



AVNET<sup>®</sup> SILICA

Avnet Silica WiFi Shield  
Quick Start Guide

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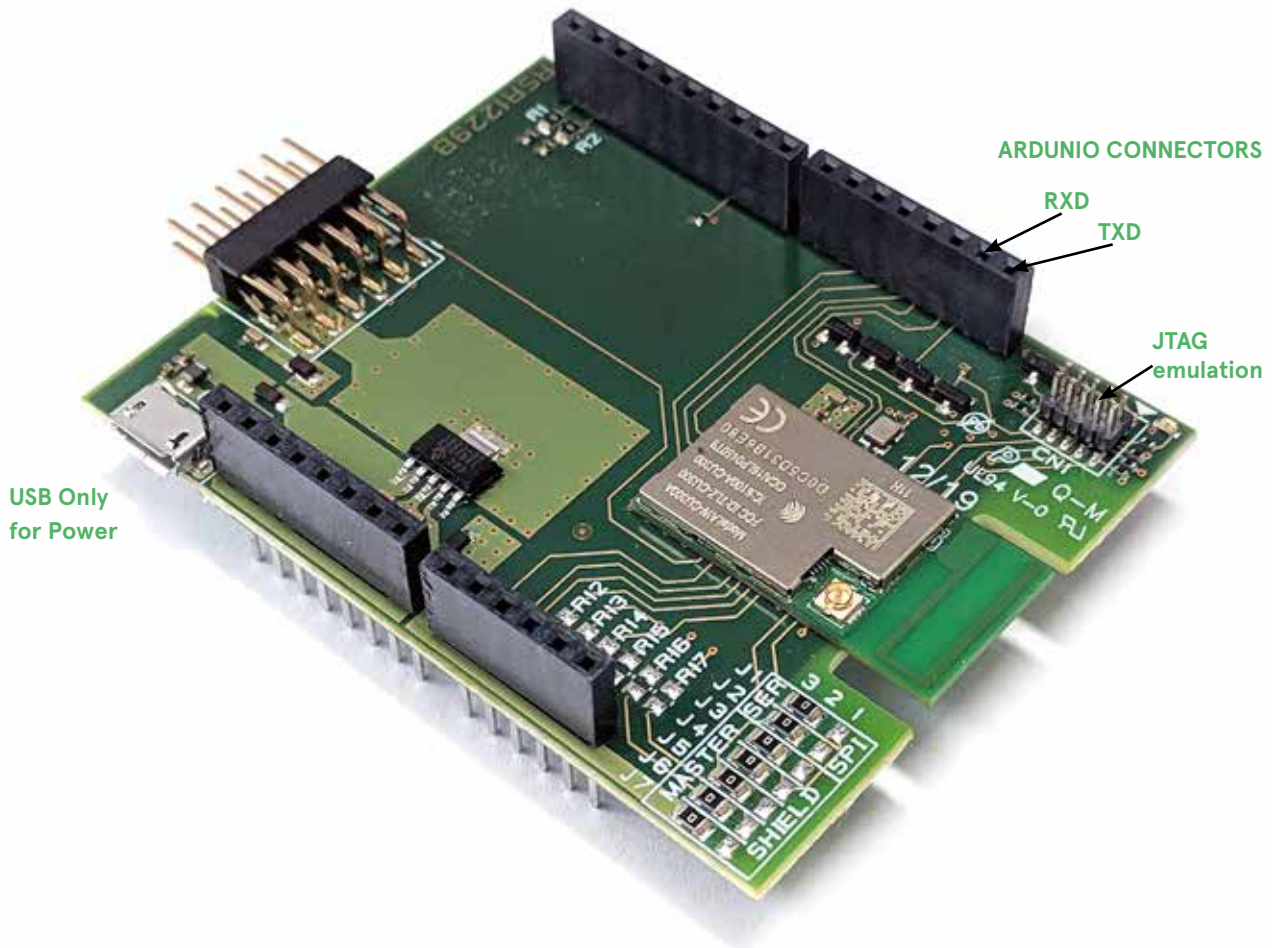
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# General description

The Avnet Silica WiFi Shield is based on an AW-CU300A module, providing Arduino pinout connectors.

Arduino connectors provide ultimate flexibility, leveraging on a huge ecosystem of compatible boards. Furthermore, the module also includes a PMOD® connector for extended compatibility with additional boards.

The module is based on the 88MW300 WiFi SoC processor from Marvell, an Arm Cortex-M4 CPU integrated with a WiFi radio, with support for Wi-Fi 802.11 b/g/n. The module is pre-programmed with a UART based command interpreter, making it easy to connect to a WiFi network with simple ASCII commands. CPU documentation and a serial command list is available from the Marvell webpage.



