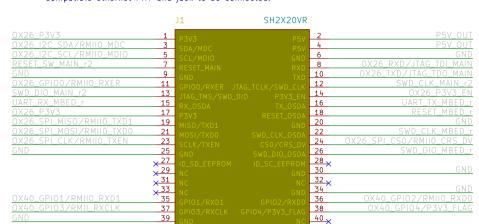
Main Controller (K22F)

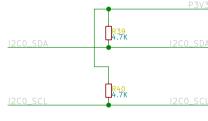
OX40N Connector OX40N connector is compatible with a Raspberry Pi 26 or 40 pin connector. It could easily be used with other external controllers and can even power them via 5V supply and switchable 3.3V supply. It mainly provides I2C, SPI, and UART connections to the main MCU. N variant pulls out RMIIO connections from the main MCU to allow compatible ethernet PHY and jack to be connected.

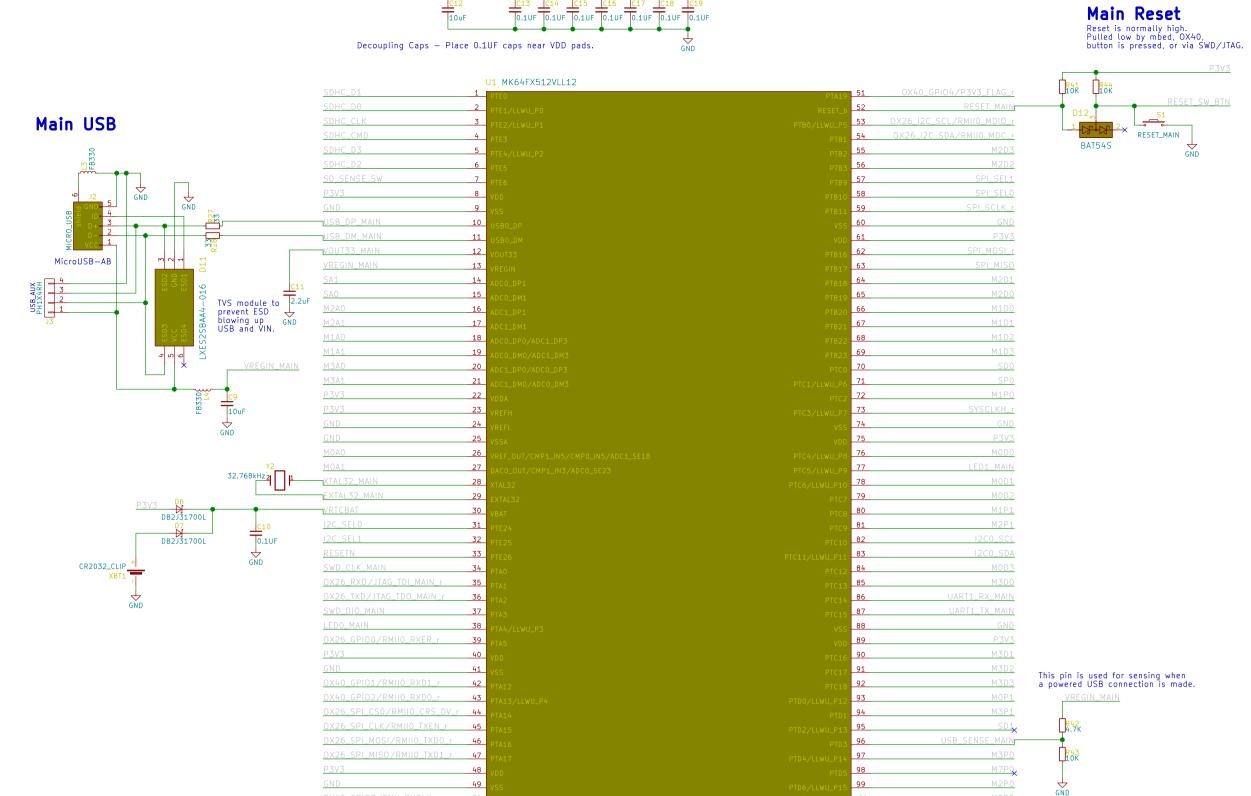


Isolation and Series Load Resistors

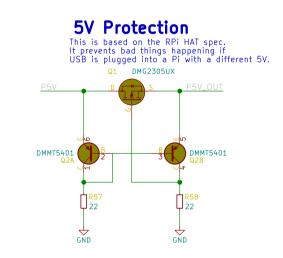
0.000 100 004 (0.000 100	R4 100	0,406,106,604,404,110,406
OX26_I2C_SDA/RMIIO_MDC		OX26_I2C_SDA/RMIIO_MDC_r
OX26_I2C_SCL/RMIIO_MDIO	R5 100	OX26_I2C_SCL/RMII0_MDIO_r
OX26_GPIOO/RMIIO_RXER	R6 150	OX26_GPIOO/RMIIO_RXER_r
OX40_GPIO2/RMIIO_RXDO	R7 150	OX40_GPIO2/RMIIO_RXDO_r
OX40_GPIO1/RMIIO_RXD1	R8 150	OX40_GPIO1/RMIIO_RXD1_r
OX40_GPIO3/RMII_RXCLK	R9 150	OX40_GPIO3/RMII_RXCLK_r
OX26_SPI_CLK/RMIIO_TXEN	R10 150	OX26_SPI_CLK/RMIIO_TXEN_r
OX26_SPI_MOSI/RMIIO_TXDO	R11 150	OX26_SPI_MOSI/RMIIO_TXDO_r
