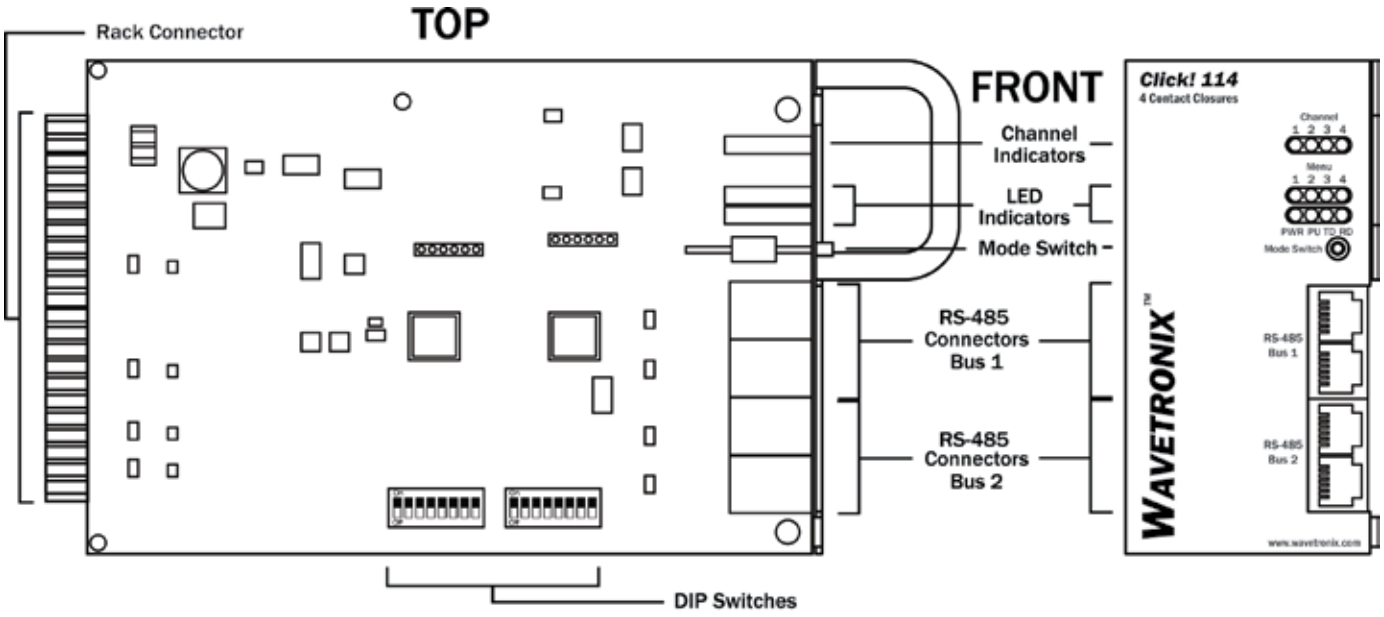
Detector Rack Cards

The Click!™ 112/114 are 2-/4-channel contact output rack cards that plug into any standard detector rack card slot in any cabinet type. Each output is electrically isolated and is normally open. When the cards receive the appropriate serial message from SmartSensor™ sensors, they will close the contact outputs.

Features

- Compatible with NEMA TS1 and TS2, 170, and 2070 traffic controllers
- Plugs into any standard input file rack card slot
- Fail-safe mode in case of interruption of data flow
- Dual communications ports for separate data and configuration communication
- Uses industry-standard RS-485 communications
- Displays detection via LEDs on face-plate
- Automatically sets baud rate
- Solid state outputs
- Configurable via hardware (DIP switches) or software (front panel interface or Click! Supervisor)
- Software configuration is read-only when in Hardware Configuration mode
- Conformal coated



Click!™

Technical Specifications

Physical
- Weight: 0.25 lbs. (0.11 kg) / 0.29 lbs. (0.13 kg)
- Physical dimensions: 8.3 in. x 4.5 in. x 1.2 in. (21.1 cm x 11.4 cm x 3 cm) / 8.3 in. x 4.5 in. x 2.4 in. (21.1 cm x 11.4 cm x 6.1 cm)
- Ambient operating temp: -29°F to 165°F (-34°C to 74°C)
- Humidity: up to 95% RH

