

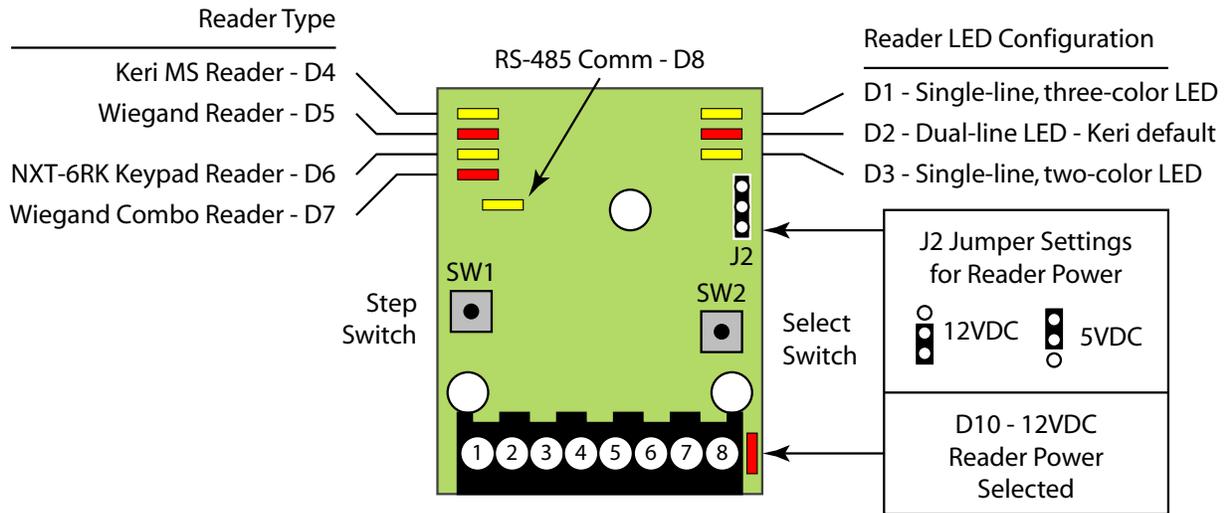
NXT Reader Interface Module

Installation Guide

1.0 Wiring and Layout Diagrams

1.1 Reader Interface Module (RIM)

NXT-RM Installation Drawing



P/N: 02501-002 Rev.J

Keri MS Reader			Wiegand Reader			
Pin #	Connection	Wire Color	Single-Line LED		Dual-Line LED	
Pin #	Connection	Wire Color	Connection	* Farpointe Wire Color	Connection	* Farpointe Wire Color
1	Antenna	Blue	n/a	n/a	n/a	n/a
2	Beeper	Green	Beeper	Blue	Beeper	Blue
3	Red LED	White	LED	Brown	Red LED	Brown
4	Green LED	Brown	n/a	n/a	Green LED	Orange
5	+ 12 VDC	Red	+ 12 VDC	Red	+ 12 VDC	Red
6	Ground	Black & Shield	Ground	Black & Shield	Ground	Black & Shield
7	n/a	n/a	Data0	Green	Data0	Green
8	n/a	n/a	Data1	White	Data1	White

* For other Wiegand reader types, please refer to the reader manufacturer's color code.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

NXT Reader Interface Module

Installation Guide

2.0 Specifications

2.1 Size

- When mounted on the NXT Controller
 - 6.50 inches high by 5.50 inches wide by 2.50 inches deep, not including wiring connectors
 - 16.51 cm by 13.97 cm by 6.35 cm

2.2 Power/Current Requirements

- 10 to 14 VDC @ 100 mA (maximum current draw at 12 VDC)

2.3 Operating Conditions

- 32°F to 150°F (0°C to 60°C) – 0% to 90% Relative Humidity, non-condensing

2.4 Cable Requirements

The total RIM to reader cable length must be less than 500 feet.

