

The **LSR Wireless Shield** is an Arduino™ form-factor expansion board for prototyping wireless connected IoT products with customizable sensor/peripheral capabilities. It features FCC certified WiFi and BLE modules from LS Research, versatile expansion options plus Reference Designs for two ARM® Cortex™ M based SoC and MCU platforms:

- **Avnet SmartFusion2 KickStart Kit** (Microsemi M2S010S secure SoC)
- **FRDM-K22F Freedom Development Board** (NXP Kinetis K22 MCU)

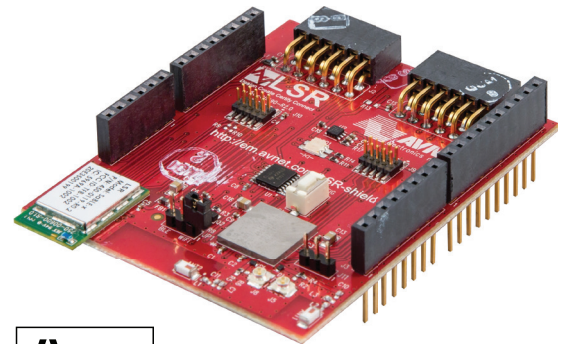
FEATURES

- **TiWi-C-W** WiFi SoC wireless module (802.11 bgn, based on Broadcom BCM4390)
 - Multiple firmware applications, reconfigurable via over-the-air programming
 - Antenna diversity: dual onboard chip antennas and dual U.FL connectors
 - Modular certification enabled via reuse of LSR FCC ID and ETSI certifications
- **SaBLE-X** BLE SoC wireless module (Bluetooth Smart 4.1, based on TI CC2640)
 - Class-leading low-power and RF performance
 - Developer Tool Suite desktop app simplifies BLE application development
 - ModuleLink BLE mobile app available for both iOS and Android
 - Worldwide regulatory certifications (FCC, IC, ETSI, Giteki, C-Tick)
- Stackable Arduino™-compatible Shield connectors for further expansion
- Dual Pmod™-compatible expansion interfaces (I2C and SPI)
- Onboard 5V to 3.3V power regulation (1A rating)

WIFI REFERENCE DESIGNS

- **TiWiConnect**
 - Cloud-connectivity agent plus cloud-service for easily created dashboard UI
 - Reduced software effort/accelerated development, auto-generates C source code
 - Includes free cloud account on <https://avnet.tiwiconnect.com> developer portal
- **Serial-to-WiFi**
 - Serial communications API for simplified TCP and UDP socket connections
 - Easy implementation of M2M IoT connectivity
 - Includes a connection management layer, simplifying software on host MCU
 - Desktop App for testing both sides of socket connections (for Microsemi kit only)

To purchase this kit, visit www.cloudconnectkits.org/LSR-shield



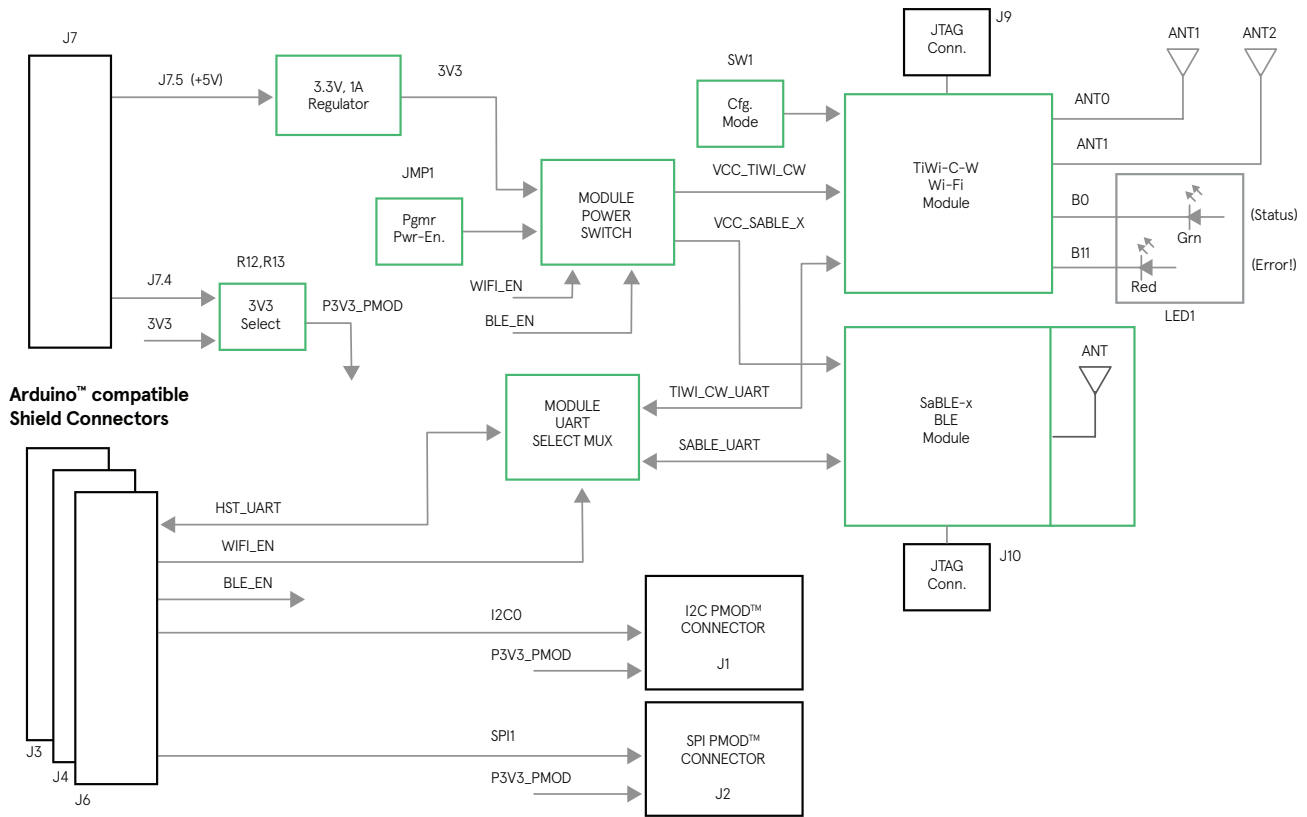
KIT INCLUDES

- Avnet LSR Wireless Shield expansion board pre-loaded with hosted-mode firmware:
 - TiWiConnect LIFT Agent firmware (450-0143) on WiFi module
 - Serial-to-BLE Peripheral firmware (480-0038) on BLE module
- Complimentary cloud account on Avnet developer portal: <https://avnet.tiwiconnect.com>
- Quick Start Card (in box) Getting Started Guide plus all technical documentation available for download
- Serial-to-WiFi firmware (480-0070) for TCP / UDP socket-based connectivity (available as an over-the-air update of the WiFi module)

TARGET APPLICATIONS

- Industrial Automation
- Building Automation
- Smart Home Appliances
- IoT Enabled Sensors

BLOCK DIAGRAM



FEATURED MANUFACTURERS



PARTS

Part Number	Description	Resale
AES-SHLD-BLEWF-G	LSR Wireless Shield	\$49.95 USD

RELATED PARTS

Part Number	Description	Resale
AES-SF2-KSB-G	SmartFusion2 M2S010S Soc FPGA KickStart Development Kit	\$59.95 USD
FRDM-K22F	Kinetis K22 Microcontroller Freedom Development Platform	\$28.42 USD

Countries Available for Purchase: Americas, EMEA, Asia, Japan

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