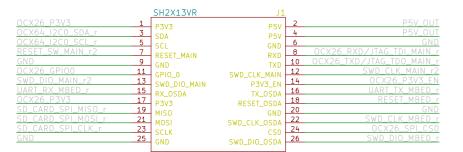
# **OX26 Connector**

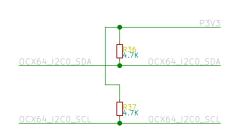
OX26 connector is compatible with a Raspberry Pi 26 or 40 pin connector. It could easily be used with other external controllers and can even power them via 5V supply. It mainly provides I2C, SPI, and UART connections to the main MCU.



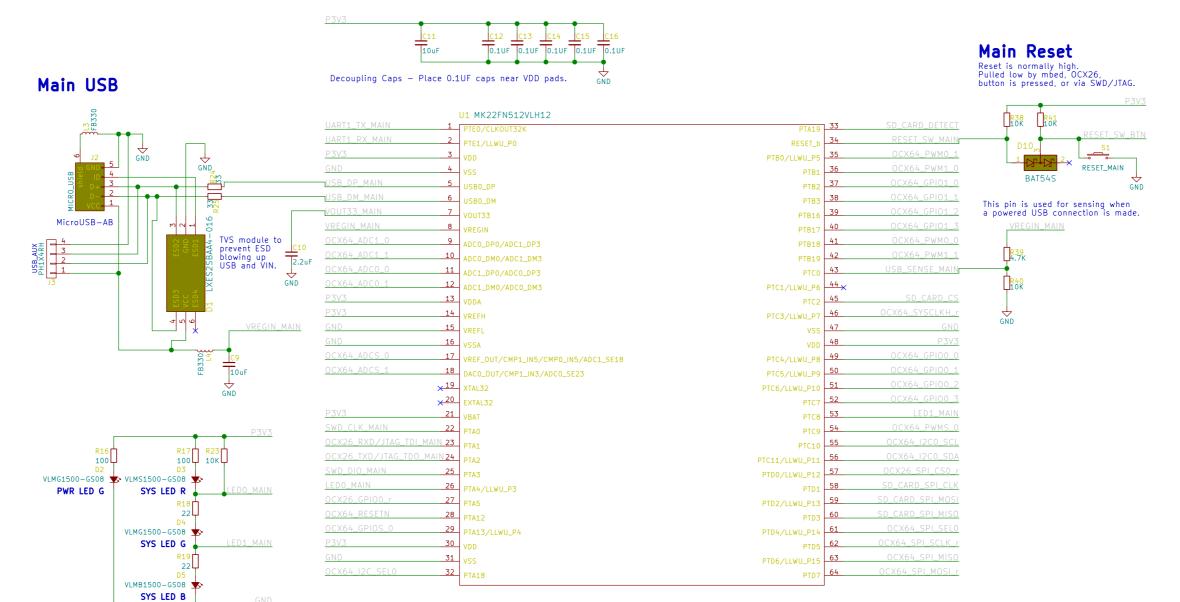
#### Isolation and Series Load Resistors

OCX26_RXD/JTAG_TDI_MAIN	R4 470	OCX26_RXD/JTAG_TDI_MAIN_r
OCX26_TXD/JTAG_TDO_MAIN	R5 470	OCX26_TXD/JTAG_TDO_MAIN_r
OCX64_I2C0_SDA_r	R6 <u>2</u> 2	0CX64_I2C0_SDA
OCX64_I2C0_SCL_r	R7 22	0CX64_I2C0_SCL
30101_1200_300_1		00/10 1_12 00_002
OCX26_GPI00	R8 470	0CX26_GPI00_r
OCX26_SPI_CS0	R10 470	OCX26_SPI_CSO_r
SD_CARD_SPI_CLK_r	R11 470	SD_CARD_SPI_CLK
SD_CARD_SPI_MOSI_r	R12 470	SD_CARD_SPI_MOSI
SD_CARD_SPI_MISO_r	R13 470	SD_CARD_SPI_MISO
SWD_CLK_MAIN_r2	R9 470	SWD_CLK_MAIN
SWD_DIO_MAIN_r2	R46 470	SWD_DIO_MAIN
RESET_SW_MAIN_r2	R47 470	RESET_SW_BTN
SWD_CLK_MBED_r	R48 470	SWD_CLK_MBED
SWD_DIO_MBED_r	R49 470	SWD_DIO_MBED
RESET_MBED_r	R50 470	RESET_MBED
UART_RX_MBED_r	R51 470	UART_RX_MBED
UART_TX_MBED_r	R52 470	UART_TX_MBED
UART1_TX_MAIN_r	R28 470	UART1_TX_MAIN
	R29 470	
UART1_RX_MAIN_r		UART1_RX_MAIN
SWD_CLK_MAIN_r	R30 100	SWD_CLK_MAIN
SWD_DIO_MAIN_r	R31 100	SWD_DIO_MAIN
RESET_SW_MAIN_r		RESET_SW_BTN
OCX64_SPI_SCLK_r	R33 22	OCX64_SPI_SCLK
	R34 22	
OCX64_SPI_MOSI_r		OCX64_SPI_MOSI
OCX64_SYSCLKH_r	R35 22	OCX64_SYSCLKH

