

# YATIRON SMART CITY AND ENERGY





**Intelligence Makes the Dream Come True** 

Let's be more SMART, GREEN and HEALTH...



Ver.: 2024.04.01



#### **COMPANY PROFILE**

**YATRON** was established in 2006 with the technical support of **General Electric - GE** of the United States. It is a comprehensive holding group.

Its subsidiary "YATRON Smart City and Energy Group" is the world's leading Green and Smart City diversity organization. Its businesses include: Green and Smart City Solutions, Smart factories and Smart manufacturing, Smart energy management, Smart agriculture, Smart buildings, Smart healthcare, Smart transportation, Smart education, Smart sports, new semiconductor materials, etc. We are present in fields such as industrial manufacturing, energy, semiconductors, commerce, data centers, water treatment, transportation, sports facilities, medical systems, fishery and agriculture, education and culture, event planning and exhibitions, etc. YATRON utilizes its own core technologies and products and integrates various system resources.

We provide customers with comprehensive end products and service solutions to ensure the reliability and protection of production, power and energy infrastructure. And continue to implement Chinese and German TÜV SÜD ISO9001, ISO14001, ISO50001, ISO14064 Greenhouse Gases (GHG) Emissions and Removals, ISO14067 Greenhouse gases-Carbon footprint of products, PAS2060 Carbon Neutrality etc..

Corporate social responsibility (CSR) and ESG are YATRON's long-term concepts for sustainable development.

\*\*\*

- Corporate Social Responsibility (CSR)
- ESG "Environment" (Environment), "Social Responsibility" (Social), "Corporate Governance" (Governance)



## SCOPE OF BUSINESS

• 00000	Smart Systems Green and Smart City Smart Factory and Smart manufacturing Smart Big Data and AI Smart 3D Printing System Smart Energy Management System		Solutions Data Center Smart UPS and solutions Smart Lighting Solutions Electrical and Mechanical equipment Construction Material
	Smart Power System Smart Agriculture and Fisheries Smart Education Smart Sports Smart consultancy Smart Operational Technology (OT) and Information Technology (IT)	• • •	Construction and MEP Engineering EPC Turn-key Facility Management
•	Manufacturing and System Integration Smart Low-voltage switchgears and controlgear equipment Smart LV and MV Components Smart Energy Management System Smart Power Quality Cable and Wire Smart Lighting Custom made system, hardware and software	• 0000000	Investment and Management Contract energy management PPP, BOT, BT Mega Complex building and Infrastructure Mega Shopping Mall Resort, Hotel, Service apartment Commercial building High-end residential building Industrial plant, Intelligence Warehouse
	Climate and Energy Climate and Energy Consulting Service Energy Management System (EnMS) Renewable Energy Wind and Solar Energy System Electric Vehicle and Charger System Energy Storage System (ESS) Industrial and Building automation integration (BAS, SCADA, PLC)		Power plant Power substation and Water plant Highway, Railway, Airport and Port Renewable Energy   Wind and Solar Energy Industry, infrastructure, Energy Investment Consulting Service



### HISTORY

#### **YEAR/MONTH**

#### **CASE**

2024/07/01	Establish YATRON Australia
2022/07/01	Establish YATRON Pacific Rim Center in Hainan, China
2021/07/01	Establish YATRON Technology Center in Guangzhou, China
2019/10/01	Establish YATRON Europe
2018/11/02	Reorganized into YATRON Group in UK
2018/09/20	TÜV SÜD/ISO 14001 Environmental Management
2018/08/20	Establish YATRON Thailand
2017/10/04	TÜV SÜD/ISO 50001 Energy Management
2015/11/02	Establish YATRON International in Taiwan
2015/07/20	Establish YATRON International in Macau
2014/08/20	Establish YATRON Malaysia(Group HQ of ASEAN)
2014/07/20	Establish YATRON Taiwan and Indonesia
2013/07/20	Establish YATRON Hong Kong
2012/09/11	YATRON Group ERP Online
2010/09/29	TÜV SÜD/ISO 9001
2010/05/01	Authorized LV Equipment Manufacturer by GE Energy
2010/03/01	Establish YATRON Factory in Zhuhai, China
2009/04/08	YATRON obtains the qualification of authorized partner of
	General Electric - GE Consumer and Industrial in United States, started
	deep cooperating with the world's largest conglomerate – an global leader
	in energy and automation industry
2008/09/01	Establish YATRON Zhuhai, China
· . · .	Establish YATRON Macau
2006/07/20	Establish YATRON R&D and Manufacturing Center in Taiwan
	[Technical support by General Electric - GE of the United States]









