

# iQUBE 2®

Digital Diagnostic Junction Box



## Standard Features

- iQUBE2® board has four A/D channels
- Stainless steel or Fiberglass Reinforced Polyester (FRP), NEMA Type 4X enclosure
- Supports networking up to four boards, for 16 A/D channels; connection can be up to four separate platforms with a system total, or four separate scale systems
- Diagnostic routines for weighing errors and system health
- Cell tests for overloaded, underloaded, zero reference, drift, noise and unbalanced conditions
- Onboard status LEDs for communication and visual bi-color indication of cell health
- Cell emulator compensates for load cell failure until a repair can be made
- Cal-Match® algorithm automatically trims and calibrates the scale in one pass of test weights (stopping over each mount)
- Standard communication RS-232/RS-422
- Option card slot for fiber optic, Ethernet TCP/IP, wireless TCP/IP, USB or RS-232/485
- Four digital I/O per card, for push-button operation, setpoint control or cell status

## Applications

- Truck and railroad scales
- Tank and hopper scales
- Multi-channel scales
- Interfaces to 920i®, 1280, VIRTUi2® and ASCII serial commands

## Dimensions

Stainless Steel 8 in x 10 in			
A	8.91 in (226.3 mm)	E	11.50 in (292.1 mm)
B	10.13 in (257.3 mm)	F	10.75 in (268.5 mm)
C	12.57 in (319.3 mm)	G	6.00 in (152.4 mm)
D	4.29 in (109 mm)	H	0.312 in (7.9 mm)
FRP Large 10 in x 12 in			
A	11.30 in (287 mm)	E	13.53 in (343.7 mm)
B	13.33 in (338.6 mm)	F	12.76 in (324.1 mm)
C	14.00 in (355.6 mm)	G	8.00 in (203.2 mm)
D	5.57 in (141.5 mm)	H	0.312 in (7.9 mm)
FRP Small 8 in x 10 in			
A	9.31 in (236.5 mm)	E	11.51 in (287.2 mm)
B	11.31 in (287.2 mm)	F	10.75 in (273.1 mm)
C	12.85 in (326.4 mm)	G	6.00 in (152.4 mm)
D	5.42 in (137.7 mm)	H	0.312 in (7.9 mm)

## Specifications

### Enclosure:

Stainless steel or Fiberglass Reinforced Polyester (FRP), NEMA Type 4X enclosure

### Voltage Input:

115/230VAC power supply DC/DC converter for 9-36V  
6-12VDC to CPU

### Load Cell Inputs:

Four channels per board up to four networked boards

### A/D Sampling Rate:

2.5-500 Hz (selectable)

### Temperature Range:

14°F to 104°F (-10°C to 40°C)