OX26_SPI_MISO/RMIIO_TXD1	R12 150	OX26_SPI_MISO/RMIIO_TXD1_r
OX26_SPI_CSO/RMIIO_CRS_DV	R13 150	OX26_SPI_CSO/RMIIO_CRS_DV_r
OX26_RXD/JTAG_TDI_MAIN	R14 150	OX26_RXD/JTAG_TDI_MAIN_r
OX26_TXD/JTAG_TDO_MAIN	R15 150	OX26_TXD/JTAG_TDO_MAIN_r
0X40_GPI04/P3V3_FLAG	R16 470	0X40_GPI04/P3V3_FLAG_r
SWD_CLK_MAIN_r2	R49 470	SWD_CLK_MAIN_
SWD_DIO_MAIN_r2	R50 470	SWD_DIO_MAIN
RESET_SW_MAIN_r2	R51 470	RESET_SW_BTN
SWD_CLK_MBED_r	R52 470	SWD_CLK_MBED
SWD_DIO_MBED_r	R53 470	SWD_DIO_MBED
RESET_MBED_r	R56 470	RESET_MBED
UART_TX_MBED_r	R54 470	UART_TX_MBED
UART_RX_MBED_r	R55 470	UART_RX_MBED
UART1_TX_MAIN_r	R31 470	UART1_TX_MAIN
UART1_RX_MAIN_r	R32 470	UART1_RX_MAIN
SWD_CLK_MAIN_r	R33 100	SWD_CLK_MAIN
SWD_DIO_MAIN_r	R34 100	SWD_DIO_MAIN
RESET_SW_MAIN_r	R35 100	RESET_SW_BTN
SPI_SCLK_r	R36 22	SPI_SCLK
SPI_MOSI_r	R37 22	SPI_MOSI
SYSCLKH_r	R38 22	SYSCLKH

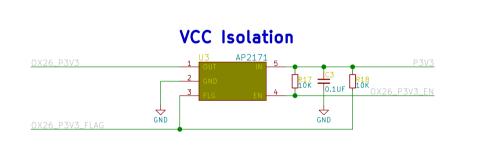
I2C Pull-up Resistors





USB Power By default, USB will power the 3.3V supply on the board. If a powered backplane is connected, the LDO is disabled by pulling the EN pin low.