Powered by GE



### **GLOBAL FOOTPRINT**



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### **GLOBAL FOOTPRINT - EUROPE**



- GLOBAL HQ: London, UK
- R&D CENTER: Germany | Munich
- MANUFACTURING CENTER:
  - Germany | Munich
  - Italy | Milano
- BRANCH / REP. / EXP. CENTER
  - UK | London
  - ☐ Germany | Berlin, Munich
  - **□** France | Paris

Ver.: 2024.04.01



### **GLOBAL FOOTPRINT - ASIA**



- **ASIA HQ:** Macau S.A.R
- OPERATION CENTER
  - ☐ China | Guangdong | Zhuhai
- **R&D CENTER:** Taiwan | New Taipei
- **TECH. CENTER:** China | Guangzhou
- FINANCE CENTER: Hong Kong S.A.R
- PACIFIC RIM CENTER
  - ☐ China | Hainan | Qiongzhong
- MANUFACTURING CENTER:
  - China | Guangdong | Zhuhai, Jiangman
  - Taiwan | New Taipei city
- BRANCH / REP. / EXP. CENTER
  - Hong Kong SAR, Macau SAR
  - ☐ Taiwan | Taipei, Kaohsiung, Taichung
  - ☐ China | Guangdong | Zhuhai, Guangzhou
  - ☐ China | Hainan | Haikou, Qiongzhong
  - ☐ Singapore (HQ of ASEAN)
  - Malaysia | Kuala Lumpur
  - ☐ Thailand | Bangkok
  - ☐ Indonesia | Jakarta
  - Philippines | Manila
  - ☐ Vietnam | Hanoi



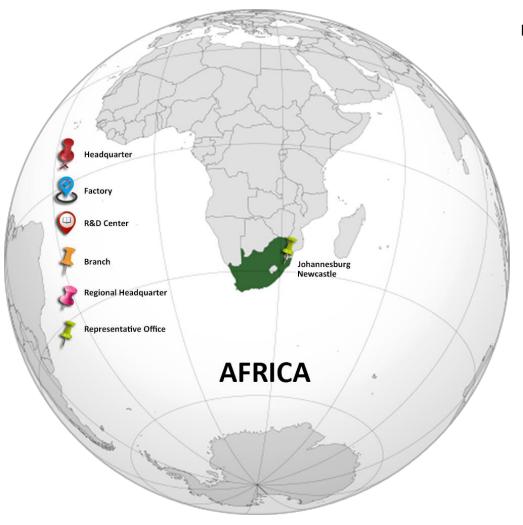


- BRANCH / REP. / EXP. CENTER
  - Australia | Brisbane | Queensland

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### **GLOBAL FOOTPRINT - AFRICA**