Order Code: AVSWIFI-CU300A-SHIELD

# Quick start with NUCLEO L476RG board

The board can be configured either as a Arduino CPU (default) or an Arduino Shield via solder jumpers; here is the configuration.

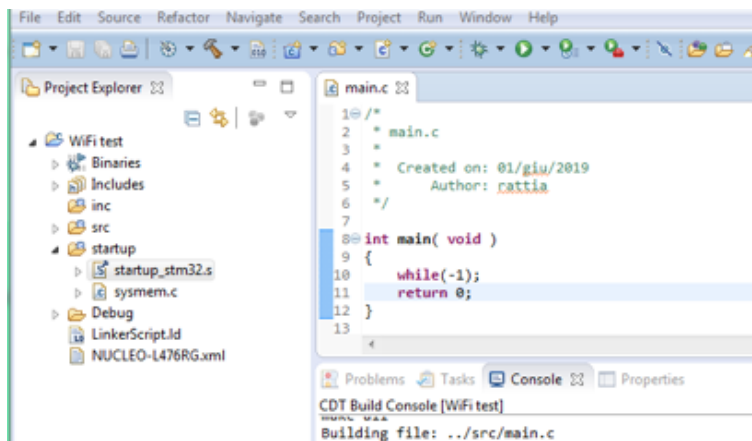
	J3	J4	J5	J6
MASTER	2-3	2-3	2-3	2-3
Shield	1-2	1-2	1-2	1-2

In order to start, connect the WiFi board to an STMicroelectronics NUCLEO-L476RG board, after having closed the SB62 and SB63 jumpers under the NUCLEO board itself. (By closing these jumpers on the NUCLEO-L476RG board, the Arduino TXD and RXD will be connected to the debug UART port).

You need to have the ST development tools installed, which include the installation of the ST-LINK-V2 drivers, needed to access the ST-LINK-V2 debug UART (read the STM32 Nucleo-64 boards [MB1136/UM1724 – STMicroelectronics document number en.DM00105823.pdf](#)

Using the ST development tool, create an empty project, and create a main.c file doing nothing; compile and run the created project.

As an example you can download the WiFiExampleL476 project from Avnet Silica web site.



The project is needed to clean up any possible already existing projects; on the NUCLEO board project using resources can conflict with the TXD and RXD signals on the debug port.

Open a terminal port on the UART port created by the ST-LINK-V2 interface, working 115200, n, 8, 1.

You can use this port to send a command to the WiFi module, write on the terminal

```
mwm+sv=1
```

You get

**OK.**

# Quick start with FREEDOM-K64F board

The board has to be configured as Arduino Shield via solder jumpers.

	J3	J4	J5	J6
MASTER	2-3	2-3	2-3	2-3
Shield	1-2	1-2	1-2	1-2

Put the WiFi board over an NXP FRDM-K64F board.

Using MCUXPRESSO, create a project which is able to bridge UART0 (which is connected to the UART debug port) and UART3 (connected to the Arduino TXD/RXD wires).

As an example you can download the WiFiExampleK64F project from the Avnet Silica web site.

Compile and run the example, open a terminal on the UART generated by the FREEDOM debug interface, running 115200, n, 8, 1.

This will send a command to the WiFi module.

Write on the terminal

```
mwm+sv=1
```

You get

**OK.**

# Quick start with LPC55S69-EVK board

The board has to be configured as Arduino Shield via solder jumpers.

	J3	J4	J5	J6
MASTER	2-3	2-3	2-3	2-3
Shield	1-2	1-2	1-2	1-2

Put the WiFi board over an NXP LPC55S69-EVK board.

Using MCUXPRESSO create a project which is able to bridge UART0 ( which is connected to the UART debug port ) and UART2 (connected to the Arduino TXD/RXD wires ).

As an example you can download the WiFiExampleLPC55xx project from Avnet Silica web site.

Compile and run the example, open a terminal on the UART generated by the EVK board debug interface, running 115200, n, 8, 1.

This will send a command to the WiFi module.

Write on the terminal

```
mwm+sv=1
```

You get

**OK.**



# Scan a WiFi network

Having connected to the module via a UART interface, these are the commands to scan an existing WiFi network:

```
Mwm+sv=1
```

```
# OK
```

```
mwm+wstrt
```

```
# OK
```

```
mwm+wscan
```

```
if answer is
```

```
OK
```

```
scan-count:0
```

```
retry mwm+wscan
```

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