

**Table 29. ST morpho connector on NUCLEO-F401RE,
NUCLEO-F411RE, NUCLEO-F446RE**

CN7 odd pins		CN7 even pins		CN10 odd pins		CN10 even pins	
Pin	Name	Name	Pin	Pin	Name	Name	Pin
1	PC10	PC11	2	1	PC9	PC8	2
3	PC12	PD2	4	3	PB8	PC6	4
5	VDD	E5V	6	5	PB9	PC5	6
7	BOOT0 ⁽¹⁾	GND	8	7	AVDD	U5V ⁽²⁾	8
9	-	-	10	9	GND	-	10
11	-	IOREF	12	11	PA5	PA12	12
13	PA13 ⁽³⁾	RESET	14	13	PA6	PA11	14
15	PA14 ⁽³⁾	+3.3V	16	15	PA7	PB12	16
17	PA15	+5V	18	17	PB6	-	18
19	GND	GND	20	19	PC7	GND	20
21	PB7	GND	22	21	PA9	PB2	22
23	PC13	VIN	24	23	PA8	PB1	24
25	PC14	-	26	25	PB10	PB15	26
27	PC15	PA0	28	27	PB4	PB14	28
29	PH0	PA1	30	29	PB5	PB13	30
31	PH1	PA4	32	31	PB3	AGND	32
33	VBAT	PB0	34	33	PA10	PC4	34
35	PC2	PC1 or PB9 ⁽⁴⁾	36	35	PA2	-	36
37	PC3	PC0 or PB8 ⁽⁴⁾	38	37	PA3	-	38

1. The default state of BOOT0 is LOW. It can be set to HIGH when a jumper is on pin5-7 of CN7. Two unused jumpers are available on CN11 and CN12 (bottom side of the board).
2. U5V is 5 V power from ST-LINK/V2-1 USB connector and it rises before +5V.
3. PA13 and PA14 share with SWD signals connected to ST-LINK/V2-1, it is not recommended to use them as IO pins if the ST-LINK part is not cut.
4. Refer to [Table 10: Solder bridges](#) for details.