PERFORMANCE

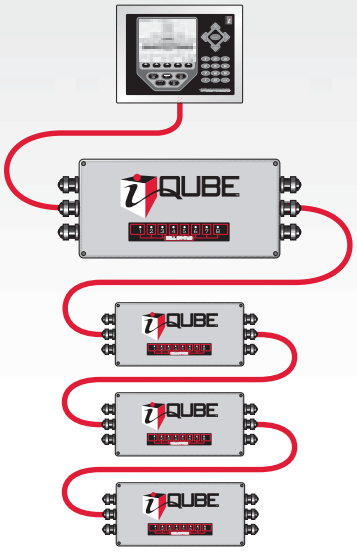
Offering transient protection, high-speed data processing, simplified calibration, and a wide range of configuration and packaging options, iQUBE's progressive capabilities deliver advanced performance for today and tomorrow.

iQUBE elevates scale system performance by:

- Providing valuable instrument immunity from transient strikes induced by lightning or common voltage surges*
- Daisy chaining up to three iQUBEs in a master/slave configuration (up to 16 total load cells) seamlessly integrates several scales into one system
- Connecting to analog indicators and PLCs using iQUBE's optional analog output modules
- Integrating in LANs and WANs using an on-board Ethernet interface
- Storing relevant load cell calibration data and multipoint calibration tables for all connected load cells

A leading performance advantage of the iQUBE is the reduction of costs and services associated with calibration. Methods include:

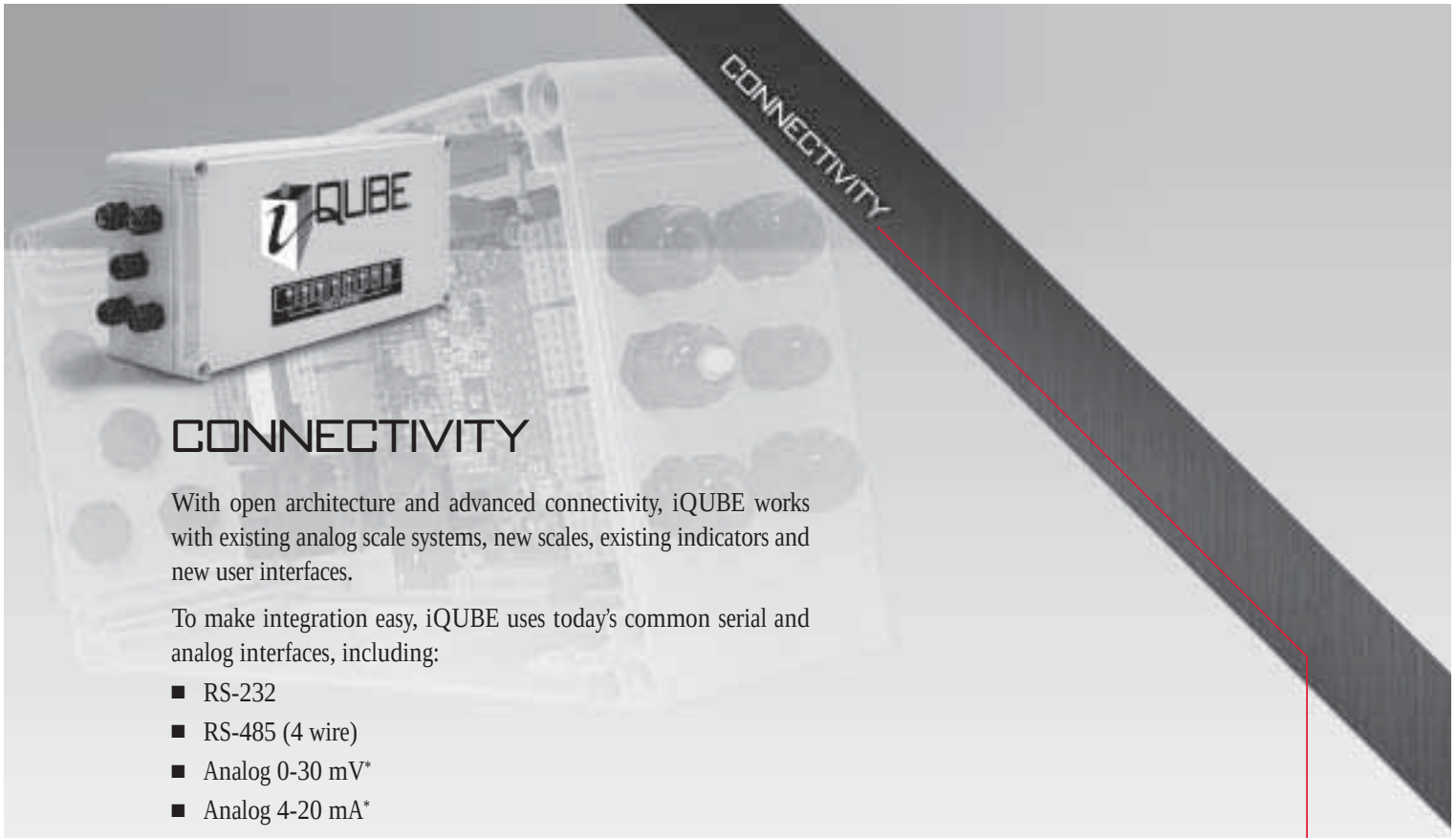
- **Corner Cal-Match™** - Requires weight to be placed over each load cell individually. The total scale calibration is relevant to the amount of weight used for trimming. Then a single-point calibration can be used for a larger amount of weight without affecting the trimming values
- **Section Cal-Match** - Requires weight to be placed over each section. To calibrate, weights can be moved down the middle of the scale on a weight cart or test truck and stopped on each section. A single-point calibration can be used for larger amounts of weight without affecting the trimming values
- **Theoretical Cal-Match** - Allows each cell to be zeroed and the outputs of each cell to be entered manually. This method is based on load cell mV/V values and capacity. No weights are applied to the scale.**



