CARDINAL®

SMARTCAN DIGITAL SYSTEMS

ANALOG-TO-DIGITAL CONVERSION SYSTEM

- **Perfect for retrofitting existing analog scales or converting analog load cells to a digital system**
- **Fail-Safe mode keeps your scale running in the event of a failed cell** (coming soon)
- **Enables usage of SmartCal and digital calibration adjustments**
- **Remote troubleshooting and scale monitoring through iSite cloud-based software**

iSITE

NTEP NATIONAL CONFERENCE ON WEIGHTS AND MEASURES
LEGAL FOR TRADE

SMARTCAN10

SMARTCAN4

7 different SmartCan boxes available for a wide range of configurations

FAST AND POWERFUL SCALE DIAGNOSTICS

- Analog-to-digital load cell conversion system
- Receive text and/or e-mail alerts from iSite for any load cell issues
- Troubleshooting of scale issues with the NEST diagnostic tool
- All components housed in a rugged IP66 / NEMA 4 rated enclosure
- Universal mounting brackets for easy field installation
- No power is required in most applications (SmartCan is also available with AC power)
- May be used with Guardian® hydraulic load cells
- Load cell troubleshooting through the Cardinal Scale 225D or 825D indicators
- Compact enclosure size only requires minimal space
- Real-time load cell failure and fault diagnostics
- Lightning/surge protection
- Ideal for troubleshooting multi-platform truck scales
- NTEP certified

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DIGITIZE YOUR SCALE WITH SMARTCAN

You can now digitize any existing analog scale using Cardinal Scale's SmartCan analog-to-digital conversion system. SmartCan allows users to digitally monitor each individual load cell and identify cell failures quickly and effectively.

The SmartCan system utilizes the advanced, internationally-standardized CAN (Controller Area Network) serial bus system to digitize the analog output signals from two or more independent load cells and send the data to the indicator.

SmartCan is housed in a compact, rugged weatherproof IP66 / NEMA 4 enclosure and doesn't require cumbersome external power supplies, in many cases. The indicator software permits a maximum of 32 load cells that could be used in any combination with SmartCan (the homerun cable length, power supply, and sample rate may limit the number of load cells used, in some instances).

SmartCan digital diagnostics help identify load cell failures

ONBOARD DIAGNOSTICS

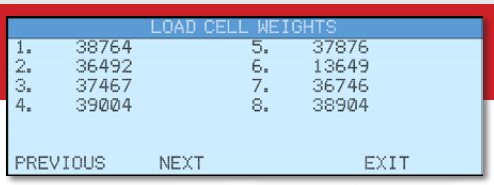
The SmartCan system has onboard diagnostics that can be used by a technician to alert them of critical errors due to setup issues and hardware problems. The following diagnostics data is available and will be shown to the technician on the main weight screen of the 225D or 825D indicator:

- Live (real time) Load Cell Weights
- Minimum and Maximum Load Cell Weights
- Deadload Shift (from original calibrated deadload)
- Individual Load Cell Signal in Millivolts
- DLC Controller Card Communication Error Count
- iSite Status of Last Connection

SMARTCAN
DIGITAL CONVERSION SYSTEM

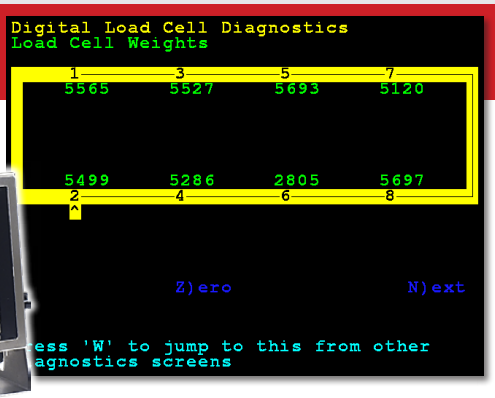
TROUBLESHOOT THROUGH THE INDICATOR

Cardinal Scale's 225D Navigator and 825D Spectrum weight indicators easily interface with the SmartCan digital conversion system and provide onscreen diagnostics for load cell performance in real-time. The 825D makes corner and section trimming easier with its graphical, full-color display.



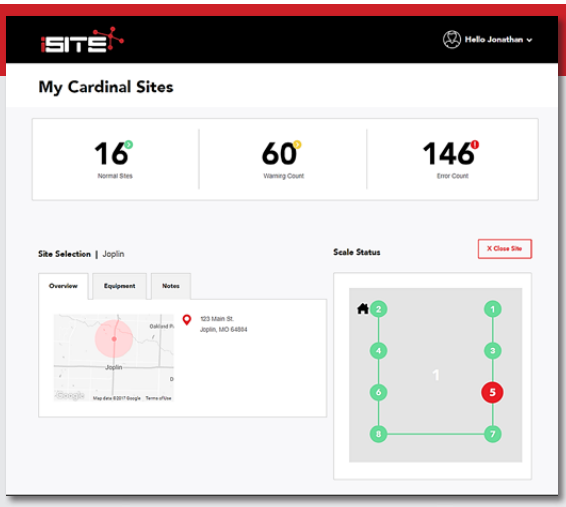
225 NAVIGATOR

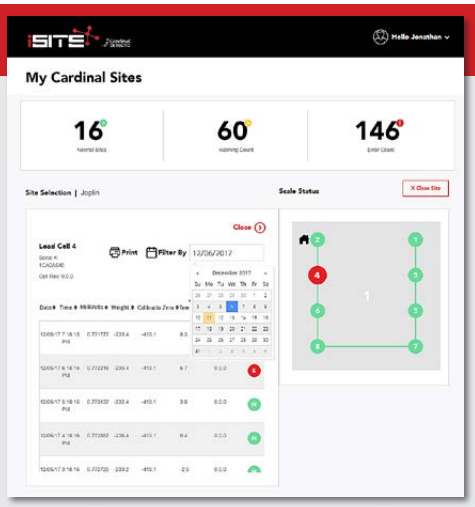
825 SPECTRUM



ISITE REMOTE MONITORING

Cardinal Scale's iSite is a cloud-based remote monitoring system for load cells connected to the SmartCan conversion box. Text and/or e-mail auto alerts can be sent for errors and warning events. Through secure online dealer access, scale diagnostics may be looked up remotely to quickly identify problems before they interrupt weighing operations.





