

# 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

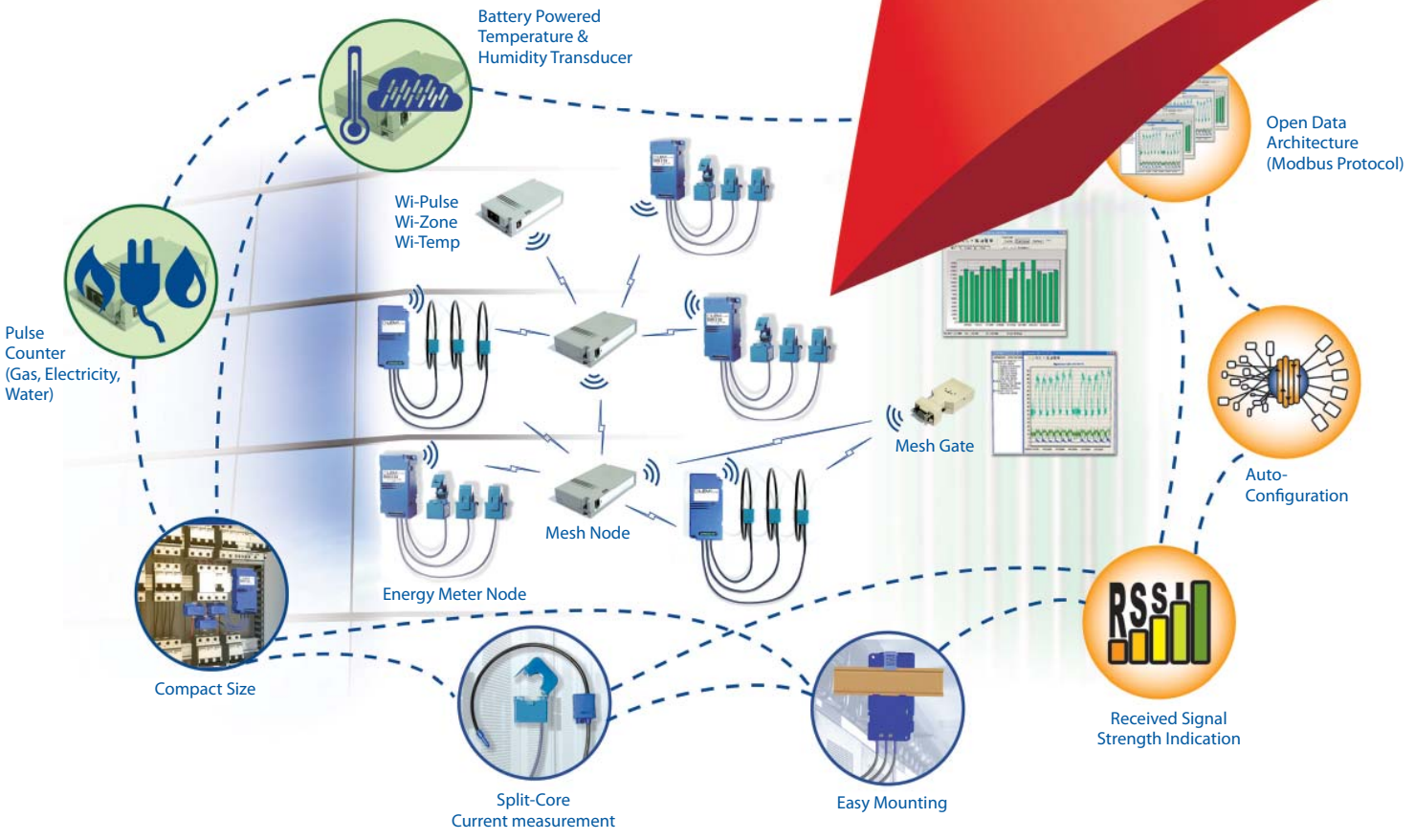
CONNECTED 

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.

