

## iQUBE® Digital Diagnostic Junction Box



iQUBE is the intelligent alternative to analog resistance junction boxes. Unlike conventional load cell summing devices, iQUBE provides simplified calibration, diagnostics and enhanced electrical overload protection. iQUBE increases the performance of any existing multi-cell system and complements new scale installations. Through Rice Lake's exclusive Cell-Emulator™ feature, iQUBE compensates for an improperly functioning load cell to ensure that the scale maintains accurate operation.

Featuring the latest analog to digital technology and a non-proprietary interface, iQUBE works with conventional weight indicators, serial operator interfaces, PLCs and PCs. Networking is available through analog (4-20 mA and 0-30 mV), serial (RS-232 and RS-485) and Ethernet connectivity. iQUBE supports fiber optic, RF and copper communication routings for integration with WAN, LAN, Internet and other non-proprietary network configurations. When paired with Rice Lake's 920i®, iQUBE® supports proprietary networks including: Profibus® DP, Allen-Bradley Remote I/O and DeviceNet™.

iQUBE offers advanced diagnostic features that alert both operators and technicians to potential scale inaccuracies. It greatly reduces scale downtime and provides valuable troubleshooting data to speed repair.

From simple material handling and truck ticketing to complex enterprise-level integration, iQUBE provides value-added opportunities for data collection and data distribution. Blending incredible value with connectivity options to deliver performance, diagnostics, data acquisition, control and future migration paths... iQUBE is the portal to intelligent weighing integration.

### APPLICATIONS

Mission critical weighing processes, including:

- Truck and railroad track scales
- Tank and hopper scales
- Floor and bench scales

### STANDARD FEATURES

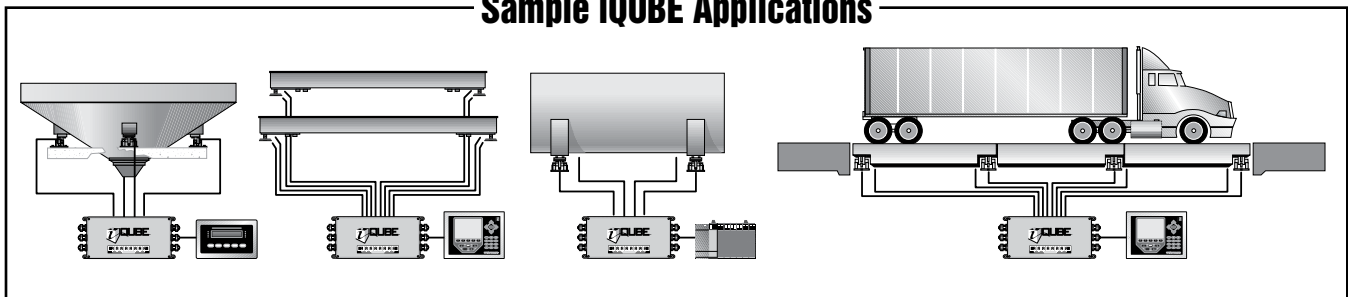
- 4-channel model, 8-channel model and 8-channel model with 8 digital I/O
- NEMA 4X polycarbonate enclosure
- Multi-level transient protection
- 4-platforms and 16-cell summing capabilities (with networked board)
- Daisy chain up to 3 primary/secondary iQUBEs
- Cal-Match™ algorithm automatically trims and calibrates a scale in one pass of test weights (stopping over each mount)
- Theoretical calibration allows you to enter factory sensitivity and capacity values to calibrate the scale without test weights
- Function to manually adjust cell trim
- Load cell substitution supports cells of unmatched capacities
- Serial (RS-232 and RS-485) connectivity – full duplex
- Bi-color LEDs offer diagnostics capabilities by checking and illustrating load cell status in real time
- Cell-Emulator load cell algorithm compensates for excessive drift, A/D failures, connection errors, excitation voltage shifts and more. It allows the scale to function until a permanent repair is available.
- Configure with Revolution software for use with analog devices
- Connects serially to 820i® and 920i®

### Additional 820i and 920i indicator features:

- Indicator alerts operators of potential errors. When combined with Ethernet option, the indicator initiates error notification to the scale distributor.