Daisy chain configuration with a 920i digital indicator

*When used with optional fiber optics
**Not Legal-for-Trade

SMART SHEETS



CONNECTIVITY

With open architecture and advanced connectivity, iQUBE works with existing analog scale systems, new scales, existing indicators and new user interfaces.

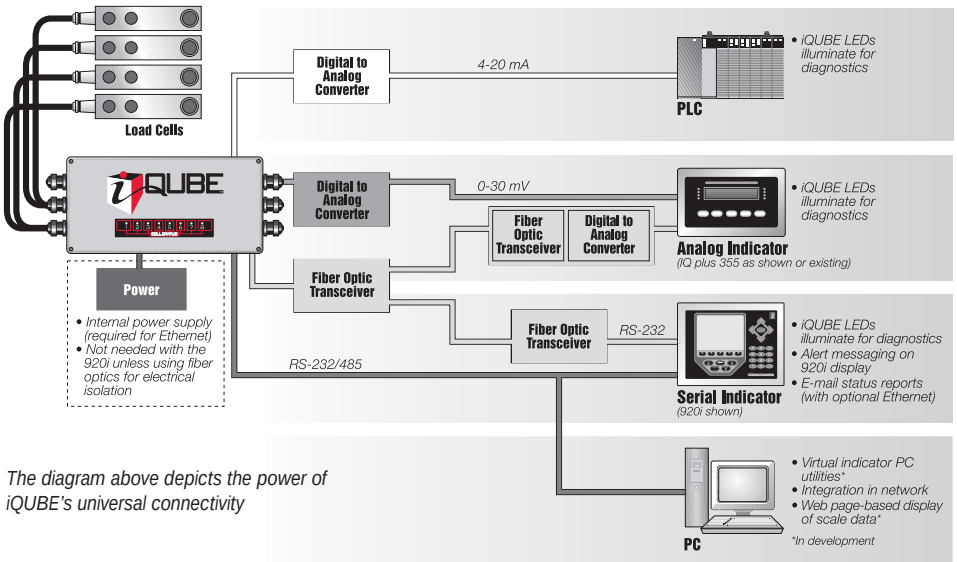
To make integration easy, iQUBE uses today's common serial and analog interfaces, including:

- RS-232
- RS-485 (4 wire)
- Analog 0-30 mV*
- Analog 4-20 mA*
- Fiber optics*
- RF wireless*
- Ethernet TCP/IP*

If a business is heavily vested in fieldbus technology, iQUBE adapts to the following proprietary fieldbus protocols:

- DeviceNet™
- Profibus® DP
- Allen-Bradley® Remote I/O

*Optional



The diagram above depicts the power of iQUBE's universal connectivity

SMART SHEETS

DATA COLLECTION

iQUBE is the foundation in an evolution of data collection solutions. It converts the electrical outputs of load cells to a usable serial string for a multitude of data integration possibilities.

