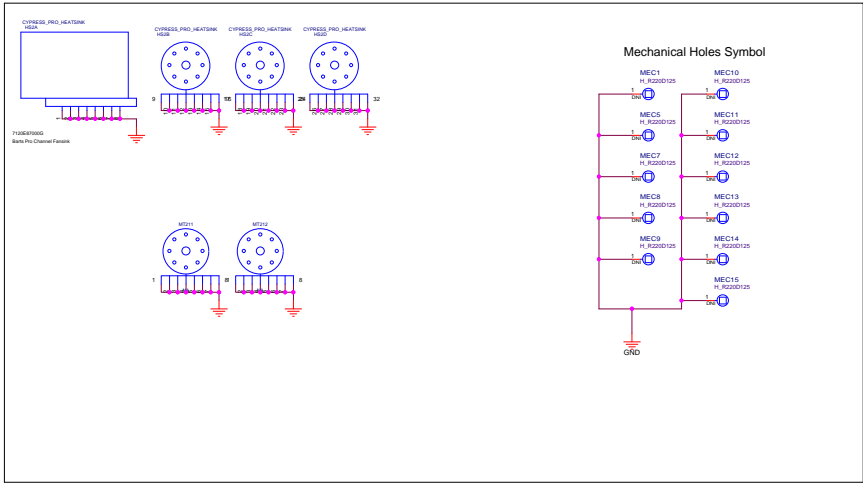
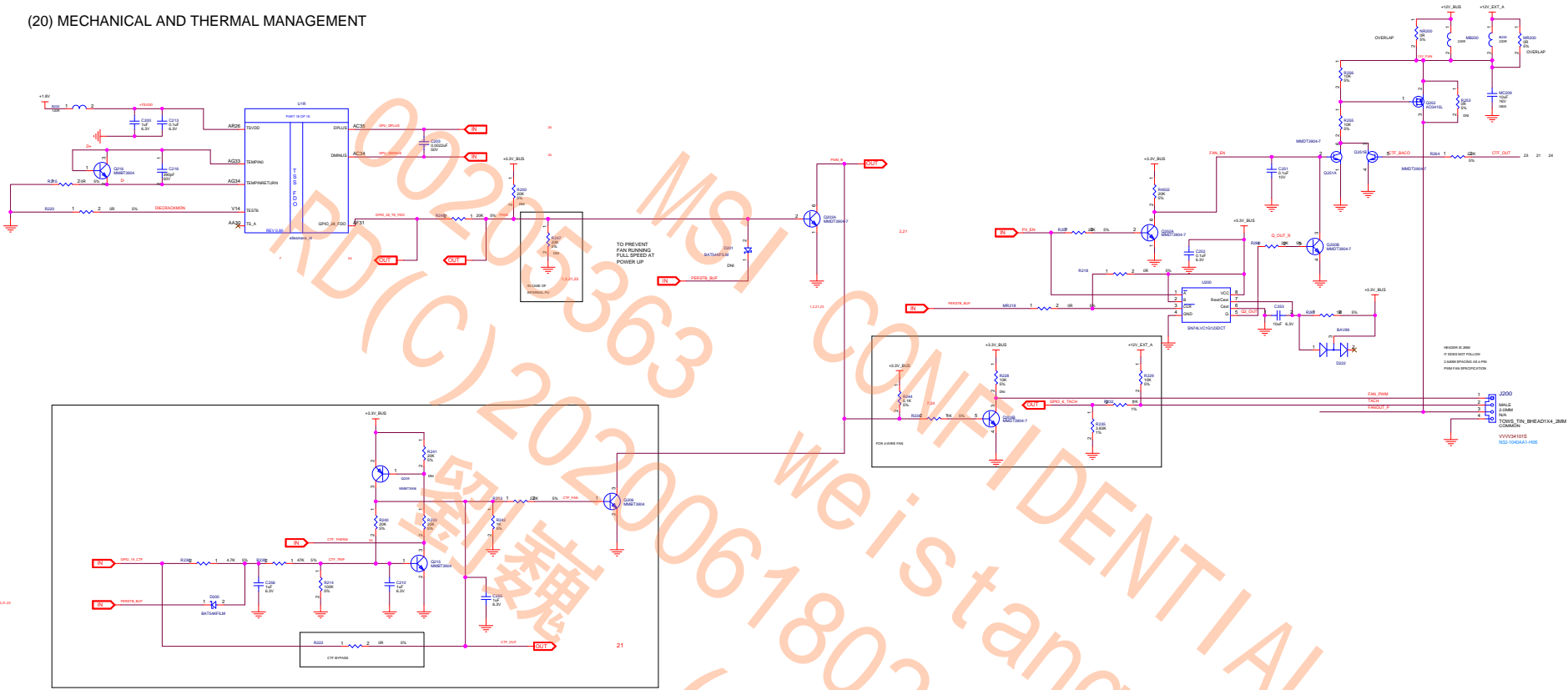