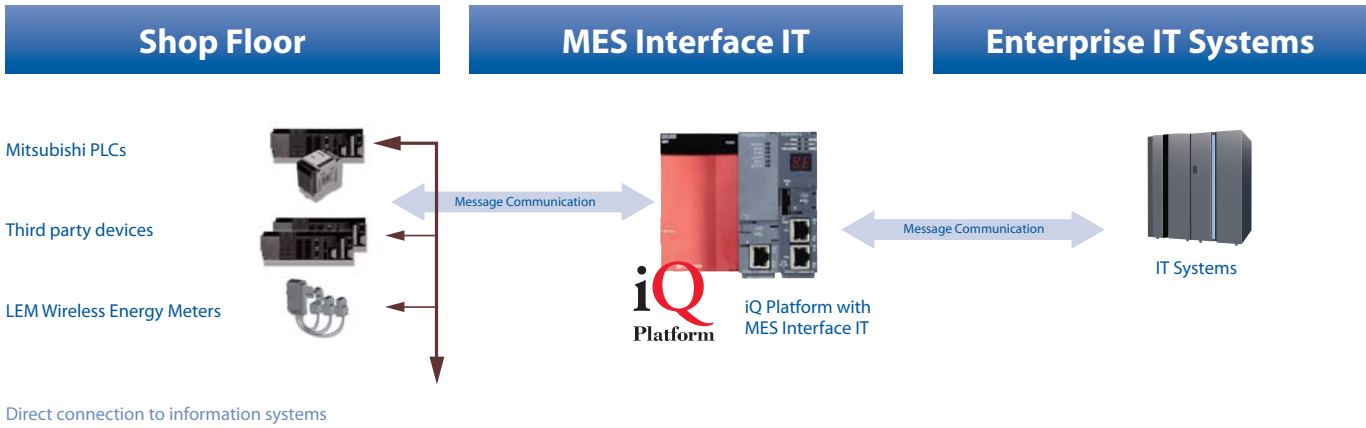
## Visibility

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 ///



## EUROPEAN BRANCHES

MITSUBISHI ELECTRIC EUROPE B.V. D-40880 Ratingen Phone: +49 (0)2102 / 486-0	<b>GERMANY</b>
MITSUBISHI ELECTRIC EUROPE B.V. CZ-158 00 Praha 5 Phone: +420- 251 551 470	<b>CZECH REPUBLIC</b>
MITSUBISHI ELECTRIC EUROPE B.V. F-92741 Nanterre Cedex Phone: +33 (0)1 / 55 68 55 68	<b>FRANCE</b>
MITSUBISHI ELECTRIC EUROPE B.V. I-20041 Agrate Brianza (MB) Phone: +39 039 / 60 53 1	<b>ITALY</b>
MITSUBISHI ELECTRIC EUROPE B.V. PL-32-083 Balice Phone: +48 (0)12 / 630 47 00	<b>POLAND</b>
MITSUBISHI ELECTRIC EUROPE B.V. E-08190 Sant Cugat del Vallés (Barcelona) Phone: 902 131121 // +34 935653131	<b>SPAIN</b>
MITSUBISHI ELECTRIC EUROPE B.V. UK-Hatfield, Herts. AL10 8XB Phone: +44 (0)1707 / 27 61 00	<b>UK</b>

