iQUBE® Intelligent Junction Box

Standard Features

- 4-channel model, 8-channel model
- Fiberglass Reinforced Polyester (FRP) NEMA 4X TuffSeal ™ enclosure
- PreVent ™ breather vent
- Multi-level transient protection
- 4-platforms and 16-cell summing capabilities (with networked board)
- Cal-Match algorithm automatically trims and calibrates scale in one pass of test weights (stopping over each corner or section)
- Theoretical Cal-Match uses bad cell factory sensitivity and capacity values to perform scale calibration without test weights
- Manual software trimming to tweak sections or corners
- Load cell substitution supports cells of unmatched capacities
- Cell-Emulator load cell algorithm compensates for cell failure, excessive drift, A/D failures, connection errors, and more. It allows the scale to function properly until a permanent repair is available*
- Serial connectivity: full duplex RS-232; RS-485
- Bi-color LEDs illustrate load cell status in real-time
- Configure with Revolution III software for use with 820i or analog devices and iRev software for the 920i

Additional features when used with the Virtui, 820i and 920i indicator:

- Scale diagnostics are displayed on the indicator in real-time, alerting operators of possible errant conditions. Add the Ethernet option card and these error messages can be e-mailed to the appropriate personnel
- Configuration menu-based iQUBE setup

*Cell-Emulator mode is not NTEP Legal-for-Trade

Options/Accessories

- VIRTUi™ indicator software
- Analog output, 0-30 mV or 4-20 mA
- Ethernet interface
- Fiber optic networking
- Revolution III scale software
- Power supply

Specifications

Enclosure:	NEMA 4X polycarbonate
Voltage Input:	5–16 VDC
Load Cell Inputs:	8 (up to 16 with networked boards)
A/D Sampling Rate:	15 updates per load cell per second
Temperature Range:	14ºF to 104ºF (-10ºC to 40ºC)
Load Cell Excitation Voltage:	+ 4 VDC
Excitation Current Supply:	120 mA maximum, short circuit protected
Warranty:	2-year limited warranty
Approvals:	NTEP Certified, CC# 03-032

DIGITAL TO ANALOG CONVERTER

Output:	0-30 mV or 4-20 mA
Resolution:	16 bit
Temperature Range:	14ºF to 104ºF (-10ºC to 40ºC)

FIBER OPTIC TRANSCEIVER

Voltage Input:	6–8 VDC
Serial Input:	To 115 Kbaud
Transmitter:	Green, visible
Transmission Media:	1mm plastic fiber 1.5 db/meter attenuation, duplex jacketed Can be used as serial-to-serial fiber optic link

NTEP CC #03-032

Measurement Canada Approved
AM-5561

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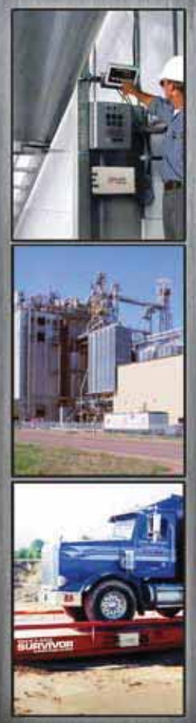
iQUBE

INTELLIGENT JUNCTION BOX



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iQUBE®

Intelligent Weighing Integration From All Sides

Featuring the latest analog to digital technology and a non-proprietary interface, *i*QUBE is ideal for new or retrofit applications. Combining connectivity, diagnostics, data collection, performance, economics, and logical migration paths, *i*QUBE provides a synchronized, progressive solution for any multi-cell scale system.

PERFORMANCE

With iQUBE as part of your total scale system, you will notice an increase in available scale data. View this data through a PC or digital indicator in a format you need, without expensive custom software or system consulting fees. In some scale systems, three to four times more usable load cell signal can be derived by simply installing an iQUBE. Also, depending on the application, an iQUBE may result in reduced installation and service expenses.

iQUBE's innovative Cal-Match™ routines dramatically reduce scale calibration time by automating the load cell trim and calibration process. Additionally, iQUBE's Theoretical Cal-Match algorithm gives you the ability to calibrate without test weights.