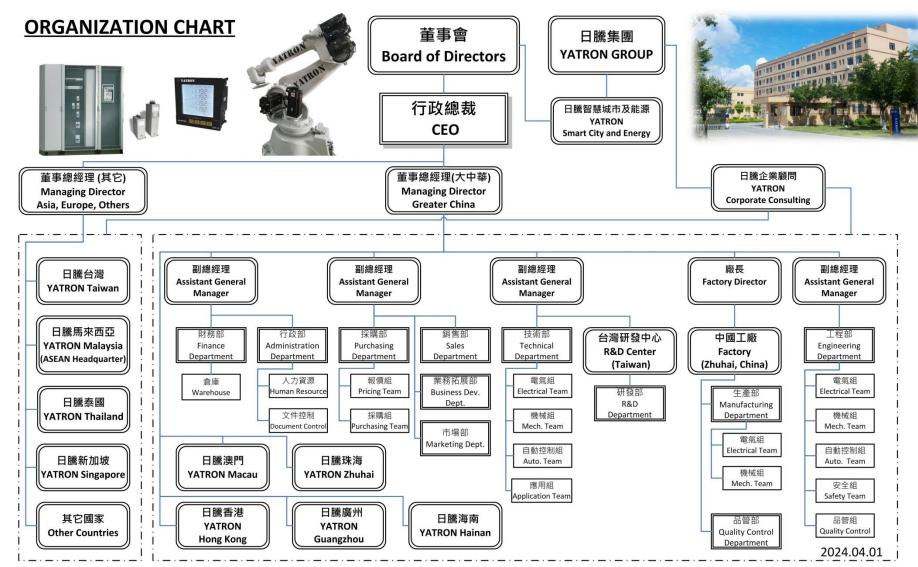


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  - South Africa | Johannesburg
  - South Africa | Newcastle

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### **ORGANIZATION CHART**



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#### **CERTIFICATES**





### **TOTAL SOLUTIONS**























#### **CORE BUSINESS**

### Manufacture and Solutions

- **KenerCITY**
- Smart City
- KenerSys
- Smart Factory and Manufacturing
  - Smart Production Line
  - Smart Robot, AGV, ARM, UAV(UAS)
  - Smart Conveyer
  - Smart 3D Printing
- Smart Energy Management
- Smart Building
- Smart Fisheries and agriculture
- Smart Museum



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#### **CORE BUSINESS**

### Manufacture and Solutions

- KenerPower
- Smart Industrial Solutions
  - Switchgears and Controlgears
  - Busway (Busbar Trunking)
  - LV and MV Components
  - Power Quality and UPS
  - EV Charging System
  - ☐ Cable and Wire
  - ☐ Lighting Solutions

**KenerPV** 

- Smart Renewable Energy (Solar Photovoltaics)
  - PV panel
  - Inverter
  - Energy Storage Solution
- Smart Pneumatic system





### **SMART CITY - SUSTAINABLE**

### **Smart City**

**AUTOMATION | IOT | BIG DATA | MACHINE LEARNING | AI** 



**Smart City need Smart Energy and IoT** 

Let's be SMART ...



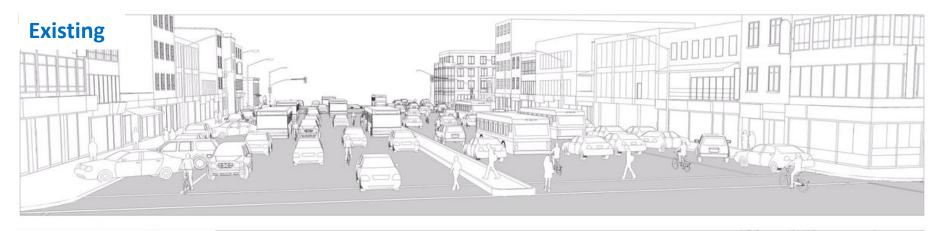


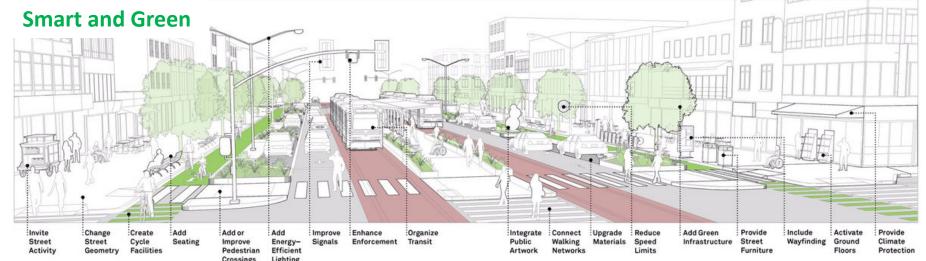
### SMART CITY - SUSTAINABLE KenerCITY



### **Smart City**

#### AUTOMATION | IOT | BIG DATA | MACHINE LEARNING | AI







#### **SMART CITY - SUSTAINABLE**



### **Green and Smart City – Core Elements**



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### SMART CITY - SUSTAINABLE KenerCITY



