Nucleo-F446RE

Nucleo Pin #	STM32 Pin #	Pin Name	CAN	UART	USB	PWM	SPI	I2C	Counter	Analog In	AnalogOut	GPIO	Funktion	Beschreibung	Typ	Level	Bemerkung	Arduino Shield
CN7-1	51	PC10		UART3_TX / UART4_TX			SPI3_SCK					PC10	SPI3_SCK	SD SPI SCK				
CN7-2	52	PC11		UART3_RX / UART4_RX			SPI3_MISO					PC11	SPI3_MISO	SD SPI MISO				
CN7-3	53	PC12		UART3_CK / UART5_TX			SPI3_MOSI	I2C2_SDA				PC12	SPI3_MOSI	SD SPI MOSI				
CN7-4	54	PD2		UART5_RX					TIM3_ETR			PD2	PD2	SD SPI CS				
CN7-5	19	VDD													REF			
CN7-6		E5V													PWR			
CN7-7	60	BOOT0																
CN7-8		GND													GND			
CN7-9		NC															NC	
CN7-10		NC															NC	
CN7-11		NC															NC	
CN7-12		IOREF													REF			
CN7-13	46	PA13										PA13		SWDIO-JTMS		3.3V	SWDIO-JTMS	
CN7-14	7	RESET												NRST				
CN7-15	49	PA14										PA14		SWCLK-JTCK		3.3V	SWCLK-JTCK	
CN7-16		3V3													REF			
CN7-17	50	PA15		UART4_RTS			SPI1_NSS / SPI3_NSS		TIM2_CH1 / TIM2_ETR			PA15	PA15	Schrittmotor2_DIR		3.3V	JTDI	
CN7-18		5V													REF			
CN7-19		GND													GND			
CN7-20		GND													GND			
CN7-21	59	PB7		UART1_RX				I2C1_SDA	TIM4_CH2			PB7	TIM4_CH2	Encoder B M2		3.3V		
CN7-22		GND													GND			
CN7-23	2	PC13										PC13	PC13	User Button		3.3V	USER_BUTTON	
CN7-24		VIN													PWR			
CN7-25	3	PC14										PC14				3.3V	NC(Nucleo)	
CN7-26		NC															NC	
CN7-27	4	PC15										PC15				3.3V	NC(Nucleo)	
CN7-28	14	PA0		UART2_CTS / UART4_TX		TIM8_ETR			TIM2_CH1 / TIM2_ETR / TIM5_CH1	ADC123_IN0		PA0	TIM2_CH1	Encoder A M3		3.3V		Analog In 0
CN7-29	5	PH0										PH0				3.3V	NC(Nucleo)	
CN7-30	15	PA1		UART2_RTS / UART4_RX					TIM2_CH2 / TIM5_CH2	ADC123_IN1		PA1	TIM2_CH2	Encoder B M3		3.3V		Analog In 1
CN7-31	6	PH1										PH1	PH1	Motor Feedback		3.3V		
CN7-32	20	PA4		UART2_CK			SPI1_NSS / SPI3_NSS			ADC12_IN4	DAC_OUT1	PA4		CS SPI Stepper2		3.3V		Analog In 2
CN7-33	1	VBAT																
CN7-34	26	PB0		UART4_CTS		TIM1_CH2N / TIM8_CH2N	SPI3_MOSI		TIM3_CH3	ADC12_IN8		PB0	ADC12_IN8			3.3V		Analog In 3
CN7-35	10	PC2					SPI2_MISO			ADC123_IN12		PC2	ADC123_IN12	Analog0 (oder MISO SPI Stepper)		3.3V		
CN7-36	9	PC1					SPI2_MOSI / SPI3_MOSI			ADC123_IN11		PC1	PC1			3.3V	NC(Nucleo)	Analog In 4
CN7-37	11	PC3					SPI2_MOSI			ADC123_IN13		PC3	ADC123_IN13	Analog1 (oder MOSI SPI Stepper)		3.3V		
CN7-38	8	PC0								ADC123_IN10		PC0	PC0			3.3V		Analog In 5
CN10-1	40	PC9		UART5_CTS		TIM8_CH4		I2C3_SDA	TIM3_CH4			PC9	I2C3_SDA	I2C SDA IMU		3.3V		
CN10-2	39	PC8		UART5_RTS / UART6_CK		TIM8_CH3			TIM3_CH3			PC8	PC8	Servo 1 / D1		3.3V		
CN10-3	61	PB8	CAN1_RX					I2C1_SCL	TIM2_CH1 / TIM2_ETR / TIM4_CH3 / TIM10_CH1			PB8	I2C1_SCL			3.3V		SCL
CN10-4	37	PC6		UART6_TX		TIM8_CH1			TIM3_CH1			PC6	PC6	Servo 2 / D2		3.3V		
