

# Energy Solutions

Utility Management for the Shop Floor

## Shop Floor to Top Floor

Rapid capture of energy usage data



**e-Factory**  
Partner Product

VISIBILITY 

Acquire energy usage data for business and energy management purposes

SIMPLE 

Parameter based set-up eliminates programming

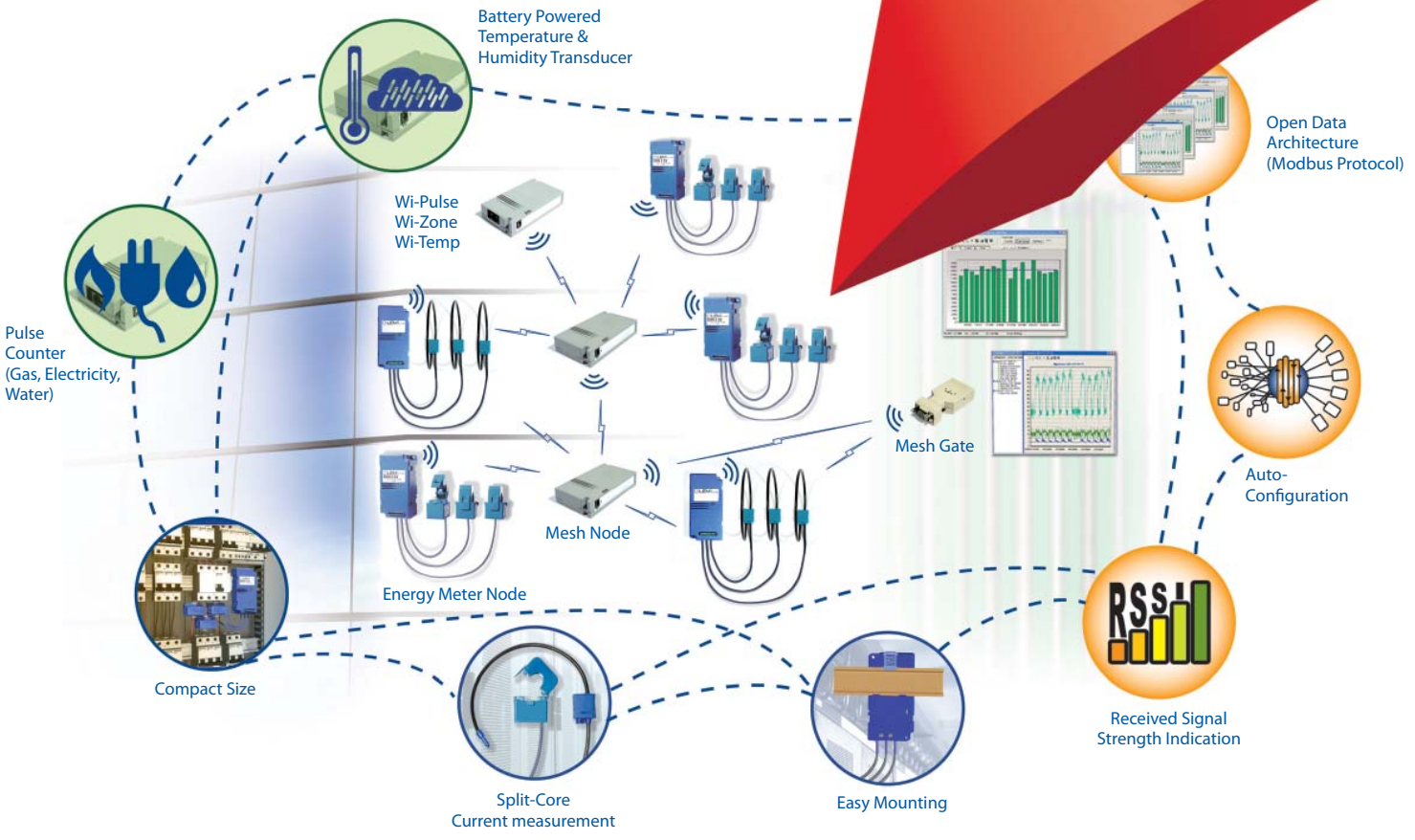
CONNECTED 

Easy connection to IT databases and other information systems

COMPLETE 

Combine with automation systems for integrated solution

# Do you know where your energy is?



## A precious resource

Most companies understand the effect of energy costs on the bottom line. However, few truly understand where and how their energy is being used on a machine by machine basis. In today's carbon conscious environment, the need to understand the exact nature of consumption is more important than ever. The Wi-LEM solution (Wireless Local Energy Meters Network) provides an elegant and effective solution to these issues.

