iQUBE³
Digital Diagnostic Junction Box

NEW

Approvals

TuffSeal®

Standard Features

- Designed for weighing systems using the 1280 Enterprise™ Series indicator
- iQUBE³ CPU board: Four A/D channels, SD Slot, RS232/485, four DIOs, Ethernet TCP/IP (wired), USB-C
- iQUBE³ CPU board supports networking up to five iQUBE³ four-channel boards (four A/D channels each), for a total of 24 A/D channels; connection can be up to four separate scales and a system total
- Diagnostic routines for weighing errors and system health
- Additional diagnostics for overloaded, underloaded, zero reference, drift, noise and unbalanced conditions
- Onboard status LEDs for communication and visual bi-color indication of load cell health
- Load cell emulator compensates for a failed load cell
- Cal-Match® algorithm automatically trims and calibrates the scale in one pass of test weights (stopping over each load cell)
- Two options available

Options

- Fiber optic
- Analog output: 16-bit resolution, 0 to 10 VDC, 0 to 20 mA, 4 to 20 mA
- Relay or Serial (two RS-232 or RS-422/485)
- Bridge resistance board

Applications

- Truck and railroad scales
- Tank and hopper scales
- Multi-channel scales

Specifications

Voltage Input:
AC voltage: 100 to 240 VAC; 50/60 Hz
DC voltage: 9 to 36 VDC

Analog Signal Input Range:
-51 to +51 mV

Analog Signal Sensitivity:
0.3 uV/grad at 30 Hz
0.5 uV/grad at 100 Hz
1.2 uV/grad at 500 Hz

A/D Sampling Rate:
2.5 to 500 Hz (selectable)

Digital I/O:
Four per card, for push-button operation, setpoint control or cell status
24 mA per DIO at 5 V

Communication Ports:
RS-232/RS-422/485
USB-C
Ethernet TCP/IP, wired standard
Ethernet TCP/IP, optional wireless

Load Cell Inputs:
Connect up to 24 load cells (four, per board)

Load Cell Excitation:
3.3 VDC, 38 mA maximum per channel
Up to 24 × 350 ohm load cells

Rating/Material:
Polycarbonate (NEMA Type 4X) enclosure
Stainless steel (NEMA Type 4X) enclosure with hinged cover

Temperature:
Certified: 14 °F to 104 °F (-10 °C to 40 °C)
Operating: -40 °F to 140 °F (-40 °C to 60 °C)
Storage: -40 °F to 158 °F (-40 °C to 70 °C)

Warranty:
Two-year limited

Approvals:
NTEP 25-041
Measurement Canada (pending)
cULus (pending)
CE Marked (pending)

Part Number/Price

Part #	Description	Est. Weight	Price
With AC Power Supply			
227157*	iQUBE³, four-channel, polycarbonate small junction box	9 lb	Consult
227158	iQUBE³, four-channel, polycarbonate large junction box	11 lb	Consult
227159	iQUBE³, eight-channel, polycarbonate large junction box	11 lb	Consult
227160	iQUBE³, four-channel, stainless steel small junction box	13 lb	Consult
With DC Power Supply			
227165	iQUBE3, Four-channel, polycarbonate small junction box with transient protection	9 lb	Consult
227166	iQUBE3, Four-channel, polycarbonate large junction box with transient protection	11 lb	Consult
227167	iQUBE3, Eight-channel, polycarbonate large junction box with transient protection	11 lb	Consult
227168	iQUBE3, Four-channel, stainless steel small junction box with Transient protection	13 lb	Consult
Without Power Supply			
227161*	iQUBE³, four-channel, polycarbonate small junction box	8 lb	Consult
227162	iQUBE³, four-channel, polycarbonate large junction box	10 lb	Consult
227163	iQUBE³, eight-channel, polycarbonate large junction box	10 lb	Consult
227164	iQUBE³, four-channel, stainless steel small junction box	12 lb	Consult

Small iQUBE³ required for truck scale junction box pocket.

