



# Technical Specifications

## ORB 2.0 Transformer

**Material Information When,  
Where and How you want it**

**The ORB 2.0 Transformer** is KM's newest ESS (Embedded System Server) instrument. By design, it transforms ordinary level and weight data into useful information that will increase process productivity at every level of the organization. This instrument interfaces with the sensing systems to log high volumes of data that are then organized as needed by various users within the plant environment as well as remotely. Bulk material management, capacity utilization, and system reliability have direct impact on Quality, Delivery and Cost (QDC). The simplicity with which information is transformed is made possible with the simple HTML access to this highly reliable server. Thus, via a simple web browser interface, the programs are accessible without need for special programming, drivers or software packages.

### **Productivity and Flexibility**

Standard are the communication ports which include TCP/IP as well as its built-in modem and web server. A user can log onto the network (LAN/WAN) for immediate access to individualized information that features both graphical format as well as a tabular format. Historical trending, raw data access and 'events' extend user flexibility.

Tactical users include operations, maintenance and instrumentation while Strategic users include finance, procurement, material planning and IS/IT. As the ever-changing requirements of both groups differ, so do the feature-rich capabilities of the system. While real-time material updates, past trends and usage rates are needed for strategic users, watchdog alarms can help operations warn of imminent overfills, low levels or run outs. Secure user access can be assigned by department for in-plant use and extend to remotely based suppliers or other logistics personnel. Extended capabilities include instrument calibration backup for validation or when calibration is needed and is optionally supported by KM's remote system troubleshooting and other services for all the sensing systems.

For demo, go to [www.kmorb.com/about](http://www.kmorb.com/about).



## **Features & Benefits**

### **Data Security**

Encrypted database is password protected and combined with SSL (Secure Socket Layers) offers full system and data protection for both intranet and internet access.

### **Integrated Communications**

Built-In web server supplies material and system information to any desktop using an Ethernet TCP/IP or modem connection simplifying and minimizing involvement for MIS/contract services.

### **Simple To Use**

Users need no special training to use or access material levels and trending information screens. Raw data can also be downloaded from the ORB 2.0 Transformer SQL database for access with programs such as Excel and Access.

### **Quick Startup**

Quick Config of ORB 2.0 Transformer auto-detects and learns connected KM systems for immediate startup.

### **Easy Access**

Current and historical data are available to a large number of sites and multiple users.

### **Watchdog with Call To Action**

Continually monitors and alerts users you define about material and system alarm conditions.

### **Expand Flexibility with Online Services**

KM's optional hosted website for Bulk Inventory Logistics (B.I.L.) and Tech Central Remote Control Startup and Lifeline.

## Security and Flexibility

The SQL database is encrypted and password protection prevents unauthorized access to the web server. For on-line services or where a user is accessing the system outside of the company LAN, an SSL (Secure Socket Layer) server connection can be used. This connection prevents unauthorized users from viewing for protection of user information. Optional on-line services are offered by KM to supplement the built-in logistics and maintenance features of the ORB 2.0 Transformer where time or staffing is an issue.

No need for huge budgets to have others modify your existing data collection systems to get to the data you need.

In all, the ORB 2.0 Transformer is a breakthrough instrument: a comprehensive, flexible tool to unlock productivity gains while it sets the standard for simplicity, security, and reliability.

## Productivity For All

### ***Features and Benefits For Tactical Users***

If your position is: Operations, Engineering, Instrumentation & Control, or Maintenance

#### ORB 2.0 Transformer/Instrument

Feature: Connects quickly to LAN or company WAN.

Benefit: Data maintained within your company network.

Feature: Rapid plug and play start-up with built-in Web interface.

Benefit: Direct integration to KM level/weight systems and services requiring no special set-up or software.

Feature: Data logging, historical trending, and local calibration backup.

Benefit: Precise material and system tracking with local backup.

#### ORB 2.0 Services

Feature: KM hosted website.

Benefit: Simple, cost effective solution for users who have limited or no MIS/IT support.

Feature: Dual services, dynamic upgrades.

Benefit: Secure, off-site data is maintained with up-to-date tools.

Feature: Your network security remains intact while information flow is uninterrupted.

Benefit: Your system is secure and reliable.

### ***Features and Benefits For Strategic Users***

If your position is: IT, CEO, CIO, President, Vice-President, Operations, or Engineering

#### ORB 2.0 Transformer/Instrument

Feature: Simple "on the fly" Graphical Trends, Data Logging.

Benefit: Improve material management with built-in usage and historical trend and rate graphs.

Feature: Intuitive built-in web interface.

Benefit: Now anyone throughout the organization can configure and use data as they need without any special setup or user training.

