DT0057
Design tip

Compatibility of the X-NUCLEO-IDW01M1 Wi-Fi evaluation board with other X-NUCLEO boards

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Main components	
X-NUCLEO-IDW01M1	Wi-Fi expansion board based on the SWPF01SA module for STM32 Nucleo

Purpose and benefits

The X-NUCLEO-IDW01M1 Wi-Fi evaluation board is based on the SPWF01SA serial-to-Wi-Fi modules, and provides Wi-Fi expansion to the STM32 Nucleo boards. With the Nucleo environment the user can easily evaluate Wi-Fi connectivity offered by the module in different use case and application scenarios. This is possible thanks to the ability to stack other expansion boards (e.g. with other connectivity links, sensors, or motor control) on top of the X-NUCLEO-IDW01M1, by simply plugging them onto the ST morpho connectors or Arduino UNO R3 connectors.

To allow the maximum compatibility with the other expansion boards, the X-NUCLEO-IDW01M1 has been conceived with different connection options for the 4-wire UART interface and relevant GPIOs. For the complete alternate pin positioning, see user manual UM1975 “Getting started with X-NUCLEO-IDW01M1 Wi-Fi expansion board based on SPWF01SA module for STM32 Nucleo”. The goal of this document is to provide the list of the X-NUCLEO boards with out-of-the-box compatibility with the X-NUCLEO-IDW01M1, and also, for other cases, to offer guidelines on the appropriate selection of the alternate pin positioning on the X-NUCLEO-IDW01M1 to ensure compatibility with the selected X-NUCLEO board.

Description

Table 1 lists the cases in which the X-NUCLEO-IDW01M1 Wi-Fi expansion board is out-of-the-box compatible with other available X-NUCLEO boards. The table also reports the cases where a conflict arises and the operations that must be performed on the X-NUCLEO-IDW01M1 board to ensure its proper functioning in conjunction with the selected X-NUCLEO board.

Table 1: X-NUCLEO-IDW01M1 Wi-Fi board compatibility matrix

	Compatibility out-of-the-box	Comment	NO -> YES on X-NUCLEO-IDW01M1	NO -> YES on other board
X-NUCLEO-IDB04A1	YES*	*user is not enabled to access EEPROM		
X-NUCLEO-IDB05A1	YES*	*user is not enabled to access EEPROM		
X-NUCLEO-IHM01A1	NO	USART conflicts with L6474	Mount R33 and R35 and unmount R4 and R8	
			Mount R9 and R34 and unmount R4 and R8	
X-NUCLEO-NFC01A1	NO*	*conflict with LED3, easy to resolve with #	Mount R33 and R35 and unmount R4 and R8	Unmount R4 on X-NUCLEO-NFC01A1
			Mount R9 and R34 and unmount R4 and R8	# Disable LED3 by firmware of X-CUBE-NFC1
X-NUCLEO-IKS01A1	YES*	*conflict with USER_INT	Mount R33 and R35 and unmount R4 and R8	Do not use USER_INT
			Mount R9 and R34 and unmount R4 and R8	
X-NUCLEO-IHM02A1	YES			
X-NUCLEO-CCA01M1	YES			
X-NUCLEO-CCA02M1	YES*	*user cannot use USB on this board		
X-NUCLEO-IDS01A4/5	YES			
X-NUCLEO-IKA01A1	YES*	*conflict with D2 (Window Comparator)	Mount R33 and R35 and unmounts R4 and R8	
			Mount R9 and R34 and unmounts R4 and R8	
X-NUCLEO-PLC01A1	YES			
X-NUCLEO-6180XA1	YES*	*only with on-board sensor (Right Satellite will create conflicts)	Mount R33 and R35 and unmount R4 and R8	
			Mount R9 and R34 and unmount R4 and R8	

X-NUCLEO-IHM03A1	NO		Mount R33 and R35 and unmount R4 and R8	
			Mount R9 and R34 and unmount R4 and R8	
X-NUCLEO-IHM04A1	NO		Mount R33 and R35 and unmount R4 and R8	
			Mount R9 and R34 and unmount R4 and R8	
X-NUCLEO-IHM05A1	NO		Mount R33 and R35 and unmount R4 and R8	
			Mount R9 and R34 and unmount R4 and R8	

Support material

The table below lists the available documentation and support material for the X-NUCLEO-IDW01M1.

Related design support material
X-NUCLEO-IDW01M1 schematic http://www.st.com/st-web-ui/static/active/en/resource/technical/layouts_and_diagrams/schematic_pack/x-nucleo-idw01m1_schematic.pdf
Documentation
Data Brief: DB2726, Wi-Fi expansion board based on SWPF01SA module for STM32 Nucleo http://www.st.com/st-web-ui/static/active/en/resource/technical/document/data_brief/DM00241659.pdf
User manual: UM1975, Getting started with X-NUCLEO-IDW01M1 Wi-Fi expansion board based on SPWF01SA module for STM32 Nucleo http://www.st.com/st-web-ui/static/active/en/resource/technical/document/user_manual/DM00245012.pdf
User Guide: X-NUCLEO-IDW01M1 Quick start user guide http://www.st.com/st-web-ui/static/active/en/resource/sales_and_marketing/presentation/product_presentation/x-nucleo-idw01m1_quick_start_guide.pdf

Revision history

Date	Version	Changes
09-Feb-2016	1	Initial release

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