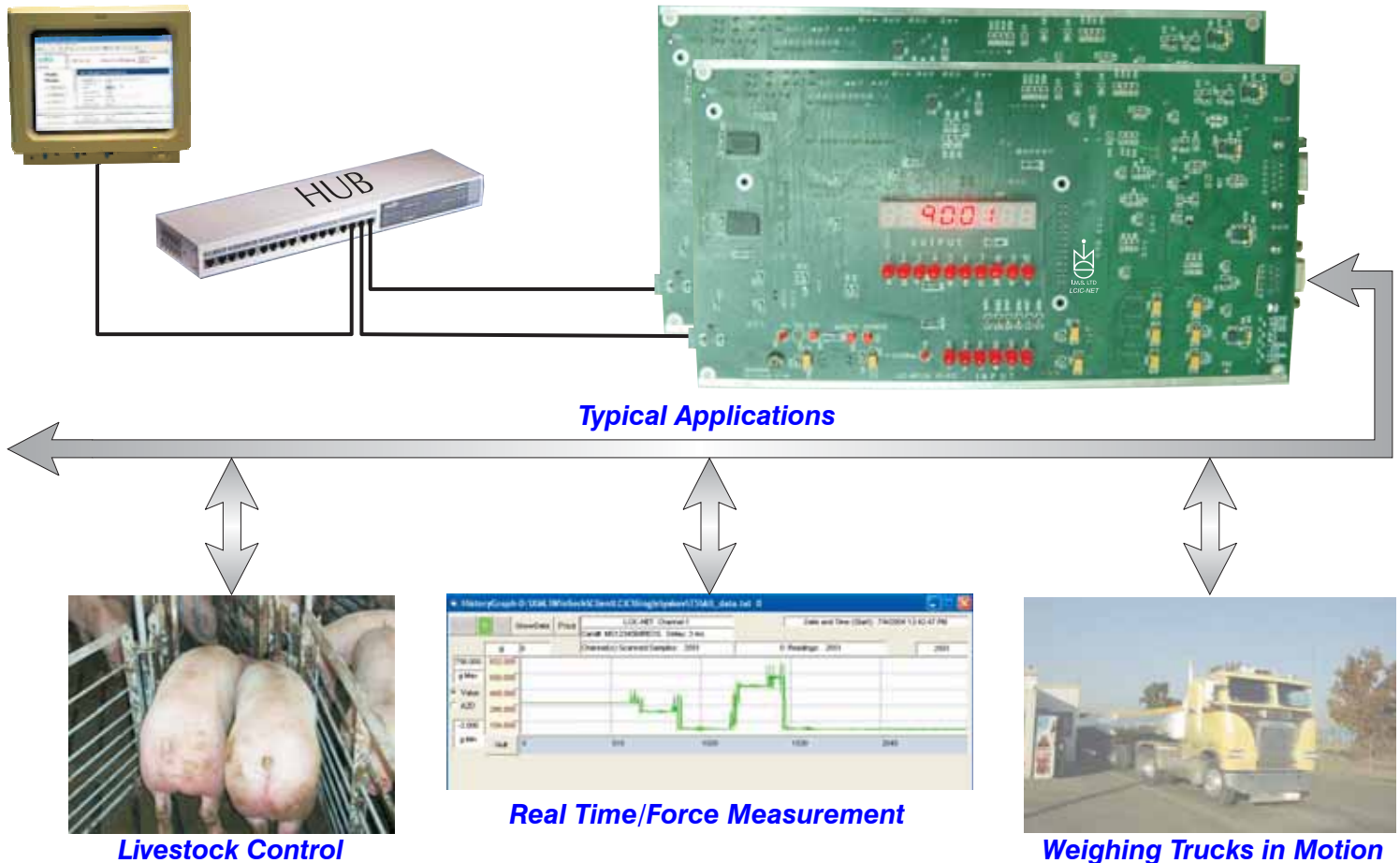


# Load-Cell Interface Card for the NET—LCIC-NET

## Ethernet Interface with TCP/IP Protocol

Especially designed to fit real-time weighing applications, such as weighing trucks in motion (WIM), measuring forces, or monitoring unlimited number of scales over a TCP/IP Ethernet network.



The **LCIC-NET** is a stand-alone 1- or 2-channel high resolution and very fast sampling rate Load Cell Interface that requires no other interfacing accessories. The **LCIC-NET** comes with a built-in Web server that delivers pages for easy calibration, password control, alternate TCP/IP address set-up and more. Simply connect the **LCIC-NET** to your network hub or directly to a network card in your PC, launch your browser, enter the default TCP/IP address, set your defaults, run the calibration—and you are done. Now you may read your scales on your existing TCP/IP network or by preparing your own application.

The **LCIC-NET** also has an on-board numeric display and 16 I/Os, enabling logic control through the user's application program. The **LCIC-NET** comes with straight-forward examples for the programmer showing how to communicate under VB6.0 or .Net and uses the popular and most common XML protocol that allows fast communication for real time applications.

**I.M.S.** INDUSTRIAL MEASUREMENT SYSTEMS LTD.  
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Provided with the board is our powerful **LCIC-Net-Monitor** application that runs on your PC and allows reading the weight, monitoring the I/O and even monitoring real time readings in a rate of 1000 samples per second, showing it in a graph and storing the results in a file.

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## Typical Applications:

- WIM—Weighing trucks in motion (axle by axle)
- Watching any scale from any PC in the network with a standard web browser
- Peak detector and analyzing forces
- Static weighing + I/O control over valves, gates, etc.
- Collecting data from many scales around the plant using the existing PC network

## Main Features:

- On-board 8-digit numeric display
- 10 outputs and 6 inputs all are opto-isolated
- One fast output triggered on-board by a set-point
- Supports all standard strain-gage based Load Cells
- User-friendly calibration by using a standard web browser
- Two modes for reading: Single Weight or Fast Weight
- Software filters on board-parameter setup
- Calibration parameters reside in the **LCIC-NET** memory
- Changing of IP address allows the connection of up to 256 **LCIC-NET** boards
- No need to run with a long Load-Cell Cable, as the board can reside next to the scale
- Changing the initial setup and calibration is password-protected
- Large on-board memory stores data until the next read request

## Hardware Specifications:

- Load Cell excitation voltage: 10 VDC
- Internal A/D resolution: 24 bit (17 bit in use)
- Internal A/D sampling: 1000 per second
- External power supply: 9 VDC 1.2 A 110-220 VAC (supplied)
- Load Cell range covered: 1 - 3 mV/V

- Number of load cells: up to 6 (350  $\Omega$  each)
- Outputs: 10 Opto-isolated outputs current sink 1.5 A 5-30 VDC
- Inputs: 6 Opto-isolated inputs
- On board display: 8 digits + LED for I/O status
- Communication: Ethernet TCP/IP XML protocol
- **LCIC-NET** dimensions: 246 x 135 x 30 mm
- I/O Screw Terminal dimensions: 81 x 76 mm
- Connectors:
  - RJ45 for the network cable
  - “D” type 9 pin for the Load Cell
  - I/O Screw Terminal (option)



## Software Included:

Scale Calibration and initial setup (residing inside the board as web pages) allows access from a standard web browser.

Examples for the programmer in VB6.0 and .NET on how to communicate with the **LCIC-NET** by using the popular XML protocol are provided.

Our powerful **LCIC-NET-Monitor** application runs on a PC and displays the weight, controls the I/O, displays I/O status, monitors real time samples in 1000 readings per second—and shows graphs and keeps the results in a file for later analysis with tools such as Microsoft Excel®.





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