## Precise monitoring

While monitoring the exact consumption of any given asset is an ideal, it is often impractical due to wiring, metering access or other plant issues. The Wi-LEM neatly solves these problems with a convenient selection of electrical sub-meters featuring split core measurement sensors that allow monitoring to be carried out without any need to disturb existing cabling. Further, the monitoring units communicate wirelessly with a central mesh mode, meaning there is no requirement for new infrastructure to collect the data.



## Measure, then act

Collecting usage data is only half the story. Without transparent access to this information, it is of little use. The Wi-LEM solution addresses this with easy connectivity to a range of third party systems, including the Mitsubishi Electric automation solution. Via the technology contained in the Mitsubishi iQ Platform, this information is then easily provided to higher level IT systems for analysis, manipulation and presentation. This is made possible by Mitsubishi's MES Interface IT module, which features a direct connection to these systems. This allows elimination of potentially insecure and maintenance intensive PC based intermediary systems. If communication is lost temporarily, the store and forward capability of the MES Interface IT ensures no actual data is lost.

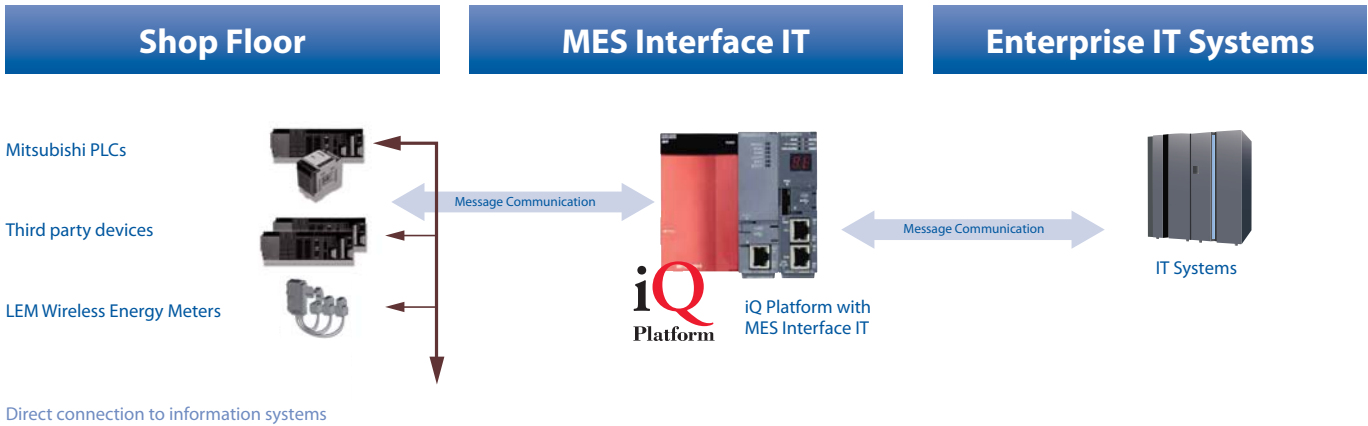
## Visibility

The continuous insight provided by the LEM solution into the nature of plant energy usage has multiple applications. On a basic level, it is possible to determine the precise breakdown of usage to know where it all goes. However, other capabilities include allocation of wasted energy to users, determining asset efficiency, monitoring before and after retrofits, and load profile management (e.g. peak demand). Finally, the information captured also allows general maintenance and asset management to be conducted more efficiently, e.g. detecting equipment defects or inappropriate usage.

## Fast deployment

Finally, a key cost of ownership issue is how fast the system can be up and running. Thanks to a configuration approach that uses parameterization rather than programming, it's possible to be monitoring energy consumption in as little as 10 minutes. The meters themselves are autoconfiguring, meaning no work is required to set them up. When combined with other features such as easy mounting and wireless signal strength indicators, the payback period for particularly energy intensive applications begins almost immediately.

# Shop floor connectivity ///



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