

DP MIO-E Design Reference

Revision 1.0

Reference Documents

Document	Location

Introduction

- This document is the design reference for designing a MIOe module with DP feature to work with Advantech MIO single board.

- Contents:
 - Function Selection Table
 - PCB Layout Considerations
 - Reference Schematic
 - Component List

This document is only for MIOe design reference purpose only. Although the information is intended to be accurate, Advantech makes no claims, promises, or guarantees about the quality or reliability of a MIOe board that designed by any user who is outside of Advantech Corp.

FUNCTION SELECTION TABLE

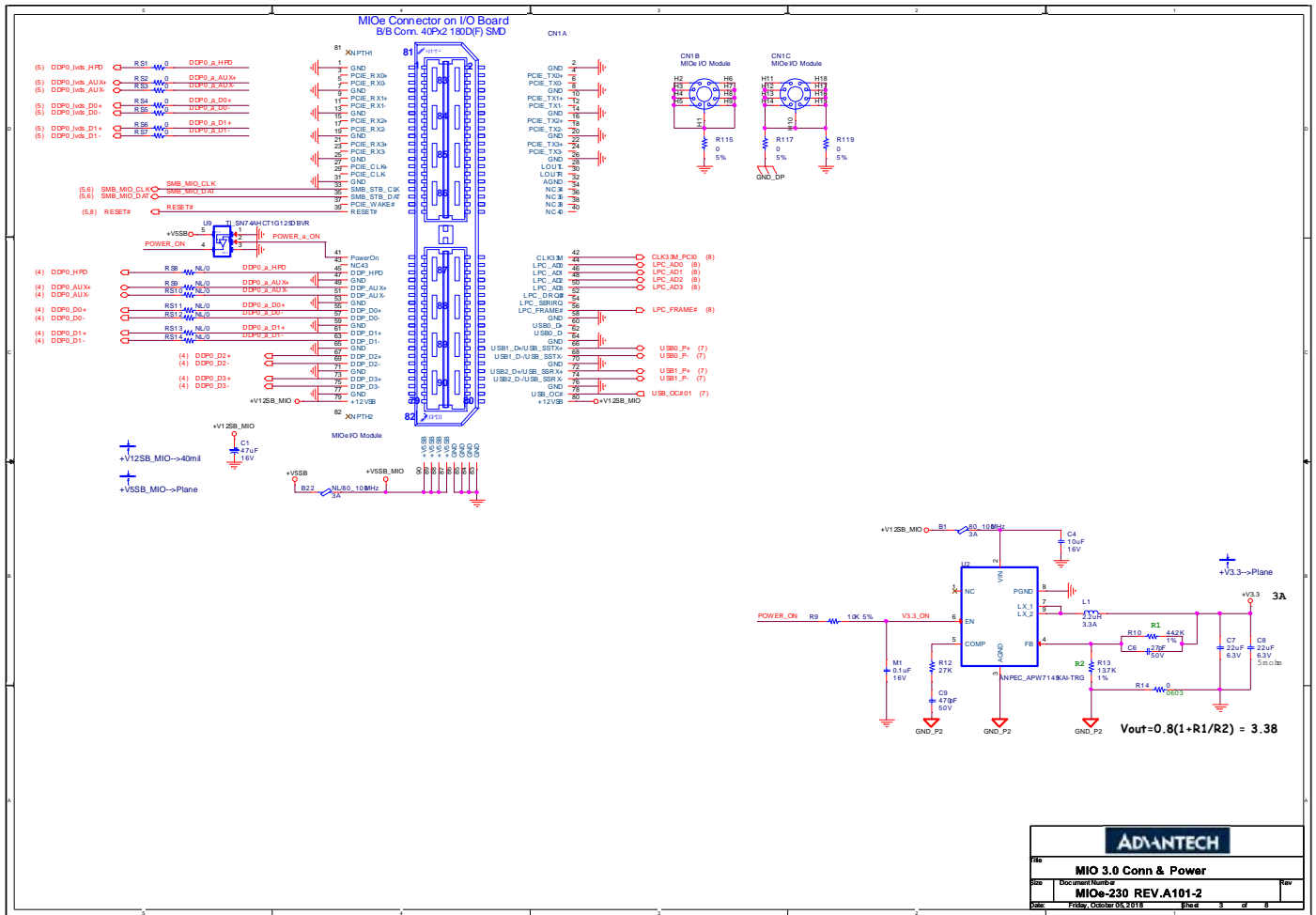
DP

Configuration	Function
1. Stuff RS8, RS9, RS10, RS11, RS12, RS13 and RS14 with 0 ohm resistors. 2. Remove RS1, RS2, RS3, RS4, RS5, RS6 and RS7	DP

PCB Layout Considerations

Please notice that PCB Layout will be vary depends on design. For layout considerations, please refer to MIOe Design Guide.