*NOTE: On long cable runs, cable resistance causes a drop in voltage at the end of the cable run. Ensure the appropriate power and current for your device is available **at the device** at the end of the cable run.*

Table 1: Cable Requirements

Connection	Total Run Length	# of Conductors	Shielded	Stranded	Twisted Pair	AWG ^a	Belden Equivalent
RIM to Keri-MS or Wiegand Single-line LED Reader	500 feet	6	Y	Y	N	22	9536
RIM to NXT-6RK or Wiegand Dual-line LED Reader	500 feet	7	Y	Y	N	22	9537

a. Heavier gauges than those listed are always acceptable.

3.0 RIM Configuration

The RIM allows either Keri MS or Wiegand readers/credentials to be recognized and read by NXT controllers. The default RIM configuration is for an MS-Series Reader using two line LED control (multi-color). Perform the following steps to configure the RIM for your application. Refer to the Drawing on page 1 for switch and LED locations, and the Table on page 3 for switch and LED definitions.

NXT Reader Interface Module

Installation Guide

3.1 Enter Programming Mode

1. Hold down both SW1 and SW2 for about two seconds.
2. All seven LEDs on the RIM will flash three times.
3. Release both SW1 and SW2, and the unit is now in configuration mode.
4. Once in configuration mode, SW1 steps between options - SW2 selects the currently displayed option.

3.2 Select Your Reader Type

The Keri MS (D4), Wiegand (D5), Keri Keypad (D6), and Wiegand Keypad/Reader Combo (D7) types are currently supported.

1. Press SW1 to step through the supported reader types. Each press of SW1 will step to the next reader type.
2. When the desired reader type LED is illuminated, press SW2. The reader type is now set.
3. If you have selected Wiegand (D5), Keri Keypad (D6), or Wiegand Combo (D7) reader mode, the unit is now ready to configure the RIM's LED line control mode. Skip to section 3.3 for configuration instructions.
4. If you have selected Keri MS (D4) reader mode, press SW2 twice. The RIM is now configured and the unit reboots to accept the new parameters. All seven LEDs will flash three times as the unit reboots with the new configuration parameters. When the LEDs stop flashing, the unit is operational.

*NOTE: Do **not** remove power from the RIM during the reboot process. Loss of power during rebooting will invalidate any configuration changes you have made.*

3.3 Select Your Wiegand Reader LED Line Configuration

Dual-line control is the default RIM setting for LED line configuration. This is the desired setting for the Keri Keypad reader. Perform the following steps to switch between single-line and dual-line LED control.

1. Press SW1 to step through the supported LED line configuration types. Each press of SW1 will step to the next LED line type.
2. When the desired LED line control mode LED is illuminated, press SW2. The LED line control mode is now set.
3. Press SW2 twice and the RIM is now configured and the unit reboots to accept the new parameters.
4. The RIM's LEDs will be off for about 10 seconds as the unit resets itself. All seven LEDs will flash as the unit is rebooting with the new configuration parameters. When the LEDs stop flashing, the unit is operational.

*NOTE: Do **not** remove power from the RIM during the reboot process. Loss of power during rebooting will invalidate any configuration changes you have made.*

NXT Reader Interface Module

Installation Guide

3.4 Verifying RIM Configuration

The corresponding reader type and line control mode LEDs are illuminated during operation. Refer to the Drawing on page 1 for switch and LED locations, and the Table on page 2 for switch and LED definitions to confirm your configuration settings.

Table 2: Reader Interface Module LED Guide

LED	Reader Type
D4	Keri MS Series <i>Keri factory default setting</i>
D5	Wiegand
D6	Keri NXT-6RK Keypad
D7	Wiegand Reader/Keypad Combo
LED Control	
D1	single wire LED control – red, green, amber, off
D2	two wire LED control – red, green, amber, off <i>Keri factory default setting</i>
D3 ^a	single wire LED control – red, green, off <i>standard setting for Wiegand Readers using a single wire to drive the LED (no amber)</i>
Communication Active	
D8	RS-485 Bus
J2 Reader Power Setting	
D10	lit when set for 12 VDC reader power

a. Table is valid for RIM Firmware v03.01.06 and later. Please upgrade your firmware as necessary.

NXT Reader Interface Module

Installation Guide

4.0 Contact Keri Systems

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