Interface provides instrumentation including signal conditioners, high speed data loggers, portable load cell indicators, weight indicators and junction boxes.

Many instruments are used in force measurement applications. We provide full data acquisition and wireless telemetry systems for load cell and torque transducers. Our multi-channel bridge amplifier has a 4-channel capability, while the INF-USB3 universal serial has a sensor to USB output converter.

**Excitation**
- A Wheatstone bridge-based sensor, such as a load cell, requires excitation voltage to operate. The excitation voltage is typically 10V; however, many instruments supply lower voltage, an 2.5V, 5V, and others. Since these sensors are ratiometric, our instrumentation is a great match for these types of products.

**Signal**
- The output signal from a load cell is expressed in terms of mV output per V of excitation, at capacity. For example, a 100 lb capacity load cell rated for 2 mV/V output will have 20mV output at 100 lb, when excited with 10V. Because the output signal is directly affected by input voltage, it’s important to maintain a stable excitation voltage, which our instrumentation does. A signal can also be a voltage or mA signal as well.

**Signal Conditioner**
- Provides stable excitation voltage to the sensor and amplifies the low-level sensor signal to a high-level output such as +/-5V, +/-10V, 0-20mA, 4-20mA, 0-5V, or 0-10V.
- Many of our products include filtering, which can help reduce noise in the output signal.
- Many data acquisition systems require high-level inputs such as +/-10V and don’t work very well with low level mV signals but ours do.
- The DAQ doesn’t necessarily supply a stable excitation voltage to the sensor but ours do.
- When selecting, some things to consider are power supply requirements, amount of filtering, fixed or adjustable filtering, input range, scalability and zero adjustment range. Our instrumentation can accommodate these requirements.

**PC Interface Modules**
- Converts the low-level mV/V sensor signal to a digital format that can be transmitted to a PC.
- Popular interface modules provide USB, wireless USB, or Bluetooth data transmission.
- Software is normally provided and allows data display, logging and/or graphing.
- Commonly used when data needs to be logged to a PC and a the customer doesn’t already have an existing data acquisition system.
- Advantages over standard data acquisition is ease of use and they are normally plug-n-play.
- Considerations include bit resolution, number of channels, sample rate, software features and type of output.

**Indicators**
- Provides stable excitation voltage and converts the sensor signal to a digital display.
- Commonly available features include analog or digital output, selectable digital filtering, peak and valley monitoring and set point outputs.
- Things to consider when selecting an indicator are internal sample rate and update rate of analog output.

**Wireless Telemetry System (WTS)**
- Easy-to-use wireless data communication between a load sensor and a receiving indicator.
- Capable of receiving multiple inputs.
- Fully compatible will all Interface force sensors.
- Comes calibrated, tested and ready-to-run.
- Lasts up to 3 months using AA batteries.

### Instrumentation Definitions

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Indicator</th>
<th>Signal Conditioner</th>
<th>PC Interface Module</th>
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<th>Logging</th>
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**JB104SS** 4-Channel Stainless Steel Junction Box

**WTS-AM-1E** Wireless Strain Bridge Transmitter Module
For Strain Bridge Input

**WTS-AM-1F** Wireless Strain Bridge Transmitter Module
For Fast Measurements

**WTS-AM-2** Wireless Voltage Sensor Transmitter
For Voltage Input

**WTS-AM-3** Wireless 4-20 mA Transmitter Module
For mA Input

**WTS-BS-1** Wireless Handheld Display for Unlimited Transmitters
Roams Between Transmitters in Range

**WTS-BS-1-HA** Wireless Handheld Display for Multiple Transmitters
Provides Summation of Up to 12 Transmitters

**WTS-BS-1-HS** Wireless Handheld Display for Single Transmitters
Simple Operation

**WTS-BS-4** Wireless Base Station with USB Interface in Industrial Enclosure
Includes WTS Toolkit Software and Log 100 Software

**WTS-BS-5** Wireless Analog Output Receiver Module
Provide Analog Output for WTS Acquisition Modules

**DIG-USB/DIG-USB-F** USB & Fast USB Output Module
Configuration, Calibration, Graphing, Logging, & Display Software

**BSC1/BSC2/BSC4** Multi-Channel Bridge Amplifier or PC Interface Module
1 Channel
2 Channel
4 Channel

**BSC1-HD** Single Channel PC Interface Module with Analog Output
Single Channel

**BSC4D-BT** Portable 4-Channel Bluetooth Data Logger
4 Channel

**BX6-BT/ BX6-OEM** Portable 6-Channel High Speed Bluetooth Data Logger
Compact Size
Digital Inputs & Outputs

**BX8** Data Acquisition & Amplifier System
8 Channel

**INF-USB3/SI-USB4** PC Input Module
Single & Dual Channel
mV/V, VDC, or mA Input

**WTS-BS-1-HS** Wireless Handheld Display for Single Transmitters
Simple Operation

**BTS** Bluetooth Telemetry System
Bluetooth Strain Gage Transmitter

**WTS-WSS** Wireless Wind Speed Transmitter Module
Constantly Monitors Average Wind Speed

**INF-USB3/SI-USB4** PC Input Module
Single & Dual Channel
mV/V, VDC, or mA Input
Interface
Instruments

- Digital Indicators
- Signal Conditioners
- Digital Output Indicators
- Analog Indicators
- USB Interface Modules
- Data Acquisition
- Junction Boxes
- Acquisition Modules
- Wireless
- Repeater Modules
- Modbus
- LED Displays
- Remote Data Collection

Interface force measurement instruments are available in many design configurations for project designs requiring the highest performance.

To learn more about the Interface products or force measurement solutions call 480-948-5555.

Instrumentation Software
- BlueDAQ Software
- DIG-USB Toolkit
- DIG-USB-F Toolkit
- Log 24 Software
- Log 100 Software
- INF-USB-VS 3 Software
- MeterView Pro Software
- T-USB-VS Software
- WTS Toolkit
- BTS Toolkit

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Interface is the world’s trusted leader in technology, design and manufacturing of force measurement solutions. Our clients include a “who’s who” of the aerospace, automotive and vehicle, medical device, energy, industrial manufacturing, test and measurement industries.

Interface engineers around the world are empowered to create high-level tools and solutions that deliver consistent, high quality performance. These products include load cells, torque transducers, multi-axis sensors, wireless telemetry, instrumentation and calibration equipment.

Interface, Inc., was founded in 1968 and is a US-based, woman-owned technology manufacturing company headquartered in Scottsdale, Arizona.