### Analog signal sensitivity:

0.3 uV/grad at 30 Hz  
0.5 uV/grad at 100 Hz  
1.2 uV/grad at 500 Hz

### Load Cell Excitation:

5 V DC, 57 mA maximum per channel

### Analog range:

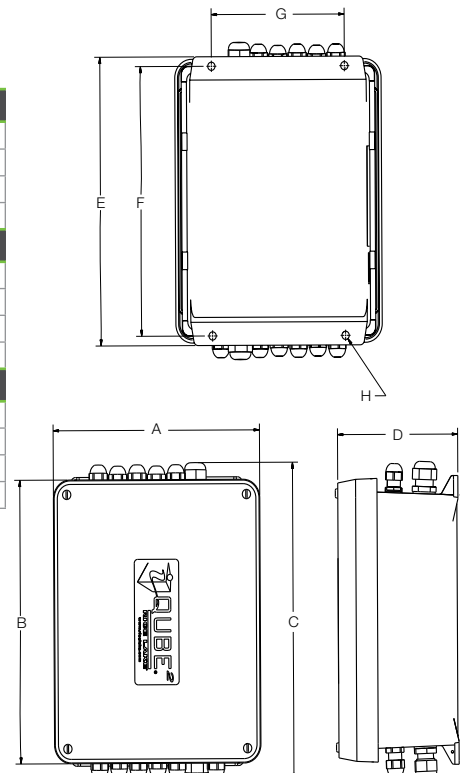
-4.5 mV/V to 4.5 mV/V

### Approvals:

NTEP 03-032A1  
Measurement Canada - AM-5561, Rev. 1  
UL E151461  
CE

### Warranty:

Two-year limited warranty



**Part Number/Price**

Part #	Description	Est. Weight	Price
<b>With AC Power Supply</b>			
108425*	iQUBE2, four-channel, FRP 8 in x 10 in junction box	9 lb	\$1,100.00
108426	iQUBE2, four-channel, FRP 10 in x 12 in junction box	11 lb	\$1,300.00
108427	iQUBE2, eight-channel, FRP 10 in x 12 in junction box	11 lb	\$2,100.00
108428*	iQUBE2, four-channel, stainless steel 8 in x 10 in junction box	13 lb	\$1,800.00
<b>Without Power Supply</b>			
108429*	iQUBE2, four-channel, FRP 8 in x 10 in junction box	8 lb	\$1,000.00
108430	iQUBE2, four-channel, FRP 10 in x 12 in junction box	10 lb	\$1,200.00
108431	iQUBE2, eight-channel, FRP 10 in x 12 in junction box	10 lb	\$2,000.00
108432*	iQUBE2, four-channel, stainless steel 8 in x 10 in junction box	12 lb	\$1,800.00
<b>Conduit Adaptors</b>			
92734	Conduit adaptor 3/8 in NTP to 3/4 in NPT		\$25.00
92735	Conduit adaptor 1/2 in NTP to 3/4 in NPT		\$25.00

\* Enclosure size 8 in x 10 in required for truck scale junction box pocket

Note: Do not mix junction box models or use other brands of junction boxes with Rice Lake junction boxes. There is a risk of system instability.

**Options/Accessories**

Part #	Description	Price
108433	Four-channel iQUBE2 board with cables and connectors	\$800.00
97475	DC/DC power supply, 9-36 VDC(requires factory installation)	\$175.00
108434	Remote power supply 115/230 VAC and transient board with enclosure	\$275.00
109396	Transient board	\$65.00
110949	Transient board with mount	\$80.00
161936	Hotspot Wi-Fi 802.11 a, b, g	\$1,195.00
161954	Hotspot in FRP enclosure	\$2,795.00
<b>Communication Card</b>		
108579	RS-232/RS-485 port	\$260.00
77142	Ethernet TCP/IP	\$400.00
108671	Wireless LAN 802.11 B/G	\$570.00
93245	USB port	\$175.00
77143	Fiber-optic board	\$200.00
77788	Fiber-optic board (installed in 920i)	\$200.00
<b>Duplex Fiber (Max Run 350 ft)</b>		
78026	Fiber-optic cable, 100 ft	\$140.00
78027	Fiber-optic cable, 200 ft	\$280.00
78910	Fiber-optic cable, custom length	\$1.40/ft
<b>Home Run Cable</b>		
116587	EL166 16 gauge, six conductor, shielded	\$2.65/ft
<b>Software</b>		
77925	Revolution <sup>®</sup> configuration software	\$35.00
108435	Virtui2 <sup>®</sup> virtual indicator demo CD	N/C
108436	Virtui2 activation part number	\$500.00
112262	Firmware update flash cable	\$50.00
<b>920i<sup>®</sup> Indicators for use with iQUBE2, requires version 4 software</b>		
77790	920i universal, 115 VAC, without A/D	\$2,025.00
77791	920i universal, 230 VAC, without A/D	\$2,025.00
93243	920i deep universal, 115 VAC, without A/D	\$2,225.00
93244	920i deep universal, 230 VAC, without A/D	\$2,225.00
77792	920i panel mount, 115 VAC, without A/D	\$2,025.00
77793	920i panel mount, 230 VAC, without A/D	\$2,025.00
77794	920i wall mount, 115 VAC, without A/D	\$2,625.00
77795	920i wall mount, 230 VAC, without A/D	\$2,625.00



**Sample Configurations\***

\*Not an actual system—illustrates connectivity

**Options/Accessories**

Part #	Description	Price
<b>1280 Indicators for use with iQUBE2</b>		
<b>189623</b>	1280 7 in touch-only, AC power supply, no power cord, standard display, without A/D	\$2,480.00
<b>188526</b>	1280 7 in touch-only, AC power supply, no power cord, high visibility display, without A/D	\$2,580.00
<b>188395</b>	1280 12 in touch-only, AC power supply, no power cord, high visibility display, without A/D	\$3,180.00
<b>181073</b>	1280 panel mount, DC power supply, no power cord, standard display, without A/D	\$2,480.00
<b>178473</b>	1280 panel mount, AC power supply, no power cord, high visibility display, without A/D	\$2,580.00
<b>176214</b>	1280 wall mount, AC power supply, U.S. power cord, standard display, without A/D	\$2,930.00
<b>171667</b>	1280 wall mount, AC power supply, U.S. power cord, high visibility display, without A/D	\$2,940.00
<b>174750</b>	1280 panel mount, AC power supply, no power cord, standard display, without A/D	\$2,480.00
<b>174207</b>	1280 universal, AC power supply, Europe power cord, standard display, without A/D	\$2,680.00
<b>171582</b>	1280 universal, AC power supply, U.S. power cord, standard display, without A/D	\$2,680.00
<b>188713</b>	1280 universal, DC power supply, no power cord, standard display, without A/D	\$2,645.00
<b>171540</b>	1280 universal, DC power supply, no power cord, high visibility display, without A/D	\$2,705.00
<b>172419</b>	1280 universal, AC power supply, U.S. power cord, high visibility display, without A/D	\$2,780.00