Reference Schematic



Component List

QTY	Description	Reference	Manufacture Part Number	Manufacture
1	CR 44.2K 1% 1/16W SMD 0402	R10	0402WGF4422TCE	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
1	CR 13.7K 1% 1/16W SMD 0402	R13	0402WGF1372TCE	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
1	SC 47uF 20% 16V SMD 7.3x4.3x1.9mm 16TQC47M	C1	16TQC47M	東三積體電子股份有限公司
4	MLCC X5R 22uF 20% 6.3V SMD 0805	C7	0805X226M6R3CT	台灣村田股份有限公司 (Taiwan Murata Electronics Co., Ltd.)
		C8		
		C21		
		C22		
11	MLCC X7R 0.1uF 10% 16V SMD 0402	C13	0402B104K160CT	國巨股份有限公司 (Yageo Co.,Ltd.)
		C14		
		C15		
		C16		
		C17		
		C18		
		C19		
		C20		
		C23		
		C31		
M1				
1	MLCC NPO 27pF 5% 50V SMD 0402	C6	0402N270J500CT	國巨股份有限公司 (Yageo Co.,Ltd.)
1	MLCCNPO 470pF 5% 50V SMD 0402	C9	0402N471J500CT	台灣東電化股份有限公司 (TDK Taiwan Corporation)
1	MLCC X7R 10uF 10% 16V SMD 1206	C4	C1206X106K016T	台灣東電化股份有限公司 (TDK Taiwan Corporation)
1	Choke 2.2uH 20% 3.3A SMD 2P	L1	EA-22AM12J02	三集瑞科技股份有限公司 (Trio Technology Co., Ltd.)
2	Bead 80 +-25% 3A SMD 0805	B1	AA-800Y03304	三集瑞科技股份有限公司 (Trio Technology Co., Ltd.)
		B22		

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22	CR 0 5% 1/16W SMD 0402	R21	0402WGJ0000TCE	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
		R22		
		R95		
		R115		
		R116		
		R117		
		R118		
		R119		
		RS1		
		RS2		
		RS3		
		RS4		
		RS5		
		RS6		
		RS7		
RS8				
RS9				
RS10				
RS11				
RS12				
RS13				
RS14				
1	Bead 30ohm 1A SMD 0603	B2	BLM18PG300SN1D	台灣村田股份有限公司 (Taiwan Murata Electronics Co., Ltd.)
1	CR 0 5% 1/10W SMD 0603	R14	0603WAJ0000T5E	惠賢
3	CR 10K 5% 1/16W SMD 0402	R9	0402WGJ0103TCE	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
		R121		
		R122		
1	CR 27K 5% 1/16W SMD 0402	R12	0402WGJ0273TCE	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
1	Schottky BAT54S 30V 225MW SMD SOT-23	D2	BAT54S	恩智浦半導體 (NXP Semiconductors)
1	MOSFET N-CH 2N7002 0.3A 60V SMD SOT-23 3P	Q11	2N7002	恩智浦半導體 (NXP Semiconductors)
1	IC SMD SN74AHCT1G125DBVR SOT-23 5PB25X TI	U9	SN74AHCT1G125DBVR	德州儀器工業股份有限公司 (Texas Instruments Incorporated)

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1	IC APW7145KAI-TRG Converter SMD SOP 8P	U2	APW7145KAI-TRG	茂達半導體有限公司 (Anpec Electronics Corp.)
1	Displayport CONN 20P 0.5mm 90D SMD 30u 3VD51203-	CN2	3VD51203-H7JJ-4H	鴻海精密工業股份有限公司 (Foxconn Electronics Inc.)
1	MIOE Connector	CN1	QTE-040-05-L-D-A	Samtec U.S.A.

Other Remarks

This document provides a reference on hardware design only. For other support or resource such as Firmware or other utilities, please contact your local agent.