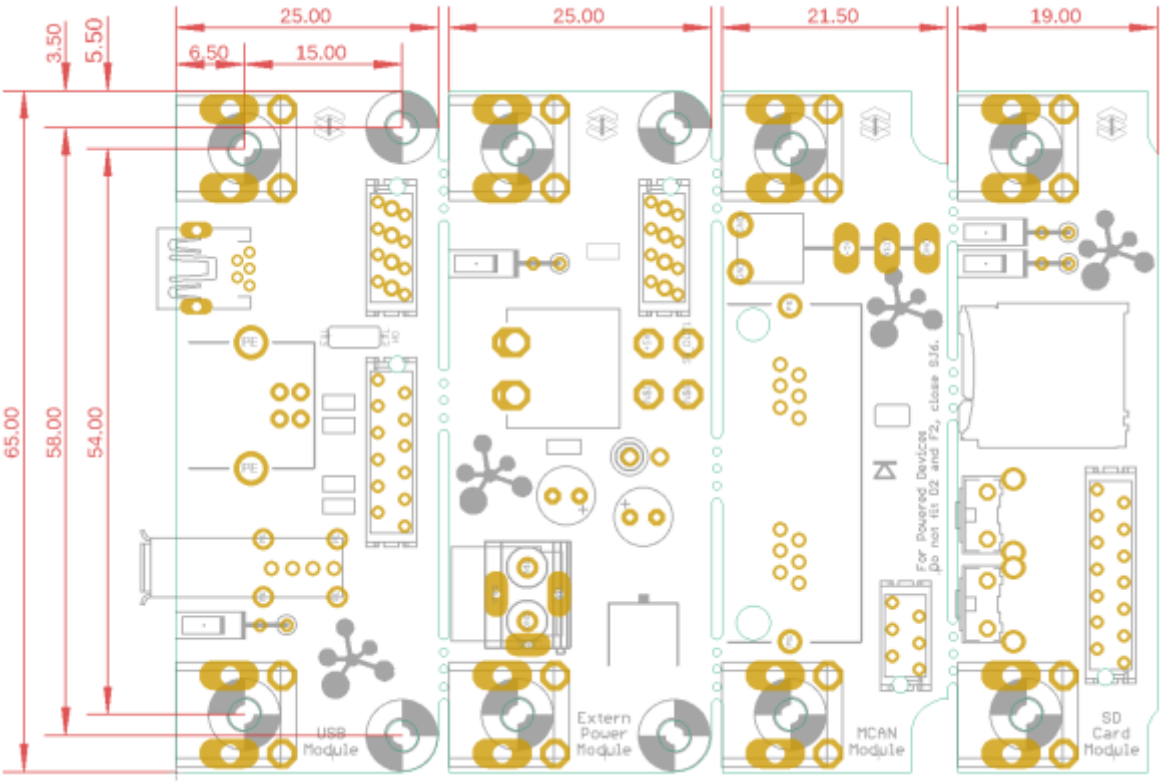
dipBoardF4 Modules

Basic connection Modules for dipBoardF4 and dipCoreF4.

Features

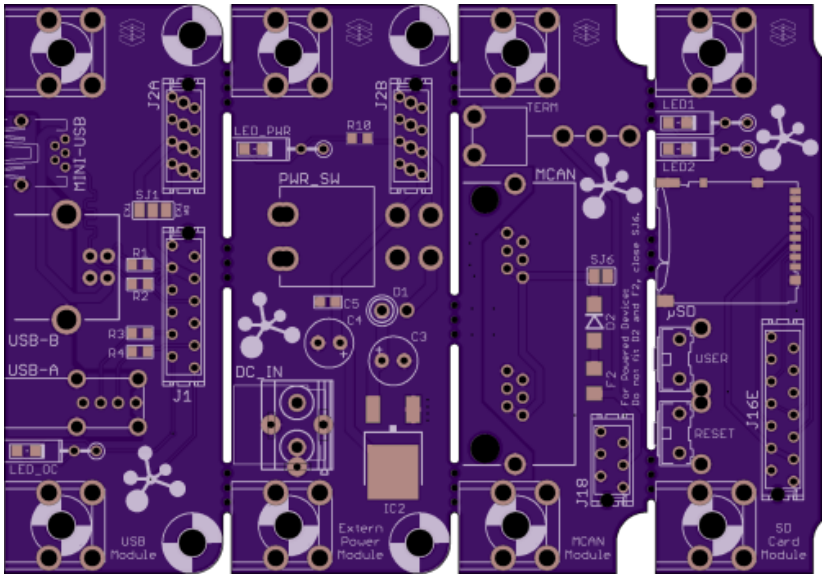
- Dual OTG USB, one Dual role(mini-AB, B) and second is Host only(A).
- DC Input 9-12V with 5V regulator, switch and led.
- In device Mode, VBUS is switched off when DC Input is enough to supply the 5V regulator.
- Power switch also acts on USB powering.
- micro-SD Card socket with push-push.
- Reset and User buttons, 2 leds for user purpose.
- Dual MCAN bus RJ11 connectors with 120Ω termination switch.