Feature: Directly integrate KM's weight and level systems to intranet, internet or even on-line services.

Benefit: Rapid plug and play start-up.

Feature: Interactive alarms and alerts feature auto and direct-alert.

Benefit: Eliminate ongoing monitoring of critical process points.

Feature: Simple TCP/IP connectivity.

Benefit: Standard computer interface for direct access to your vessel data.

Feature: Tough user and data security.

Benefit: MD5, 64-byte (512 bits) encryption guards passwords and data.

### ***Features and Benefits for Both Users***

No matter what your position, ORB 2.0 has more for you.

Feature: KM hosted website.

Benefit: Simple, cost effective solution for users who have limited or no MIS/IT support.

Feature: Dual services, dynamic upgrades.

Benefit: Secure, off-site data is maintained with up-to-date tools.

Feature: Your network security remains intact while information flow is uninterrupted.

Benefit: Your system is secure and reliable.

## Specifications:

### User Data Access

Intranet and Internet via Web Browser  
Access to built-in Web Server:  
    Internet Explorer 4.0 and Netscape Navigator 4.0 (or higher)  
SQL Compliant

### Built-in Web Server Provides

Material level or gross weight  
Long-term trends  
Alarm conditions and acknowledge  
Data logging rate  
Raw data download  
User setup  
KM system setup and access  
System change and user access log

### Watchdog Alarm Alerts

Low / Low-Low / Hi / Hi-Hi  
Rate of change  
E-mail, data pager, fax

### Optional On-Line Services

BIL (Bulk Inventory Logistics)  
Tech Central RC Startup (via TCP/IP)  
Tech Central Lifeline (via TCP/IP)

### System Setup

Plug & Play Configuration to KM Systems  
Integral Menu  
    RS-232 to PC  
    LAN/WAN via TCP/IP

### KM System Access

Gross/Level (net through data logging):  
    SVS 2000\*, Weigh II (rev B or higher firmware), STX (rev C or higher firmware), MVS (rev G or higher firmware), Sono II (rev L or higher firmware) ultra-wave  
Calibration/Setup backup and restore:  
    SVS 2000\*, Weigh II (rev B or higher firmware), MVS (rev L or higher firmware), ultra-wave

\* requires optional serial port

### Communication Ports

1 LAN/WAN (RJ45) Ethernet TCP/IP  
1 Modem (RJ11) to phone  
1 RS-232C (DB9F)  
3 RS-422/485 (terminal blocks)

### Electrical

AC Power: 90 VAC - 254 VAC; 40 watts

### Environmental

Operating Temperature: -22 to 125°F (-30 to 50°C)  
Humidity: 0-98% non-condensing

## Physical

Overall dimensions:

NEMA-4X FRP enclosure:  
10.5 in. H x 8.5 in. W x 6.5 in. D  
(130.2 mm x 215.9 mm x 165.1 mm)

Mounting hole pattern:  
10.94 in. x 6 in.  
(278.87 mm x 152.40 mm)

Weight: 6.5 lbs (2.95 kg)

## On-line Services Expand Productivity:

When you don't have the staff, the time or the access to setup and handle your own network. Provides automatic data backup and redundant servers to assure a high level of uptime.

**User Access:** Unlimited Web access to data using Internet Explorer 4.0 or Netscape Navigator 4.0 (minimum)

### ***BIL (Bulk Inventory Logistics)***

Web data updates:

By modem: 1x day standard; optional 2x, 4x, 6x, 8x, 12x, 24x

By TCP/IP Ethernet: Continual Polling

### ***Tech Central RC Startup***

Remote weight system parameter setup and calibration

### ***Tech Central Lifeline***

Automatic System parameter & calibration backup; System restore

B.I.L. (Bulk Inventory Logistics) is a KM hosted web service that posts data from the ORB 2.0 Transformer for access by your organization. This service is used when there is only a modem connection, where outsourcing of the website maintenance is desired or where staff is not available to bring the site up internally. Users access the data through a web connection to KM's website using an Internet browser. B.I.L. also provides redundancy by backing up the data of the ORB 2.0 Transformer to a reliable off-site server using a redundant server and automatic fail over to minimize downtime.

KM's Tech Central Remote Control can access weight systems to perform system calibration without a service technician on-site. Another Tech Central Service is Lifeline, where critical parameters of the systems connected to the ORB 2.0 Transformer are backed-up on a routine basis for security and fast restore in the event of system failures.

# Notes

**Targets For Continuous Improvement in my Process Area are:**

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

**Please check boxes and quantify current areas of inefficiency in resources**  
Please rate 1-10 (10 is high)

**Time** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Process** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Material** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Safety** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Cost Reduction** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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