### **Green and Smart City – Core Elements**

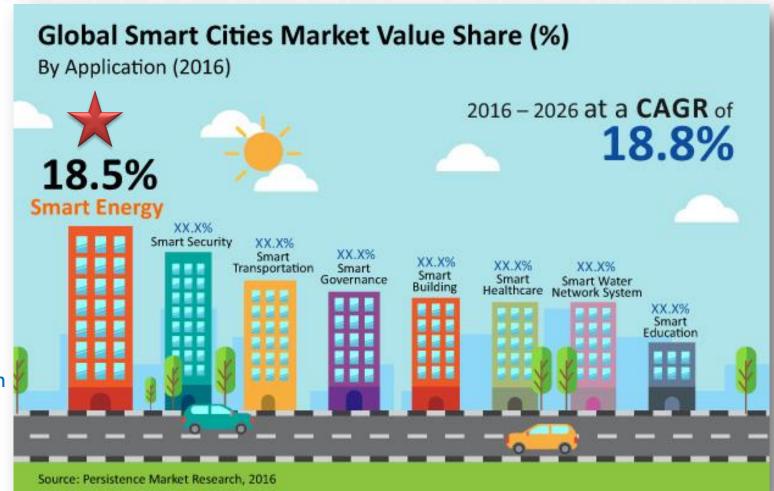




### SMART CITY - SUSTAINABLE KenerCITY



### **Green and Smart City – Core Elements**







# **YATRON**°

# Smart City IOT | BIG DATA | MACHINE LEARNING | AI



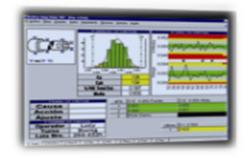


### **ENERGY MANAGEMENT SYSTEM**

### **Smart Energy Management System**

IOT | BIG DATA | MACHINE LEARNING | AI











#### BENEFIT



#### **BENEFIT of YATRON Energy**

- Authorized Business Partner | Powered by GE
  - Global Technical Support, Technical Transfer and Experience.
- Authorized Business Partner | Powered by ITRI Taiwan
  - Top ONE Technical Support, Technical Transfer and Experience of High Technology and Traditional Industry in Taiwan
  - 6,000 R&D employees.
  - 400 R&D employees in Green Energy and Environment Research Laboratories.
  - Support the BIG DATA Analysis and System improvement for end users.
- YATRON Energy's Technical and Service team by Global teams
  - $\blacksquare$  Headquarter of Europe in London, UK  $\rightarrow$  Best service for Europe and Africa.
  - R&D Center in Taiwan, Munich, Milano → High Quality R&D and production team.
  - EMS products Made in Taiwan and Europe → High Quality.
  - Headquarter of Asia in Macau, teams in Macau, Hong Kong, Taiwan and mainland China → Best service for Greater China.
  - $\blacksquare$  Headquarter of ASEAN in Singapore  $\rightarrow$  Best service for ASEAN.
  - Branch Company and Service Center cover each regions  $\rightarrow$  Fast response time.
  - Strong team background and experience about Owner, Consultancy, Contractor, Manufacturer and S.I → Well known all parties' mindset and requirement.