Mounting
- Inserts into an input file rack

Power
- Power supply voltage: 9–30 VDC
- Power consumption: 1 W

Connections
- Detection and power: 44 terminal card edge connector
- Four RJ-11 jacks: two for RS-485 bus 1 and two for RS-485 bus 2

Communication
- Has two independent RS-485 buses, so that the device can be configured without interrupting data flow
- Vehicle information to traffic controller via contact closures

Baud Rates
- Supports the following baud rates:
  - 9600 bps
  - 19200 bps
  - 38400 bps
  - 57600 bps

DIP Switch Configuration Features
- Separate DIP switches for baud rate and channel mapping selection
- DIP switch settings disable faceplate or software configurability

Faceplate Configuration Features
- Mode Switch controls menu operation
- Detection LEDs (red) display the current detection state
- Menu LEDs (Level 2) (red) lets you view and set menu options
- Menu LEDs (Level 1) displays menu item selected, as well as the following status indications:
  - Red LED (PWR) indicates the device has power
  - Blue LED (PU) is reserved for future use
  - Green LED (TD) indicates device is transmitting data
  - Yellow LED (RD) indicates device is receiving data
- Supports configuration of baud rate and channel mapping settings

Ordering Information

Part Number — WX-CLK-112
WX-CLK-114

Wavetronix
78 East 1700 South
Provo, UT 84606
Phone: 801-764-0277
Fax: 801-764-0208
Email: sales@wavetronix.com
Website: www.wavetronix.com

Software Configuration Features
- Comes with Click! Supervisor, configuration software with the following features:
  - Runs on Pocket PC or Windows desktop or laptop PC (Windows 2000 and newer)
  - Configures serial communication settings including serial baud rates
  - Configures channel mapping settings
  - Can remotely and directly upgrade the device firmware to add new features to the device
  - Can save/open a configuration to/from a file, allowing a common configuration to be easily programmed into many devices
  - Has customizable drivers that are stored in an XML file that describes the settings for a device as well the graphical user interface for that driver in the configuration software

Data Conversion
- Outputs traffic data as contact closures specified by a Wavetronix SmartSensor

Fail-safe Mode
- Enters a fail-safe mode if it has lost communications with a sensor for more than 10 seconds
- In fail-safe mode, all channel outputs are asserted
- Fail-safe mode will be exited when communication with sensor is restored

Class 4 Compliance
- Complies with the EN 61000-4-5 Class 4 lightning surge protection on the DC input

Contact Closure Outputs

- Dissipates up to a 600 W power surge received on any contact closure output terminal
- Contact closure output terminals can withstand 50 V continuously
- Contact closure outputs are less than 8 ohms in conduction state
- Contact closure outputs in non-conducting state leak less than 1uA
- Contact closure outputs can switch up to 150 mA

Pocket PC & PC Configuration Software

- Comes with Click! Supervisor, configuration software with the following features:
  - Runs on Pocket PC or Windows desktop or laptop PC (Windows 2000 and newer)
  - Configures serial communication settings including serial baud rates
  - Can remotely and directly upgrade the device firmware to add new features to the device
  - Can save/open a configuration to/from a file, allowing a common configuration to be easily programmed into many devices
  - Has customizable drivers that are stored in an XML file that describes the settings for a device as well the graphical user interface for that driver in the configuration software

Remote Upgradeability

- Flash memory can be remotely upgraded to add functionality to the firmware when new features have been developed to improve the performance of the installation

Testing

- Passes manufacturer's test before shipping
- Tested under NEMA TS2-2003

Extended Support

- Extended support options are available from Wavetronix; contact a Wavetronix representative for more information

Warranty

- One-year warranty against material and workmanship defect

Click! 112/114 Bid Specification

1.0 General. This item shall govern the purchase and installation of a detector rack card (DRC) equivalent to the Wavetronix Click!™ 112/114. The DRC shall be used to output contact closure data from a radar vehicle sensing device (RVSD) equivalent to the Wavetronix SmartSensor™. Test results and other documentation demonstrating performance and capabilities shall be provided.

2.0 Product Description. The DRC shall convert real-time serial data from the RVSD to contact closure data, providing 2- or 4-channel contact closure outputs, depending on the model. The device shall plug into a detection card slot and have two independent RS-485 buses.