CN10-5	62	PB9	CAN1_TX				SPI2_NSS	I2C1_SDA	TIM2_CH2 / TIM4_CH4 / TIM11_CH1			PB9	I2C1_SDA			3.3V		SDA
CN10-6	25	PC5		UART3_RX						ADC12_IN15		PC5	ADC12_IN15	Analog2		3.3V		
CN10-7	13	AVDD													REF			AREF
CN10-8		U5V													REF			
CN10-9		GND													GND			GND
CN10-10		NC															NC	
CN10-11	21	PA5				TIM8_CH1N	SPI1_SCK		TIM2_CH1 / TIM2_ETR	ADC12_IN5	DAC_OUT2	PA5	PA5			3.3V	LED	SCK
CN10-12	45	PA12	CAN1_TX	UART1_RTS	USB_FS_D+	TIM1_ETR						PA12	CAN1_TX	CAN TX		3.3V		
CN10-13	22	PA6				TIM1_BKIN / TIM8_BKIN	SPI1_MISO		TIM3_CH1 / TIM13_CH1	ADC12_IN6		PA6	TIM3_CH1	Encoder A M1		3.3V		MISO
CN10-14	44	PA11	CAN1_RX	UART1_CTS	USB_FS_D-	TIM1_CH4						PA11	CAN1_RX	CAN RX		3.3V		
CN10-15	23	PA7				TIM1_CH1N / TIM8_CH1N	SPI1_MOSI		TIM3_CH2 / TIM14_CH1	ADC12_IN7		PA7	PA7			3.3V		MOSI
CN10-16	33	PB12	CAN2_RX	UART3_CK		TIM1_BKIN	SPI2_NSS	I2C2_SMBA				PB12	PB12	Servo 3 / D3 (ODER Stepper 2 STEP)		3.3V		
CN10-17	58	PB6	CAN2_TX	UART1_TX				I2C1_SCL	TIM4_CH1			PB6	TIM4_CH1	Encoder A M2		3.3V		CS
CN10-18		NC																
CN10-19	38	PC7		UART6_RX		TIM8_CH2	SPI2_SCK		TIM3_CH2			PC7	TIM3_CH2	Encoder B M1		3.3V		PWM
CN10-20		GND													GND			
CN10-21	42	PA9		UART1_TX		TIM1_CH2	SPI2_SCK	I2C3_SMBA				PA9	TIM1_CH2	PWM Motor M2		3.3V		GPIO
CN10-22	28	PB2					SPI3_MOSI		TIM2_CH4			PB2	PB2	Servo0		3.3V		
CN10-23	41	PA8		UART1_CK		TIM1_CH1		I2C3_SCL				PA8	I2C3_SCL	I2C CLK IMU		3.3V		GPIO
CN10-24	27	PB1				TIM1_CH3N / TIM8_CH3N			TIM3_CH4	ADC12_IN9		PB1	ADC12_IN9	Analog3		3.3V		
CN10-25	29	PB10		UART3_TX			SPI2_SCK	I2C2_SCL	TIM2_CH3			PB10	UART3_TX	(oder SCK SPI Stepper)		3.3V		PWM
CN10-26	36	PB15			USB_HS_D+	TIM1_CH3N / TIM8_CH3N	SPI2_MOSI		TIM12_CH2			PB15	PB15	Enable Motor		3.3V		
CN10-27	56	PB4					SPI1_MISO / SPI3_MISO / SPI2_NSS	I2C3_SDA	TIM3_CH1			PB4				3.3V	NJTRST	PWM
CN10-28	35	PB14		UART3_RTS	USB_HS_D-	TIM1_CH2N / TIM8_CH2N	SPI2_MISO		TIM12_CH1			PB14	PB14	Stepper 1 STEP		3.3V		
CN10-29	57	PB5	CAN2_RX				SPI1_MOSI / SPI3_MOSI	I2C1_SMBA	TIM3_CH2			PB5		(oder CS SPI Stepper 1)		3.3V		GPIO
CN10-30	34	PB13	CAN2_TX	UART3_CTS		TIM1_CH1N	SPI2_SCK					PB13	TIM1_CH1N	PWM Motor M1		3.3V		
CN10-31	55	PB3					SPI1_SCK / SPI3_SCK	I2C2_SDA	TIM2_CH2			PB3				3.3V	JTDO	PWM
CN10-32		AGND													AGND			
CN10-33	43	PA10		UART1_RX		TIM1_CH3						PA10	TIM1_CH3	PWM Motor M3		3.3V		GPIO
CN10-34	24	PC4								ADC12_IN14		PC4	PC4	Stepper 1 DIR		3.3V		
CN10-35	16	PA2		UART2_TX					TIM2_CH3 / TIM5_CH3 / TIM9_CH1	ADC123_IN2		PA2	UART2_TX	ST Link Serial Port		3.3V	COM-PORT	Serial TX
CN10-36		NC															NC	
CN10-37	17	PA3		UART2_RX					TIM2_CH4 / TIM5_CH4 / TIM9_CH2	ADC123_IN3		PA3	UART2_RX	ST Link Serial Port		3.3V	COM-PORT	Serial RX
CN10-38		NC															NC	