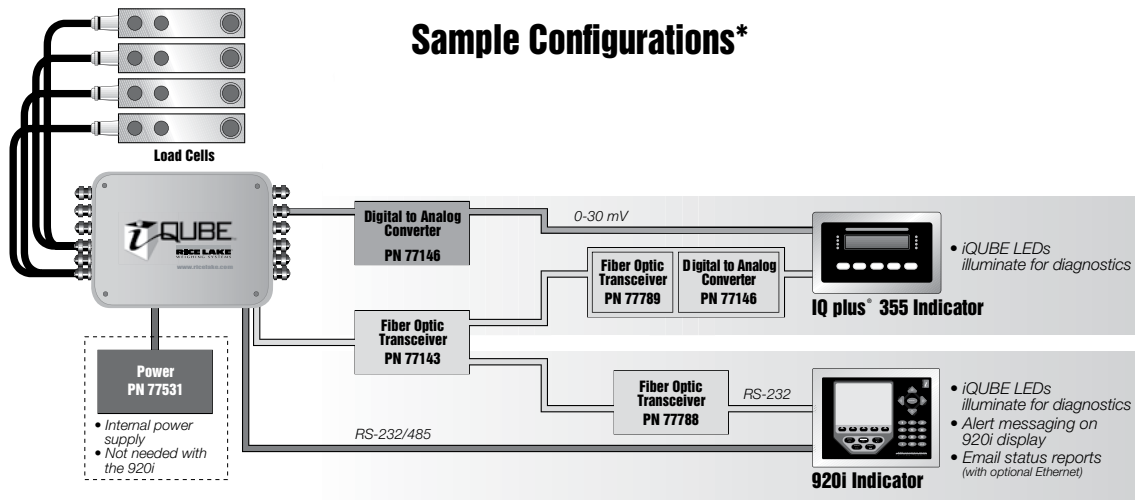
*Refer to next page for ordering information*

### Sample iQUBE Applications



# Junction Boxes

## iQUBE® (Continued)



\* Not an actual system—illustrates connectivity

### SPECIFICATIONS:

#### iQUBE:

Enclosure: NEMA 4X polycarbonate enclosure  
 Voltage Input: 5.0-16 VDC  
 Load Cell Inputs: 4 or 8 (16 with networked boards)  
 A/D Sampling Rate: 8 updates per load cell per second  
 Temperature Range: 14°F to 104°F (-10°C to 40°C)  
 Load Cell Excitation Voltage: + 4.00 VDC  
 Excitation Current Supply: 120 mA maximum, short circuit protected  
 Approvals: NTEP-certified, CC# 03-032, UL listed

#### Digital to Analog Converter:

Output: 0-30 mV  
 Resolution: 16 bit  
 Temperature Range: 14°F to 104°F (-10°C to 40°C)

#### Fiber Optic Transceiver:

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

### iQUBE ORDER INFORMATION

Part #	Description	Price
92391	iQUBE, 4-channel junction box	\$1,095.00
92392	iQUBE, 8-channel junction box	\$1,595.00

### OPTIONS/ACCESSORIES

Part #	Description	Price
77146	Digital to analog converter, 0-30 mV	\$200.00
77531	Power supply (not required with 920i)	\$160.00
77142	Ethernet interface installed in iQUBE	\$400.00
71986	Ethernet interface installed in 920i indicator	\$400.00
<b>Fiber optic boards (choose two installation options)</b>		
77143	Fiber optic board, RX/TX, installed in iQUBE	\$300.00
77789	Fiber optic board, RX/TX, in external enclosure	\$525.00
77788	Fiber optic board, RX/TX, installed in 920i	\$300.00
96736	Fiber optic board, RX/TX, installed in 820i	\$300.00
78910	Duplex fiber optic cable, custom length	\$1.30/ft
78026	Duplex fiber optic cable, 100' (30 m)	\$130.00
78027	Duplex fiber optic cable, 200' (60 m)	\$258.00
78028	Duplex fiber optic cable, 300' (90 m)	\$415.00
80892	Fiber optic cable cutter	\$7.00
85548	Fiber optic hot knife	\$45.00
69781	iRev scale software for iQUBE and 920i indicator systems	\$95.00
77224	Additional iQUBE installation manual	\$25.00

### OPTIONS/ACCESSORIES

Part #	Description	Price
<b>Indicators for use with iQUBE</b>		
86762	Virtui Virtual Indicator Software (Demo)	N/C
85107	Virtui Activation	\$495.00
77790	920i Universal, 115 VAC	\$1,650.00
77791	920i Universal, 230 VAC	\$1,650.00
77792	920i Panel Mount, 115 VAC	\$1,650.00
77793	920i Panel Mount, 230 VAC	\$1,650.00
77794	920i Wall Mount, 115 VAC	\$2,250.00
77795	920i Wall Mount, 230 VAC	\$2,250.00
93243	920i Deep Universal, 115 VAC	\$1,850.00
93244	920i Deep Universal, 230 VAC	\$1,850.00
91995	820i Universal, 115 VAC	\$1,395.00
91996	820i Universal, 230 VAC	\$1,395.00
<b>4-Channel Junction Box Product Bundles</b>		
78799	iQube (PN 77778), 920i indicator (PN 77790)	\$2,745.00
78802	iQube (PN 77778), 920i indicator (PN 77790) fiber optic boards (PN 77143, 77788 & 77531)	\$3,505.00
<b>8-Channel Junction Box Product Bundles</b>		
78809	iQube (PN 77148), 920i indicator (PN 77790)	\$3,245.00
78810	iQube (PN 77148), 920i indicator (PN 77790) fiber optic boards (PN 77143, 77788, & 77531)	\$4,005.00

Note: Prices effect in 2008

www.ricelake.com/loadcells

USA: 800-472-6703 • CANADA/MEXICO: 800-321-6703 • INTERNATIONAL: 715-234-9171

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