Options/Accessories

Part #	Description	Price
231373	iQUBE³ CPU Board, Four-channel with cables and connectors	Consult
227169	iQUBE³ 4-Channel Board, Four-channel with cables and connection	Consult
227171	Power Supply, 115/230VAC Input, 24VDC Output, FRP Enclosure, iQUBE³ Remote Power	Consult
230935	Bridge Resistance Card Assembly, 4-channel	Consult
227171	Remote power supply 115/230 VAC and transient board with enclosure	Consult
232018	Transient board with mount (only used with multiple enclosures)	Consult
231993	iQUBE³ Enclosure, Small, Polycarbonate, Includes Kickstand Bracket	Consult
231994	iQUBE³ Enclosure, Large, Polycarbonate, Includes Kickstand Bracket	Consult
231995	iQUBE³ Enclosure, Stainless Steel	Consult
215178	Enclosure mounting tabs-new style (set of 4, includes screws), polycarbonate	Consult
195084	Analog card, kit	Consult
211709	Relay card, kit	Consult
Conduit Adapter		
92734	Conduit adapter 1/2 in NPT to 3/4 in NPT	Consult
92735	Conduit adapter 3/8 in NPT to 3/4 in NPT	Consult
Communication Card		
212668	212668 is Fiber optic card, kit	Consult
231366	Wireless LAN 802.11 A/B *(factory install required)*	Consult
Duplex Fiber (Max Run 500 ft)		
78026	Fiber-optic cable, 100 ft (includes polishing kit)	Consult
78027	Fiber-optic cable, 200 ft (includes polishing kit)	Consult
78910	Fiber-optic cable, duplex 1.00 mm core 2.2 mm, custom length	Consult/ft
1280 Indicators for use with iQUBE³		
189623	1280 7 inch touch-only, AC power supply, no power cord, standard display, without A/D	Consult
188526	1280 7 inch touch-only, AC power supply, no power cord, high visibility display, without A/D	Consult
188395	1280 12 inch touch-only, AC power supply, no power cord, high visibility display, without A/D	Consult
181073	1280 Panel Mount, DC power supply, no power cord, standard display, without A/D	Consult
178473	1280 Panel Mount, AC power supply, no power cord, high visibility display, without A/D	Consult
205677	1280 Wall Mount, AC power supply, U.S. power cord, standard display, without A/D	Consult
171667	1280 Wall Mount, AC power supply, U.S. power cord, high visibility display, without A/D	Consult
174750	1280 Panel Mount, AC power supply, no power cord, standard display, without A/D	Consult
174207	1280 Universal, AC power supply, Europe power cord, standard display, without A/D	Consult
171582	1280 Universal, AC power supply, U.S. power cord, standard display, without A/D	Consult
188713	1280 Universal, DC power supply, no power cord, standard display, without A/D	Consult
171540	1280 Universal, DC power supply, no power cord, high visibility display, without A/D	Consult
172419	1280 Universal, AC power supply, U.S. power cord, high visibility display, without A/D	Consult

Dimensions

iQUBE³			
Stainless Steel			
A	13.50 in (343 mm)	E	8.00 in (203 mm)
B	12.28 in (312 mm)	F	6.29 in (160 mm)
C	12.75 in (324 mm)	G	6.20 in (157 mm)
D	10.28 in (261 mm)		
Polycarbonate Small			
A	12.13 in (308 mm)	E	5.98 in (152 mm)
B	11.45 in (291 mm)	F	6.95 in (176 mm)
C	10.51 to 11.30 in (267 to 287 mm)	G	6.71 in (170 mm)
D	9.32 in (236.84 mm)		
Polycarbonate Large			
A	14.13 in (359 mm)	E	7.99 in (203 mm)
B	13.46 in (341 mm)	F	7.02 in (178 mm)
C	12.52 to 13.31 in (318 to 338 mm)	G	6.79 in (172 mm)
D	11.36 in (289 mm)		

JUNCTION BOXES / SIMULATORS