

Nucleo-F446RE - Module Datasheet

Module Pins

Module	GPIO Pins
Oscilloscope	PB0, PC0, PC1
Counter	PA0, PA1, PD2
Voltmeter	PB0, PC0, PC1
Signal Generator	PA4, PA5
Mod. PWM Generator	PA7, PB4
Pattern Generator	PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC9
Sync PWM Generator	PB6, PB8, PC6, PC9
Voltage Source	PA4, PA5

Compatibility Matrix

Green = compatible | Red = conflict | Grey = self

	Scope	Counter	Voltm.	Sig.Gen	PWM Gen	Pattern	SyncPWM	Vout
Scope	-		X					
Counter		-		X	X		X	
Voltm.	X		-					
Sig.Gen		X		-	X	X	X	X
PWM Gen		X		X	-		X	
Pattern				X		-	X	
SyncPWM		X		X	X	X	-	
Vout				X				-

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Module Characteristics

Oscilloscope	
Channels	3
Max Sampling (12-bit)	2.32 MSps
Max Sampling (8-bit)	3.13 MSps
Interleaved (12-bit)	3.35 MSps
Interleaved (8-bit)	4.36 MSps
Interleaved Ch.	0
Buffer Size	40k samples
Resolution	12 / 8 bit

Counter	
HF Range Max	300 MHz
LF Range Max	1 MHz
Ref. Input Max	36 MHz
Counter Clock	72 MHz
Gate Clock	72 MHz

Voltmeter	
Channels	3
Resolution	12 bit
Buffer Size	40k samples

Signal Generator	
Channels	2
Max Speed	2 MSps
Resolution	12 bit
Buffer Size	10k samples
Timer Clock	72 MHz

Mod. PWM Generator	
Channels	2
Max Frequency	4.8 MHz
Timer Clock	84 MHz

Pattern Generator	
Channels	8
Data Shift	2

Sync PWM Generator	
Channels	4
Max Frequency	36 MHz
Ch. Independence	Independent

Voltage Source	
Channels	2
Resolution	12 bit