## EUROPEAN REPRESENTATIVES

GEVA Wiener Straße 89 AT-2500 Baden Phone: +43 (0)2252 / 85 55 20	<b>AUSTRIA</b>	AutoCont CS. s.r.o. Technologická 374/6 CZ-708 00 Ostrava-Pustkovec Phone: +420 595 691 150	<b>CZECH REPUBLIC</b>	KAZPROMAUTOM. Ltd. Mustafina Str. 7/2 KAZ-470046 Karaganda Phone: +7 7212 / 50 11 50	<b>KAZAKHSTAN</b>	Beijer Electronics AS Postboks 487 NO-3002 Drammen Phone: +47 (0)32 / 24 30 00	<b>NORWAY</b>	Beijer Electronics AB Box 426 SE-20124 Malmö Phone: +46 (0)40 / 35 86 00	<b>SWEDEN</b>	TEXEL ELECTRONICS Ltd. 2 Ha'umanut, P.O.B. 6272 IL-42160 Netanya Phone: +972 (0)9 / 863 39 80	<b>ISRAEL</b>
TEHNIKON Oktyabrskaya 16/5, Off. 703-711 BY-220030 Minsk Phone: +375 (0)17 / 210 46 26	<b>BELARUS</b>	B-ELECTRIC, s.r.o. Mladoboleslavská 812 CZ-197 00 Praha 19 - Kbely Phone: +420 286 850 848	<b>CZECH REPUBLIC</b>	Beijer Electronics SIA Vestienas iela 2 LV-1035 Riga Phone: +371 (0)784 / 2280	<b>LATVIA</b>	Sirius Trading & Services Aleea Lacul Morii Nr. 3 RO-060841 Bucuresti, Sector 6 Phone: +40 (0)21 / 430 40 06	<b>ROMANIA</b>	Omni Ray AG Im Schörl 5 CH-8600 Dübendorf Phone: +41 (0)44 / 802 28 80	<b>SWITZERLAND</b>	CEG INTERNATIONAL Cebaco Center/Block A Autostrade DORA Lebanon - Beirut Phone: +961 (0)1 / 240 430	<b>LEBANON</b>
ESCO D & A Culliganlaan 3 BE-1831 Diegem Phone: +32 (0)2 / 717 64 30	<b>BELGIUM</b>	Beijer Electronics A/S Lykkegårdsvej 17, 1. DK-4000 Roskilde Phone: +45 (0)46 / 75 76 66	<b>DENMARK</b>	Beijer Electronics UAB Savanoriu Pr. 187 LT-02300 Vilnius Phone: +370 (0)5 / 232 3101	<b>LITHUANIA</b>	Craft Con. & Engineering d.o.o. Bulevar Svetog Cara Konstantina 80-86 SER-18106 Nis Phone: +381 (0)18 / 292-24-4/5	<b>SERBIA</b>	GTS Bayraktar Bulvari Nutuk Sok. No:5 TR-34775 Yukari ISTANBUL Phone: +90 (0)216 526 39 90	<b>TURKEY</b>	CBI Ltd. Private Bag 2016 ZA-1600 Isando Phone: +27 (0)11 / 977 0770	<b>SOUTH AFRICA</b>
Koning & Hartman b.v. Woluwelaan 31 BE-1800 Vilvoorde Phone: +32 (0)2 / 257 02 40	<b>BELGIUM</b>	Beijer Electronics Eesti OÜ Pärnu mnt.1601 EE-11317 Tallinn Phone: +372 (0)6 / 51 81 40	<b>ESTONIA</b>	ALFATRADE Ltd. 99, Paola Hill Malta-Paola PLA 1702 Phone: +356 (0)21 / 697 816	<b>MALTA</b>	INEA SR d.o.o. Izletnicka 10 SER-113000 Smederevo Phone: +381 (0)26 / 617 163	<b>SERBIA</b>	CSC Automation Ltd. 4-B. M. Raskovoyi St. UA-02660 Kiev Phone: +380 (0)44 / 494 33 55	<b>UKRAINE</b>		
INEA BH d.o.o. Aleja Lipa 56 BA-71000 Sarajevo Phone: +387 (0)33 / 921 164	<b>BOSNIA AND HERZEG.</b>	Beijer Electronics OY Jaakonkatu 2 FIN-01620 Vantaa Phone: +358 (0)207 / 463 500	<b>FINLAND</b>	INTEHSIS srl bld. Traian 23/1 MD-2060 Kishinev Phone: +373 (0)22 / 66 4242	<b>MOLDOVA</b>	AutoCont Control s.r.o. Radlinského 47 SK-02601 Dolny Kubin Phone: +421 (0)43 / 5868210	<b>SLOVAKIA</b>	ILAN & GAVISH Ltd. 24 Shenkar St., Kiryat Arie IL-49001 Petah-Tiqva Phone: +972 (0)3 / 922 18 24	<b>ISRAEL</b>		
AKHNATON 4 Andrej Ljapchev Blvd. Pb 21 BG-1756 Sofia Phone: +359 (0)2 / 817 6004	<b>BULGARIA</b>	UTECO A.B.E.E. 5, Mavrogenous Str. GR-18542 Piraeus Phone: +350 211 / 1206 900	<b>GREECE</b>	HIFLEX AUTOM. B.V. Wolvenverstraat 22 NL-2984 CD Ridderkerk Phone: +31 (0)180 - 46 60 04	<b>NETHERLANDS</b>	CS MTrade Slovensko, s.r.o. Vajanského 58 SK-92101 Piestany Phone: +421 (0)33 / 7742 760	<b>SLOVAKIA</b>	INEA d.o.o. Stagne 11 SI-1000 Ljubljana Phone: +386 (0)1 / 513 8100	<b>SLOVENIA</b>		
INEA CR d.o.o. Losinjska 4 a HR-10000 Zagreb Phone: +385 (0)1 / 36940-01 / 02 / 03	<b>CROATIA</b>	MELTRADE Ltd. Fertő utca 14. HU-1107 Budapest Phone: +36 (0)1 / 431-9726	<b>HUNGARY</b>	Koning & Hartman b.v. Haarlerbergweg 21-23 NL-1101 CH Amsterdam Phone: +31 (0)20 / 587 76 00	<b>NETHERLANDS</b>						



Mitsubishi Electric Europe B.V. /// FA - European Business Group /// Gothaer Straße 8 /// D-40880 Ratingen /// Germany  
Tel.: +49(0)2102-4860 /// Fax: +49(0)2102-4861120 /// info@mitsubishi-automation.com /// www.mitsubishi-automation.com

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