When several scales are configured as one system, it's still possible to view individual scale activity through a PC and track how each scale's performance affects a business' bottom line.* With applications such as truck scales or tanks and hoppers, the data that iQUBE provides regarding performance and downtime can be retained and analyzed as needed.

In conjunction with the 920i indicator, users can complement iQUBE's scale diagnostic data with valuable weighment information and relevant historical time stamps.

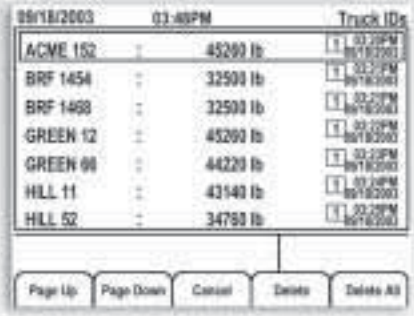
Device status information includes:

- Date of last calibration
- Weighments since last calibration
- Date of next scheduled calibration

Weighment information can be customized in the 920i database using iRite. Some examples include:

- Truck ID
- Weighment date and time
- Product description
- Lot numbers

*In development



When combined with the 920i, the iQUBE is instrumental in collecting important data such as truck ID, time, date and weight

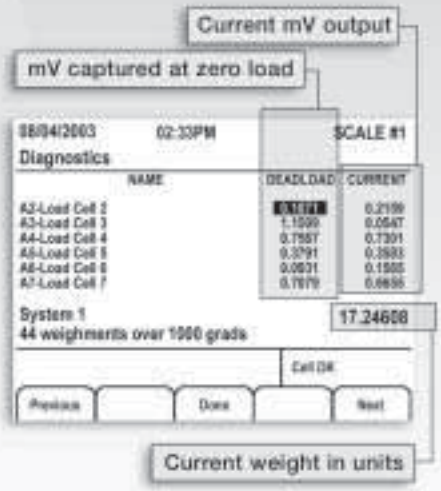
DIAGNOSTICS

iQUBE acts as a *virtual watchman*, continually monitoring scale performance. It provides immediate proactive event management to alert operators and technicians of potential inaccuracies or disturbing trends. When an irregularity is detected, the advanced diagnostics will trigger an on-board LED that will change from green to red, indicating which cell is affected. A specific diagnostic message will also display on the 920i when the two are paired together.

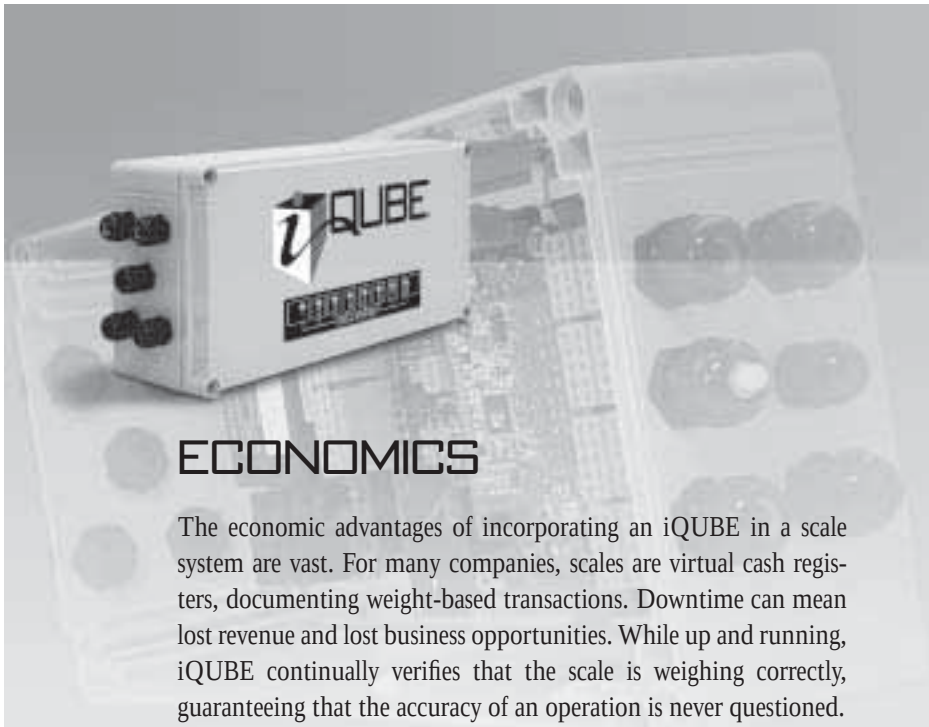
Some examples of diagnostic data that are communicated by iQUBE are:

- Load cell drift at load
- Load cell drift at no load
- Unstable weight display
- Load cell failure
- Instability at higher capacities
- Unbalanced loading of weighbridge
- Individual cell outputs in signal voltage or weight

With Ethernet, the 920i is capable of sending an e-mail to either operators or technicians, alerting them of a problem.



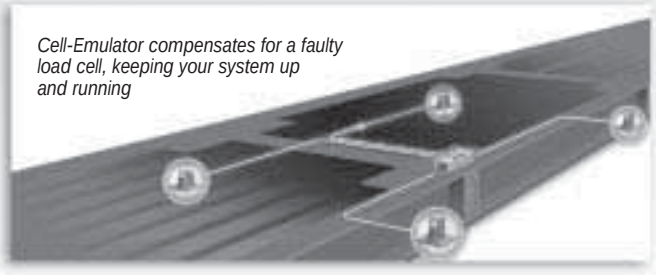
The 920i receives valuable troubleshooting information from iQUBE about load cell performance.



ECONOMICS

The economic advantages of incorporating an iQUBE in a scale system are vast. For many companies, scales are virtual cash registers, documenting weight-based transactions. Downtime can mean lost revenue and lost business opportunities. While up and running, iQUBE continually verifies that the scale is weighing correctly, guaranteeing that the accuracy of an operation is never questioned.

Whether iQUBE is added to an existing system to update the technology, or purchased in a new scale bundle with a truck scale and indicator, both will see less downtime and a timely return on investment.



Cell-Emulator compensates for a faulty load cell, keeping your system up and running

iQUBE's economic benefits include:

- The exclusive Cell-Emulator™ feature that keeps scales running and your operation at top performance (within 1.5%), even while waiting for repairs*
- Compensating for a different capacity cell if an exact match isn't available. Therefore, while waiting for the correct cell, a substitute can be used to keep the scale up and running*
- Less time spent finding the root of a problem in a multi-cell system. In the past, this process could take hours or even multiple trips to troubleshoot. The advanced diagnostics of iQUBE greatly speed this process with on-board LEDs and 920i operator messages

iQUBE's optional load cell diagnostic strip

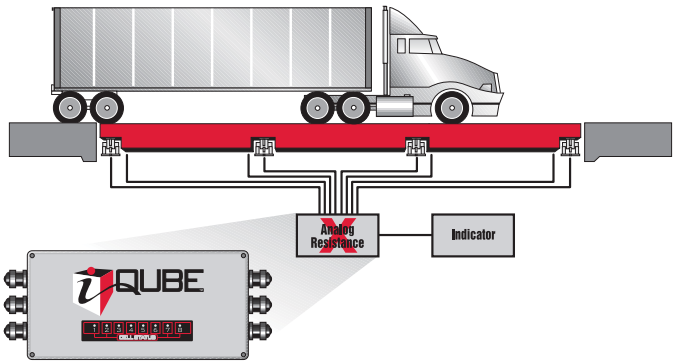
*Not NTEP Legal-for-Trade

MIGRATION

The future migration of iQUBE is limitless. It is designed to continually grow as scale technology changes. It will be enhanced and upgraded to meet various application demands. This isn't just another inexpensive signal conditioner, but a comprehensive platform with a well-defined migration path. With non-proprietary benefits, iQUBE presents no restrictions when adding system components or choosing a service provider. Additionally, the open architecture allows for integration with existing scale systems to suit retrofit application needs. It provides the technology required to manage growth and change effectively.

Several future migration paths are currently in development, including:

- PC-based and web-based virtual indicators with seamless plug-and-play compatibility (serial to Ethernet connectivity)
- Mobile (PDA) interface to iQUBE
- Wireless communications including iQUBE to a PC, PDA and indicator
- Web-based subscription services for scale to process, process to business enterprise, and business to business transactional data exchange
- Intelligent data collection and data distribution hubs, providing real time and historical scale operational data, e-diagnostics, and weighment transaction reports to LANs and the Internet



Retrofit of an existing scale system

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