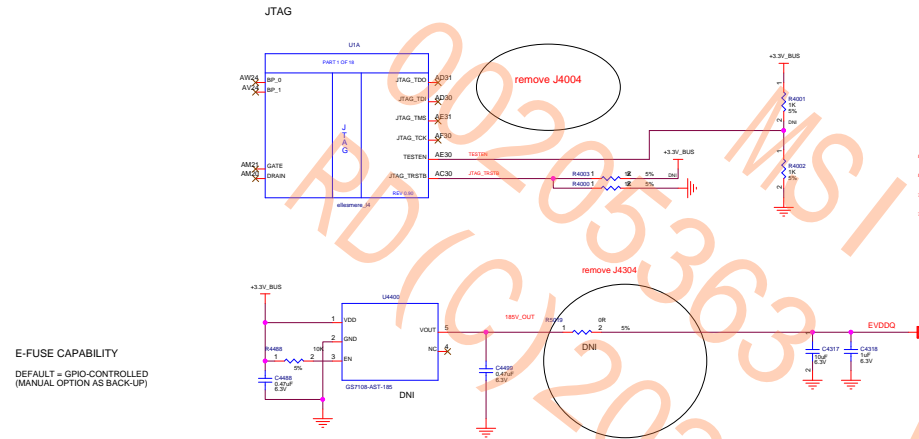
(19) POWER MANAGEMENT





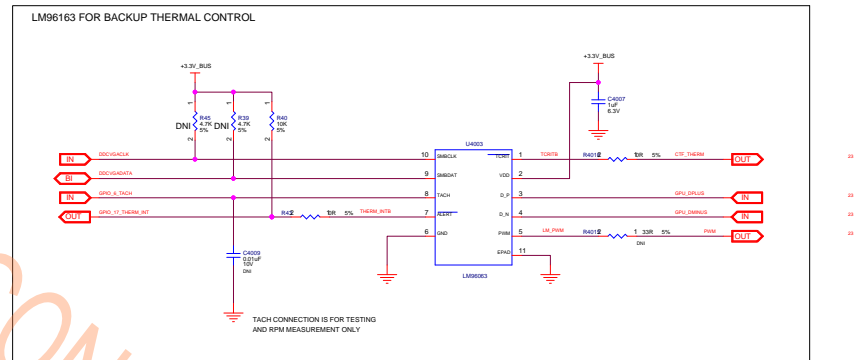
(20) MECHANICAL AND THERMAL MANAGEMENT



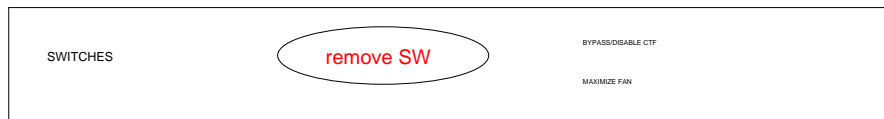
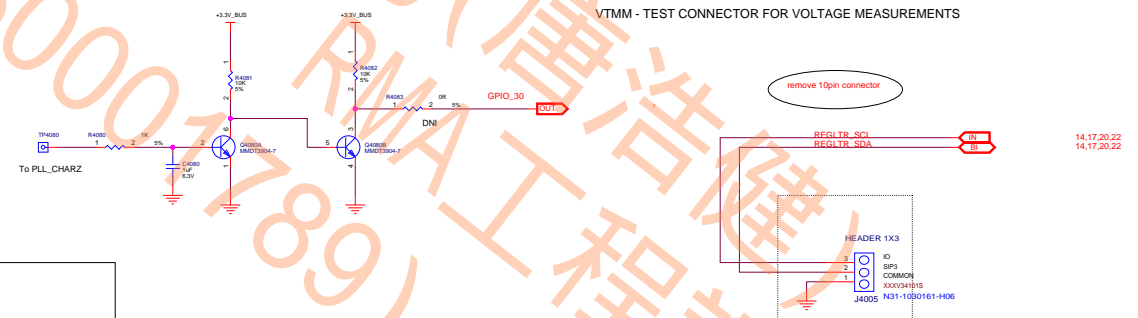


DIGITAL POTS

DIGITAL POTS



VTMM - TEST CONNECTOR FOR VOLTAGE MEASUREMENTS



0	00A	00000000	
1	00B	00000000	1. Add EPROM for dynamic VDDCI 2. Update VDDCI driver signature
2	00C	00000000	PCB: - add series resistor R11880 -R11887 - add pull-down inductor L11880 -L11887 Remove C405, C403, VR405, C410, C414, R405

- Page7: remove J2,J3
- Page9: enable DVI
- Page10: DP change to HDMI
- Page15: change dual-N MOS
- Page16: change dual-N MOS
- Page18: change dual-N MOS
- Page20: Add LED circuit
- Page21: colay 8pin power connector
- Page24: remove debug circuit