FAIL-SAFE (COMING SOON)

Cardinal Scale's Fail-Safe feature with SmartCan allows the system to compensate for a failed load cell by mirroring the estimated value of the remaining cells to offset the failed cell. The Fail-Safe feature uses an algorithm to calculate an estimated value from the data of the remaining cells and creates a virtual load cell to replace the data from the down cell.

SMARTCAL®

The SmartCan system uses Cardinal Scale's patented software algorithm called SmartCal® method of calibrating a scale. SmartCal® allows a quick calibration with no manual adjustments while the diagnostic software identifies real and potential system problems before they interrupt your weighing operations.

SmartCal one-step calibration

NEST TOOLKIT COMPATIBLE

Authorized Cardinal Scale dealers may plug a NEST toolkit directly into the SmartCan box for additional onsite diagnostics. NEST allows you to view the diagnostics in your choice of millivolts or pounds. There are three display modes: signals display, minimum-maximum display, and signals minus zero reference display.

NEST Network Enabled Scale Tool

VERSATILE APPLICATIONS

SmartCan may be used in a variety of different applications with new and existing truck scales, railroad scales, floor scales, bench scales, and batching systems.

TRUCK SCALES | RAILROAD SCALES | BATCHING SCALES | FLOOR SCALES | BENCH SCALES

SMARTCAN DIGITAL SYSTEMS

Includes universal mounting brackets and self-tapping screws for field Installation.

Options:

- 225D Navigator weight indicator
- 825D Spectrum weight indicator
- Media box for glass fiber optic cable (Model MB-G)
- Media box with SnapStream wireless (Model SNAP-DLC)

[1] *The maximum number of load cells is dependent upon the homerun cable length, indicator sample rate, and power supply (voltage provided by 225D, 825D, or external power supply).*

[2] *Power to the SmartCAN6, SmartCAN8, or SmartCAN10 can be supplied from the 225D or 825D if the CAN interface cable (HomeRun Cable) is "less" than 200 Ft (61 M) long.*

SPECIFICATIONS	
Accuracy Class	III and IIIL
Weighing Range	Single-interval
Maximum Number of Verification Scale Intervals	10,000 (CLASS III), 1,000 (CLASS IIIL)
Internal Resolution	1 part in 16,777,216
Minimum Input-Voltage per Verification Scale Intervals	0.5 uV
Excitation Voltage	10 VDC
Maximum Analog Range	1 to 30 mV
Minimum Input-Impedance	350 ohms
Maximum Input-Impedance	1100 ohms
Maximum Number of Load Cells[1]	Multiple 4-cell, 6-cell, 8-cell or 10-cell enclosures can be daisy-chained together for a total of 32 load cells
Power Requirements	
SmartCAN 4	15 VDC from the 225D or 12 VDC from the 825D
SmartCAN 6, 8, 10	15 VDC from the 225D or 12 VDC from the 825D[2]
SmartCAN6, 8, 10-AC	100 to 240 VAC (50/60 Hz) @ 0.1A
Operating Environment	Temperature: +14°F to +140°F / -10°C to +60°C (NTEP certified up to +104°F / +40°C) Humidity: 90% non-condensing (maximum)
Junction Box Construction	
SmartCAN 4	IP66 / NEMA 4 rated Stainless Steel Enclosure
SmartCAN6, 8, 10	IP66 / NEMA 4 rated Polycarbonate Enclosure
SmartCAN6-AC, 8-AC, 10-AC	
Junction Box Dimensions	
SmartCAN 4	8.5 in L x 4.7 in W x 1.3 in H (216 mm L x 119 mm W x 33 mm H) (Dimensions include the mounting strap)
SmartCAN6, 8, 10	10 in L x 9.8 in W x 4.0 in H (254 mm L x 249 mm W x 102 mm H) (Dimensions include the mounting brackets)
SmartCAN6-AC, 8-AC, 10-AC	

	SMARTCAN4	SMARTCAN6	SMARTCAN6-AC	SMARTCAN8	SMARTCAN8-AC	SMARTCAN10	SMARTCAN10-AC
							
Load Cell Capacity	Up to 4 load cells	Up to 6 load cells	Up to 6 load cells	Up to 8 load cells	Up to 8 load cells	Up to 10 load cells	Up to 10 load cells
Enclosure Type	Stainless steel enclosure	Polycarbonate enclosure	Polycarbonate enclosure	Polycarbonate enclosure	Polycarbonate enclosure	Polycarbonate enclosure	Polycarbonate enclosure
AC Power Supply			Internal AC power supply		Internal AC power supply		Internal AC power supply

Cardinal Scale reserves the right to improve, enhance, or modify features and specifications without prior notice.

MADE IN USA
of American and foreign components

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