3.0 Physical. The two-channel DRC shall not exceed 0.25 lbs. (0.11 kg) in weight. The four-channel DRC shall not exceed 0.29 lbs. (0.13 kg) in weight.

The two-channel DRC shall not exceed 8.3 in. x 4.5 in. x 1.2 in. (21.1 cm x 11.4 cm x 3 cm) in its physical dimensions. The four-channel DRC shall not exceed 8.3 in. x 4.5 in. x 2.4 in. (21.1 cm x 11.4 cm x 6.1 cm) in its physical dimensions.

The DRC shall operate over a temperature range of -29°F to 165°F (-34°C to 74°C).

The DRC shall operate in up to 95% humidity.

4.0 Mounting. The DRC shall mount in an input file rack slot.

5.0 Power. The DRC shall accept 9–30 VDC and shall operate using 1 W of average power.

6.0 Connections. The DRC shall have a 44 way edge connector for detection and power.

The DRC shall also have four RJ-11 jacks, two each for its two RS-485 buses.

7.0 Communication. The DRC shall have two independent RS-485 buses, allowing it to be configured without interfering with data communication.

The DRC's connection to the detector rack shall allow it to pass vehicle information to a traffic controller via contact closures.

8.0 Baud Rates. The DRC shall support baud rates of 1200 bps, 2400 bps, 4800 bps, 9600 bps, 19200 bps, 38400 bps and 57600 bps.

9.0 DIP Switch Configuration Features. The DRC shall feature separate DIP switches for baud rate and channel mapping selection. When these switches are on, faceplate and software configuration options shall be disabled.

10.0 Faceplate Configuration Features. The DRC shall have a mode switch for controlling menu operation.

The DRC shall have three banks of LEDs. The first bank shall have red LEDs used for detection; these shall indicate the current detection state.

The second bank of LEDs shall aid in viewing and setting menu options and shall consist of red LEDs. The third bank shall display menu items for selecting; they shall also have the following status-indicating functions:

- One LED shall illuminate to indicate the DRC has power
- One LED shall illuminate to indicate when the device is transmitting data
- One LED shall illuminate to indicate when the device is receiving data

The DRC faceplate configuration features shall support the configuration of baud rate and channel mapping settings.

11.0 Software Configuration Features. The DRC shall be provided with configuration software that:

- Runs on both a Pocket PC and a Windows desktop or laptop PC (Windows 2000 and newer)
- Configures serial communication settings including serial baud rates
- Configures channel mapping settings
- Can remotely and directly upgrade the DRC firmware to add new features to the DRC
- Can save/open a configuration to/from a file. This allows a common configuration to be easily programmed into many devices.
- Has a customizable driver that is stored in an XML file that describes the settings for a device as well the Graphical User Interface for that driver in the configuration software.

12.0 Data Conversion. The DRC shall output traffic data as contact closures specified by the RVSD.

13.0 Fail-safe Mode. The DRC shall enter a fail-safe mode if it loses communications with the RVSD for more than tent seconds. In fail-safe mode, all channel outputs shall be asserted.

The DRC shall exit fail-safe mode when communication with the RVSD is restored.

14.0 Class 4 Compliance. The DRC shall comply with the EN 61000-4-5 Class 4 lightning surge protection on the DC input.

15.0 Contact Closure Outputs. The DRC shall dissipate up to a 600 W power surge received on any contact closure output terminal.

The contact closure output terminals on the DRC shall be able to withstand 50 V continuously. The DRC's contact closure outputs shall be less than 8 ohms in conduction state. Outputs in a non-conducting state shall leak less than 1uA. They shall also be able to switch up to 150 mA.

16.0 Remote Upgradeability. The DRC shall have flash memory that can be remotely upgraded to add functionality to the firmware when new features have been developed to improve the performance of the installation.

17.0 Testing. Before shipping, each DRC shall have passed a manufacturer's test.

The DRC shall comply with the applicable standards stated in the NEMA TS2-2003 Standard.

18.0 Extended Support. Extended support options shall be available. Contact the manufacturer representative for more information.

19.0 Warranty. The DRC shall be warranted to be free from material and workmanship defects for a period of one year from date of shipment.