Overall, receive transient protection, high-speed data processing, and a wide range of configuration and packaging options. No matter how large or small the operation is, iQUBE supplies technologically advanced performance for today and tomorrow.

CONNECTIVITY

With open architecture and advanced connectivity, iQUBE works with existing analog scale systems, new scales, existing indicators and new user interfaces. To make integration easy, iQUBE interfaces using today's common serial interfaces including RS-232, RS-485, analog, fiber optics and RF wireless. Additionally, on-board Ethernet TCP/IP provides seamless integration from your front office to factory floor. If your business is heavily vested in fieldbus technology, bundle an 820i/920i digital indicator/controller with your iQUBE to easily adapt to DeviceNet™, Profibus® DP, and Allen-Bradley® Remote I/O options.

DATA COLLECTION

iQUBE is the foundation in an evolution of data collection solutions. By converting electrical outputs of load cells to usable serial strings, you can easily access information from scales, sensors, and process equipment, no matter where you are. Simply getting a weight from a scale is no longer enough. What you do with the scale data will help you optimize your bottom line.

Capturing, analyzing, and putting this data to work without complicated and expensive software and data acquisition systems adds real value to your operation's bottom line. Whether your application consists of multiple scales, or a single multi-cell platform, iQUBE provides a cost effective method to optimize your weighing system investment.

DIAGNOSTICS

iQUBE offers advanced diagnostic features that alert either operators or technicians to potential scale inaccuracies. Scales are monitored on a load cell-by-load cell basis, providing a more focused portrait of scale performance. These capabilities greatly reduce scale downtime or inaccuracies and provide valuable troubleshooting data to speed repair. Once iQUBE detects an unstable system, it automatically sends a signal to the 820i/920i digital weight indicator, which displays a user prompt. When using an Ethernet connection, the 820i/920i can send an e-mail to the scale technician or to designated personnel at the facility. iQUBE reports problems such as zero drift, instability at higher capacities, load cell failure, or unbalanced loading of the weighbridge.

Before the technician arrives on site, it's possible to identify a troubled cell and its exact location in seconds from the 820i/920i's diagnostics menu, or with the on-board LEDs. The technician can go directly to the cell and make any repairs or replacements necessary to get the system up and running. The time that was previously required to troubleshoot each cell is now greatly reduced.

ECONOMICS

In comparison to other diagnostic junction boxes, iQUBE is clearly the leader in value and performance. Once installed, iQUBE will increase system stability, reduce downtime, and lower service and calibration costs. It allows you to keep the intelligence "on the scale" while keeping your installation costs under control.

Add an iQUBE to your existing equipment to transform your system from analog to digital.

TuffSeal

iQUBE can also be purchased in a bundle with a Rice Lake Weighing Systems truck scale and indicator. The iQUBE is designed to fit perfectly in a Rice Lake truck scale junction box pocket. For many of you, your scales are virtual cash registers. When your scale is down, revenue is lost. Additionally, while repairs are being performed, scale throughput is at a standstill. Before technicians arrive, you have the option to enable an exclusive Cell-Emulator™ feature. This will keep the scale up and running until a repair or replacement can be made. Bottom line, the cost of iQUBE is easily returned by reducing or eliminating scale downtime.

MIGRATION

iQUBE is the foundation for comprehensive data exchange networks. It is designed to continually grow as scale technology changes. Migration paths include integration with an intelligent data collection hub for storage of weight data, auto report creation, e-mail notification, and a subscriber service for a web-based display of process data, reporting, and trend analysis.

Multiple connectivity options allow for process expansion and enhancement as your business grows. Start by replacing the analog-resistance load cell junction box. Next, update to a digital weight indicator and network your scale on a local area network. Use the power of the internet to view system data from anywhere in the world. iQUBE's non-proprietary approach to system architecture means there are no restrictions in choosing components or service providers.

On-board LEDs change from green to red to indicate a troubled cell and its location. When a troubled cell is detected, the operator has the option to enable Cell-Emulator to keep the system up and running.*

**Cell-Emulator mode is not NTEP Legal-for-Trade*