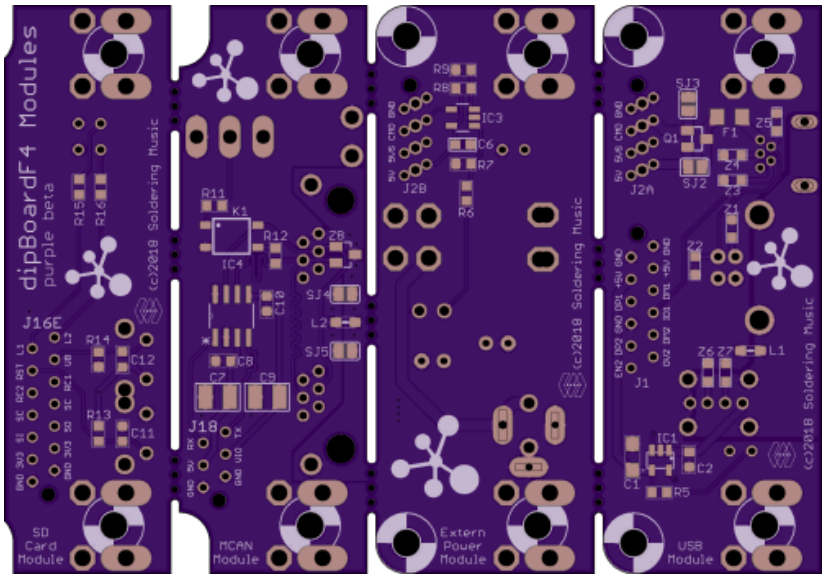
Dimension



PCB

2 layers PCB design.
Fits 2 layer mostly common design rules.





- min. drill 10mil
- min. width 6mil

BOMs

USB Module

version 1. Mouser BOM:toDo

Qty	Value	Package	Parts	Mouser	Reichelt	Conrad	Other	Notes
Resistors								
4	22R 5%	0603	R1, R2, R3, R4	667-ERJ-PA3J220V				
1	680R 5%	0603	R5	667-ERJ-PA3J681V				Depends on Led
PTC fuses, resettable thermistors								
1	1206L150THWR	1206	F1	576-1206L150THWR				
Capacitors								

Qty	Value	Package	Parts	Mouser	Reichelt	Conrad	Other	Notes
Resistors								
1	100n	0603	C2	80-C0603C104Z3V				
1	4,7u Tantalum	SMC_A(1206)	C1	647-F931C475MAA				
ESD Suppressors / TVS Diodes								
7	CG0603MLC-05E	0603	Z1, Z2, Z3, Z4, Z5, Z6, Z7	652-CG0603MLC-05E				
Ferrite Bead								
1	BLM21	0805	L1	81-BLM21P331SG				
LEDs								
1	–	0805 or THT	LED_OC	755-SML-H12U8TT86C(0805)				2x5mm rectangular THT
Transistor								
1	FDN304P	SSOT-3	Q1	512-FDN304P				P-Channel MOSFET
IC								
1	STMPS2161STR	SOT23-5L	IC1	511-STMPS2161STR				Power Switch IC
Connectors								
1	mini-USB	THT	MINI-USB	571-1734510-1				
1	USB-B	THT	USB-B	538-67068-8000				
1	USB-A	THT	USB-A	538-48204-0001				
1	micro-match 2×4	Female	J2A	571-7-215079-8 or 571-2178710-8 (value line)				
1	micro-match 2×6	Female	J1A	571-8-215079-2 or 571-1-2178710-2 (value line)				
Others								
2	Screw terminal	–	–	534-7790				