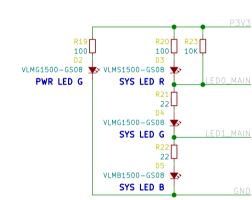


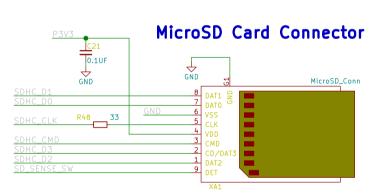


OX98 Connector

		P1		
P5V	A01		 B01_	
P5V	A02		B02	
P5V	A03		B03	GN
P5V	A04		B04	GN
P3V3	A05		B05	GN
P3V3	A06		B06	GN
GND	A07		B07	GN
M1P0	A08		B08	M1P
M1D0	A09			M1D
M1D2	A10		B10	M1D
GND	A11		D.1.1	GN
M1A0	A12		B12	M1A
GND	A13		B13	GN
MOPO	A14		B14	MOP
MODO	A15		B15	MOD
MOD2	A16		B16	MOD
GND	A17		B17	GN
MOAO	A18		B18	MOA
GND	A19		B19	GN
5A0	A20		B20	SA
GND	A21		B21	GN
SPO SPO	A22		B22	SD
	A23		B23	
CO_SDA	^A24			12C0_SC
2C_SEL0	A25			GN
GND	A26			SYSCLK
GND	A27			GN
GND	A28		B28	RESET
JSB_PWR_DISABLE	A29		B29	SPI_SCL
SPI_SEL0	A30		B30	
SPI_MOSI	A31			SPI_MIS
GND	A32		B32	GN
<u>DSI</u>			B31	SPI_MISI GN
M2P0	A36		B36	M2P
M2D0	A37		B37	M2D
M2D2	A38		B38	M2D
GND	A39		B39	GN
M2A0	A40		B40	M2A
GND	A41		B41	GN
M3P0	A42		B42	M3P
M3D0	A43		B43	M3D
M3D2	A44		B44	M3D

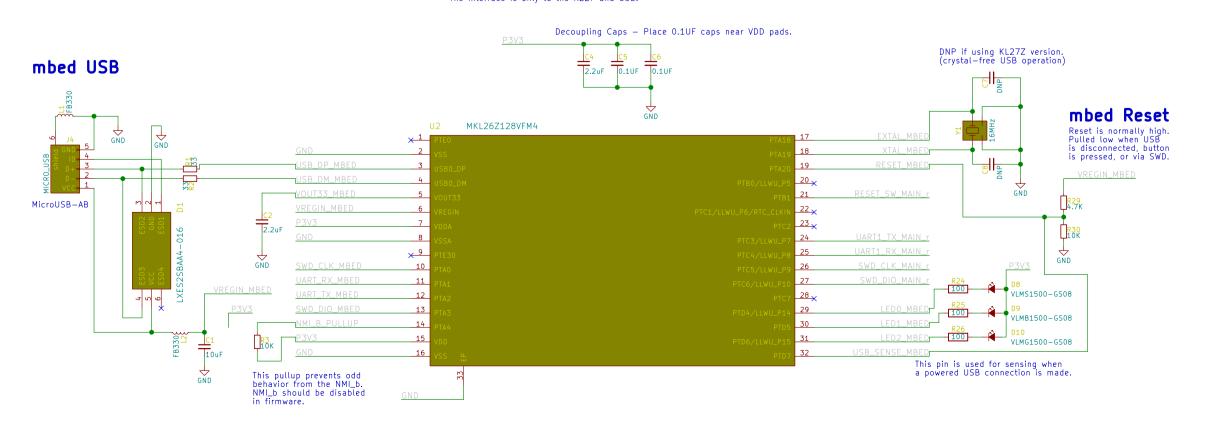
Main Controller LEDs





mbed Controller (KL26Z)

This MCU is only for debugging and programming the K22F on this board. It is running the DAPLink firmware from https://github.com/mbedmicro/DAPLink to enable mbed compatibility. It is possible to put other firmware on it via the SWD connector. The interface is only to the K22F and USB.



Hummingbird Innovations Limited
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File: CM_M4K64_A.sch
Title: CM-M4K64-A Size: A1 Date: 2017-08-KiCad E.D.A. kicad 4.0.7