HARDWARE EXTERNAL PINOUT

Initially OpenXHC project based on cheap stm32 dev board (stm32f103c8 but can be runned on other stm32f1xx with hardware USB FS), you can find it on eBay, Aliexspress and so on market price is about ~**$8** US and base goal was make it simple and cheap as possible as result it almost solderless !

PIN	TYPE	DESCRIPTION
USB INTERFACE		
PA12	**INPUT FL**	**USB DP**
PA11	**INPUT FL**	**USB DM**
LCD INTERFACE [SPI BASED/IO BASED]		
PA2	**PP**	**LCD RESET**
PA3	**PP**	**LCD D/C**
PA4	**PP**	**LCD CS**
PA5	**AF PP**	**LCD CLOCK**
PA6	**INPUT**	**LCD MISO**
PA7	**AF PP**	**LCD MOSI**
PB0	**AF PP/PP**	**LCD LED PWM [TIM3_CH3]/[OPTIONAL]**
QUADRATURE ENCODER INTERFACE		
PA0	**INPUT PU**	**ENCODER A**
PA1	**INPUT PU**	**ENCODER B**
PC13	**INPUT PU**	**ENCODER BTN [OPTIONAL]**
HARDWARE EMULATION SELECTOR		
PB2	**INPUT PU**	**SELECT HD03/HB04 DEVICE [BOOT1]**
MATRIX KEYBOARD 5x4		
PB5	**INPUT PU**	**MATRIX KBD COL1**
PB6	**INPUT PU**	**MATRIX KBD COL2**
PB7	**INPUT PU**	**MATRIX KBD COL3**
PB8	**INPUT PU**	**MATRIX KBD COL4**
PB9	**INPUT PU**	**MATRIX KBD COL5**
PB12	**INPUT PU**	**MATRIX KBD ROW1**

PB13	INPUT PU	MATRIX KBD ROW2
PB14	INPUT PU	MATRIX KBD ROW3
PB15	INPUT PU	MATRIX KBD ROW4
ROTARY SWITCH INTERFACE		
PA8	INPUT PU	ROTARY SWITCH POS 1
PA9	INPUT PU	ROTARY SWITCH POS 2
PA10	INPUT PU	ROTARY SWITCH POS 3
PB10	INPUT PU	ROTARY SWITCH POS 4
PB11	INPUT PU	ROTARY SWITCH POS 5
PB1	INPUT PU	ROTARY SWITCH POS 6
POSITION SWITCH		
PC13	INPUT PD	WC MC POSITION SWITCH

DEFAULT ADDITIONAL HARDWARE