

# CONNECTING WITH MSI

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With several methods of radio frequency (RF) technology, Rice Lake Weighing Systems' premium brand of Measurement Systems International (MSI) products makes wireless communication an easy integration for most any industry or environment.

## 802.15.4 Systems

802.15.4 systems are the primary choice in all ScaleCore™ products that employ peer to peer communications, including the following:

- MSI-3460 Challenger 3 crane scale
- MSI-7000/7001 TranSend™ wireless load cell interface
- MSI-7300 Dyna-Link 2 digital tension dynamometer
- MSI-8000HD/8004HD weight indicator/RF remote display
- MSI-4260 Port-A-Weigh crane scale

With an 2.4 GHz Spread Spectrum Frequency Hopping system, it is possible to connect multiple scales and displays within a single RF Network using MSI's CellScale™ technology-equipped products, for example, the MSI-9300 crane scale and the MSI-9850 remote display.

802.15.4 has a functional range of 300 feet, making 802.15.4 modems the primary choice for wireless scoreboards, including the LaserLight2 remote display. The MSI Rugged Remote control is also equipped with an 802.15.4 modem for use with all comparable compatible ScaleCore scales.

## Bluetooth®

All ScaleCore products with the exception of scoreboards and remote display-only devices (such the MSI-8000 and MSI-8000HD), can be equipped with Bluetooth®. The range of devices equipped with Bluetooth® is similar to 802.15.4 systems, and standby power is lower than other communication modules for an increased battery life. Bluetooth® communications provide an easy way to connect with peripherals and apps such as MSI's ScaleConnect™.

## FHSS

The primary reason to use an FHSS system is for long-range wireless communication, typically 500 - 1,000 ft. line of sight. FHSS systems are more immune to jamming and can be configured to coexist with a Wi-Fi network without interference.

## Wi-Fi 802.11 b/g

The default operation of this communication module is as a client transmitting to a Wi-Fi access point in which one device would "talk" through an access point to and from the scale. MSI's ScaleConnect app works in this mode as an access point, connecting directly to the scale as an independent network. It is also possible to use this module as an API in client mode and talk directly to the scale through an access point.

## Other Configurations

The MSI-7000HD wireless load cell interface and MSI-8004HD remote display/weight indicator have two-modem capability, allowing for simultaneous connection to multiple networks. For example, an application could employ Bluetooth® to communicate to the ScaleConnect app and 802.15.4 to communicate to remote displays. Common configurations include 802.15.4 and Bluetooth®, 802.15.4 and Wi-Fi, or Bluetooth® and Wi-Fi. These configurations also have an optional cellular modem, which will allow for carrier-connected control and cloud- based monitoring and functionality on a global level.

Contact a Rice Lake sales engineer at 800-472-6703 for assistance configuring an RF system ideal for your application.