External Power Module

version 1. Mouser BOM:toDo

Qty	Value	Package	Parts	Mouser	Reichelt	Conrad	Other	Notes
Resistors								
1	680R 5%	0603	R10	667-ERJ-PA3J681V				Depends on Led
2	10K 1%	0603	R6, R7	755-ESR03EZPF1002				
1	22K 1%	0603	R8	755-ESR03EZPF2202				
1	33K 1%	0603	R7	667-ERJ-PA3F3302V				
Capacitors								
2	100n	0603	C5, C6	80-C0603C104Z3V				
2	10u	THT	C3, C4	667-ECE-A1HKA100I				6mm diam. max, 2.5mm lead space
Diode								
1	SB240	DO15	D1	625-SB240-E3				
LEDs								

Qty	Value	Package	Parts	Mouser	Reichelt	Conrad	Other	Notes
Resistors								
1	–	0805 or THT	LED_PWR	755-SML-H12U8TT86C(0805)				2x5mm rectangular THT
IC								
1	LD1086DT50TR	DPACK	IC2	511-LD1086DT50TR				
1	LM321MF	SOT23-5	IC3	926-LM321MF/NOPB				Low Power Single Op Amp
Switch								
1	E201J1AV2	–	PWR_SW	611-E201-004				DPDT power switch(same as Sammich...)
Connectors								
1	micro-match 2×4	Female	J2B	571-7-215079-8 or 571-2178710-8 (value line)				
1	DC in Socket Opt*1	Female	DC_IN	490-PJ-037A				Jack on board
1	DC in Socket Opt*2	Female	DC_IN	651-1729128 + 502-712A				Screw terminal on board(Board/Switch on front) + Jack on backpanel
Others								
2	Screw terminal	–	–	534-7790				

SD Card Module

version 1. Mouser BOM:toDo

Qty	Value	Package	Parts	Mouser	Reichelt	Conrad	Other	Notes
Resistors								
2	680R 5%	0603	R15, R16	667-ERJ-PA3J681V				Depends on Led
2	100K 5%	0603	R13, R14	755-ESR03EZPJ104				
Capacitors								
2	100n	0603	C11, C12	80-C0603C104Z3V				
LEDs								
2	–	0805 or THT	LED1, LED2	755-SML-H12U8TT86C(0805)				2x5mm rectangular THT
Switches								
2	B3F-31xx	–	USER, RESET	653-B3F-3122				
Connectors								
1	DM3AT-SF-PEJM5	Socket	micro-SD	571-8-215079-4				with push-push
1	2×7	Female	J16E	571-8-215079-4 or 571-1-2178710-4 (value line)				
Others								
2	Screw terminal	–	–	534-7790				

MCAN Module

version 1. Mouser BOM:toDo

Qty	Value	Package	Parts	Mouser	Reichelt	Conrad	Other	Notes
Resistors								
1	100R 5%	0603	R12	755-ESR03EZPF1000				
1	1K 5%	0603	R11	755-ESR03EZPJ102				
PTC fuses, resettable thermistors								
1	1206L150THWR	1206	F2	576-1206L150THWR				
Capacitors								
2	100n	0603	C8, C10	710-885012206071				
2	1u	1210	C7, C9	710-885012209047				
ESD Suppressors / TVS Diodes								
1	PESD1CAN	SOT23	Z8	771-PESD1CAN-T/R				
Diodes								
1	LSM115J	DO214BA	D2	494-LSM115JE3/TR13				
Ferrite Bead								
1	BLM21	0805	L2	81-BLM21P331SG				
Relay								
1	TLP175A	SOP4	Q1	757-TLP175A(TPLE				Photorelay MOSFET
IC								
1	TCAN1042GV	SOIC8	IC4	595-TCAN1042GVDRQ1				CAN tranceiver
Switch								
1	1101M2S3AV2BE2	–	TERM	611-1101M2S3AV2BE2				
Connectors								
1	RJE0166202	dual RJ11 6p6c	MCAN	523-RJE01-662-02				
1	micro-match2x3	Female	J18	571-215079-6 or 571-2178710-6 (value line)				
Others								
2	Screw terminal	–	–	534-7790				

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