#### **KEY TOPIC**



- ENERGY MANAGEMENT
  - ENERGY SAVING
  - ENERGY CONTROL AND MONITORING
- SYSTEM IMPROVEMENT
- SUSTAINABILITY
- CSR (CORPORATE SOCIAL RESPONSIBILITY)
- **ESG** 
  - E = ENVIRONMENT
  - S = SOCIAL RESPONSIBILITY
  - G = CORPORATE GOVERNANCE
- CARBON NEUTRAL





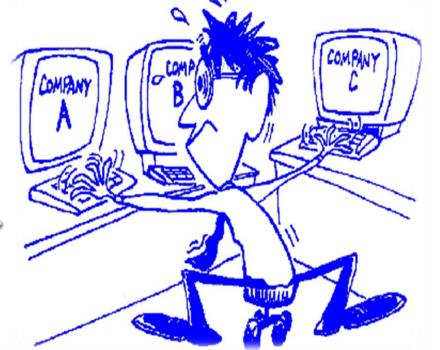
#### **KEY TOPIC**



### THE PROBLEMS WITHOUT BAS/EMS

Without BAS and EMS in the factory or building, the equipment and systems will be some issues...

- Control issue
- Management issue
- Maintenance issue
- > Risk issue
- Energy loss issue





### **ENERGY CONSULTING**



#### WHY YOU NEED ENERGY CONSULTANT?

#### CARBON NEUTRAL AND ESG

- ISO 50001 / ISO 14064 / ISO 14067 / ISO 14044
- Product selling prices getting lower and lower? → Enhance corporate image and enhance the additional value
- Increase cost of the production  $\rightarrow$  Reduce costs of production, improve efficiency
- Facing difficulty in cost control / reduce? "Bottleneck" → Creativity and assist by advance technology
- Competitiveness of price, market and service decreasing? → Utilize advance technology to reduce manpower
- Decline of competitive advantages → Innovation in management practices
- Plan of the corporate sustainable development direction and pace? → Advisory from international professional consultant



- Global client request for the Corporate Social Responsibility Report and ESG report?
   → ISO 50001 / ISO 14064 / ISO 14067 / ISO 14044 → Improve corporate image
- Compliance with legal requirements in the local markets? → Energy saving→Improve corporate image
- How to improve the corporate culture? → Improve working environment and corporate image

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### **ENERGY CONSULTING**



#### WHY YOU NEED ENERGY CONSULTANT?

- Compliance with industry best practices or standards  $\rightarrow$  ISO 50001
- Improve the company's reputation among customers → ISO 50001 → Improve corporate image
- Employee lack of energy? ISO  $50001 \rightarrow$  Improve the work environment
- Low efficiency in production and yield? ISO 50001→Improve working environment
- Saving technological transformation projects have been done (Frequency conversion, LED, Heat recovery etc.), How to economize more energy and electricity? → ISO 50001 → It should be done to manage energy and the establishment of efficient energy management software platform
- Employee lack of energy saving concept? → ISO 50001 → Apply high-tech Energy management systems
- Do not have any method to link Energy Saving and KPI together? → ISO 50001 → Apply high-tech Energy management systems and software, it show Monthly, or real-time each sector performance, especially in energy performance.





### **KEY TOPIC**



#### **ENERGY MANAGEMENT, SAVING, CONTROL AND MONITORING**

<b>Build up the EnMS</b> (Energy Management System): Hardware + Software
Power Quality: Money saving.
<b>Air conditioning:</b> Process and environment requirement, temperature of rooms (Control and Monitoring).
Ventilation Fans: Air flow in the areas (Control and Monitoring).
Elevator and Escalator: Operation control, time control.
<b>Air Compressors:</b> Operation control, Pressure guarantee, Air leakage monitoring (Control and Monitoring).
Lightings: lux management in the working and public areas (Management)
Roof: Transparence and ventilation (Renovation).
Recycle of waste heat and cooling: preheat for process, warm water necessary. Precool and cooling recycle.
Energy Management System: electricity and cost monitoring and reports





Win the energy challenge with

ISO 50001









#### ISO 50001 — What is it?

- ISO 50001:2011, Energy management systems Requirements with guidance for use, is a voluntary International Standard developed by ISO (International Organization for Standardization).
- ISO 50001 gives organizations the requirements for energy management systems (EnMS).
- ISO 50001 provides benefits for organizations large and small, in both public and private sectors, in manufacturing and service, in all regions of the world.
- ISO 50001 will establish a framework for industrial plants; commercial, institutional, and governmental facilities; and entire organizations to manage energy.
- Targeting broad applicability across national economic sectors, it is estimated that the standard could influence up to 60% of the world's energy use.