## I2C Pull-up Resistors

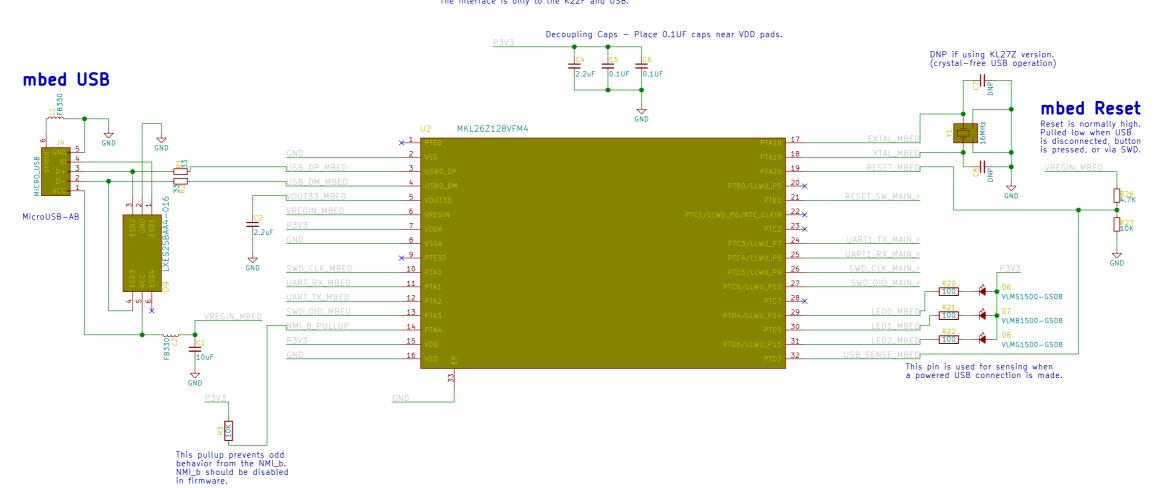


# Main Controller (K22F)



## mbed Controller (KL26Z)

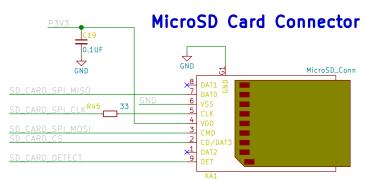
This MCU is only for debugging and programming the K22F on this board. It is running the DAPLink firmware from https://github.com/mbedmicro/DAPLink to enable mbed compatibility. It is possible to put other firmware on it via the SWD connector. The interface is only to the K22F and USB.



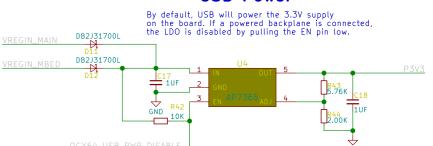
#### OCX64 Connector

The OCX64 connector interfaces the main controller to a modular backplane or single board.

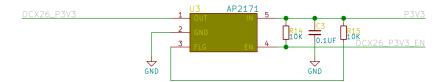
	PI			
P5V A01	P5V	P12V	В01	P12V
P5V A02	P5V	P12V	B02	P12V
P5V A03	DEW W	GND	B03	GND
P5V A04	DEV B	GND	B04	GND
P3V3 A05	DZVZ "	GND	B05	GND
P3V3 A06	P3V3 P	GND	B06	GND
GND A07	GND	GND	B07	GND
OCX64_PWM1_0 A08		PWM1_1	B08	OCX64_PWM1_1
OCX64_GPIO1_0 A09	PWM1_0 50	GPI01_1	B09	OCX64_GPI01_1
OCX64_GPI01_2 A10	GPI01_2	GPI01_3	B10	OCX64_GPI01_3
GND A11	GND	GND	B11	GND
OCX64_ADC1_0 A12	ADC1_0	ADC1_1	B12	OCX64_ADC1_1
GND A13	GND	GND	B13	GND
OCX64_PWM0_0 A14	PWM0_0	PWM0_1	B14	OCX64_PWM0_1
OCX64_GPIO0_0 A15	GPI00_0	GPI00_1	B15	0CX64_GPI00_1
OCX64_GPIO0_2 A16	GPI00_2	GPI00_3	B16	0CX64_GPI00_3
GND A17	GND	GND	B17	GND
OCX64_ADC0_0 A18	ADCO_O	ADCO_1	B18	OCX64_ADC0_1
GND A19	GND	GND	B19	GND
OCX64_ADCS_0 A20	ADCS_0	ADCS_1	B20	OCX64_ADCS_1
GND A21	GND	GND	B21	GND
OCX64_PWMS_0 A22	PWMS_0	GPIOS_0	B22	OCX64_GPIOS_0
OCX64_I2CO_SDA	TBC	TBC	B23_	
	I2CO_SDA	I2C0_SCL	B24	0CX64_I2C0_SCL
OCX64_I2C_SELO A25	I2C_SEL0	GND	B25	GND
GND A26	GND	SYSCLKH	B26	OCX64_SYSCLKH
GND A27	GND	GND	B27_	GND
GND A28	GND	RESETN	B28	OCX64_RESETN
OCX64_USB_PWR_DISABLE A29	USB_PWR_DISABLE	SPI_SCLK	B29	OCX64_SPI_SCLK
OCX64_SPI_SELO A30	SPI_SEL0	TBC	B30×	0.00001 0.000 1.000
OCX64_SPI_MOSI A31	SPI_MOSI	SPI_MISO	B31	OCX64_SPI_MISO
GND A32	GND	GND	B32	GND

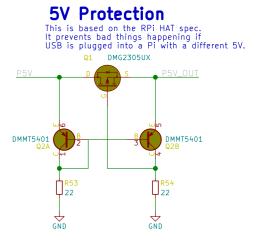


# **USB Power**



## **VCC** Isolation





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Sheet: /		
File: CM_M2	K22_A.sch	
Title: CM-	-M2K22-A	
Size: A2	Date: 2017-08-31	Rev: B
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