



RS232 • Ethernet • Wireless 802.11B Ethernet • USB • 4-20mA • RS485 • Fiber Optic

Wireless Ethernet Option

OVERVIEW

Wireless 802.11b Ethernet is now available on all Excel Series Doran indicators. Implementation of Doran's Wireless Ethernet option results in an efficient flow of information directly from the plant floor to any computer on your network utilizing existing network hardware and software. Once installed, this option enables efficient acquisition of quality control data, production monitoring and systems control. We keep your network and data safe by employing all standard security measures supported by the Wireless Ethernet standard.

A Wireless Ethernet network frees you from the high expense of Ethernet cabling and protection of the cable in industrial and washdown environments. Wireless communication gives you the freedom to move equipment around the plant while collecting weight data.

WIRELESS ETHERNET BACKGROUND

802.11b and 802.11g (also known as Wi-Fi and Wireless Ethernet) are the most common Wireless Ethernet protocols available today. These wireless communication standards allow for communication of approximately 400 feet indoors, which can differ based upon your environment. Doran's Wireless Ethernet option utilizes the 802.11b standard, which is compatible with any 802.11b or 802.11g based wireless router or device.

Doran's Wireless Ethernet option interfaces directly with your Wireless Local Area Network (WLAN) which consists of a wireless access point, (also known as WAP, AP, or wireless router) and wireless devices like laptop computers or Doran's Wireless Ethernet option. The wireless access point communicates with the wireless devices as well as serving as the interconnection point between the WLAN and the Wired Ethernet network.

To communicate with a Doran Scale through your network, Wireless Ethernet utilizes the TCP/IP Protocol that is available on all current operating systems and computers. TCP defines how messages are formatted and delivered, provides error detection, data flow control, message prioritization, and coordinates the timing of message events. As long as you are within range of a wireless access point, you can be assured your data will reach its' destination, without errors or data loss.

Every Wireless Ethernet device has an assigned IP address, which is like a mailing address. This address, allows for direct communication with the scale through any computer on your network. An example of an IP address would be 192.168.254.109. Doran's Wireless Ethernet option supports both Static and Dynamic IP addresses.

APPLICATIONS

Mobile Quality Control Data Collection

A quality control manager wants to use a 5 lb capacity scale for a quality control data acquisition in various locations throughout the facility. The weight data collected from the scale needs to be transferred directly into an Excel Spreadsheet for later statistical analysis. This is a food application and a washdown safe scale is required. Solution: A Doran 8005XL Battery Operated Scale with the Wireless Ethernet Option installed. Once configured, the scale will communicate through a Wireless Access Point to a computer via Wireless Ethernet. The operator will weigh a ten-piece sample of the product directly from the production line. Each stable weight will trigger an automatic transmission of the weight data to a computer with Doran's Excelerator Data Collection program installed. Doran's Excelerator Data Collection program, will insert the weight data automatically into an Excel spreadsheet for later analysis.

Automated Email Communication Based on Weight Setpoint Trigger

A manufacturing plant generates hazardous waste material due to a manufacturing process. This waste component is loaded into a dumpster that is weighed by a Doran 4300 with the Optional Relay board and Wireless Ethernet option installed. The waste disposal company must be notified when the container is ready to be emptied.

Doran's Wireless Ethernet option was configured to send a simple email based upon a weight setpoint trigger. Simply configure the wireless device and define the target email addresses and the message body of the email. Based upon a programmable weight limit setpoint of 3,000 LB, the Doran 4300 scale sends an email to the waste management company and the plant manager's cell phone to notify them that the dumpster is ready to be emptied. The Doran 4300 also triggers a warning light near the dumpster to notify plant employees not to place any more material into the dumpster until it is emptied.

AVAILABILITY AND ORDERING INSTRUCTIONS

Doran is able to provide the following options for Wireless Ethernet:

EXOPT102: Wireless Ethernet – Wireless 802.11b – Internal Ethernet interface board with eight open collector outputs and a 3.5" long flexible antenna with NEMA4X bulkhead mount on the back of the meter.

SFT001: Excelerator Data Collection Software – A powerful, easy to use, and cost effective software solution designed to collect data from any Doran Scale and transfer it to a Microsoft Excel spreadsheet. Visit <http://www.doranscales.com/data-collection-software.htm> for more information on Doran's Excelerator Data Collection Software.

WIRELESS OPTION SPECIFICATIONS

Wireless Standard	802.11b
Data Rate	Up to 11Mbps
Connector	Antenna included: 1 x RP-SMA connector available
LEDs	Network Link Integrity - Yellow Network Activity - Green
Frequency	2.4GHz
Transmit Power	16 dBm
Receive Sensitivity	-82 dBm @ 11Mbps
IP Address Assignment	DHCP, Auto IP, Static IP
Wireless Security	WEP (Wired Equivalent Privacy) <ul style="list-style-type: none">• 64/128-bit RC4 encryption WPA/WPA2/802.11i <ul style="list-style-type: none">• 128-bit TKIP/CCMP encryption• 802.1.x EAP authentication• Enterprise and Pre-Shared Key (PSK) mode