#### ISO 50001 — What will it do?

- ISO 50001 will provide public and private sector organizations with management strategies to increase energy efficiency, reduce costs and improve energy performance.
- The standard is intended to accomplish the following :
- CARBON NEUTRAL AND ESG
- Assist organizations in making better use of their existing energy consuming assets
- Create transparency and facilitate communication on the management of energy resources
- Promote energy management best practices and reinforce good energy management behaviors
- Assist facilities in evaluating and prioritizing the implementation of new energy efficient technologies
- Provide a framework for promoting energy efficiency throughout the supply chain





#### ISO 50001 — What will it do?

- Facilitate energy management improvements for greenhouse gas emission reduction projects
- Allow integration with other organizational management systems such as environmental, and health and safety (ISO 9001, ISO 18000, ISO 14000)





# What are the top three reasons why your organization is interested in energy management?

- CARBON NEUTRAL, ESG, CSR
- Reduce/control costs
- Comply with industry best practices or standards
- Improve the company's reputation among customers
- Align with the existing corporate culture
- Protect the global climate
- Get relevant ideas from key clients
- Corporate Social Responsibility Statement in the Annual Report
- Comply with the legal requirements of the local market



### **SOLUTIONS**



### **ENERGY MANAGEMENT SYSTEM(EnMS)**

- Power Monitoring and Control System (PMCS)
- Power Quality Management System (PQMS)
- Energy Metering System
- Transformer Monitoring and Control System (TMCS)
- Carbon Emission Management System
- Wind and Solar Energy System
- EV Charger station for Electric Vehicle



### **MONITORING AND CONTROL**

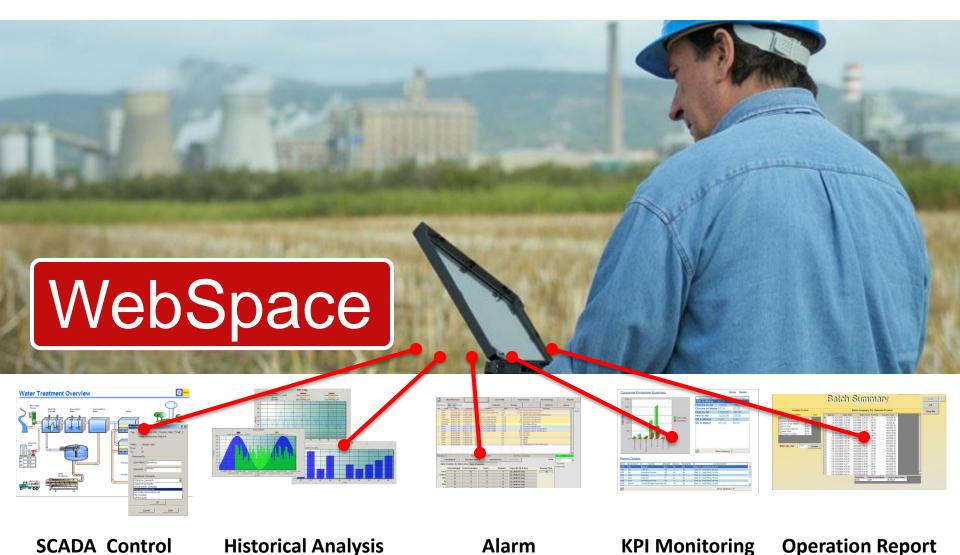






### **MONITORING AND CONTROL**



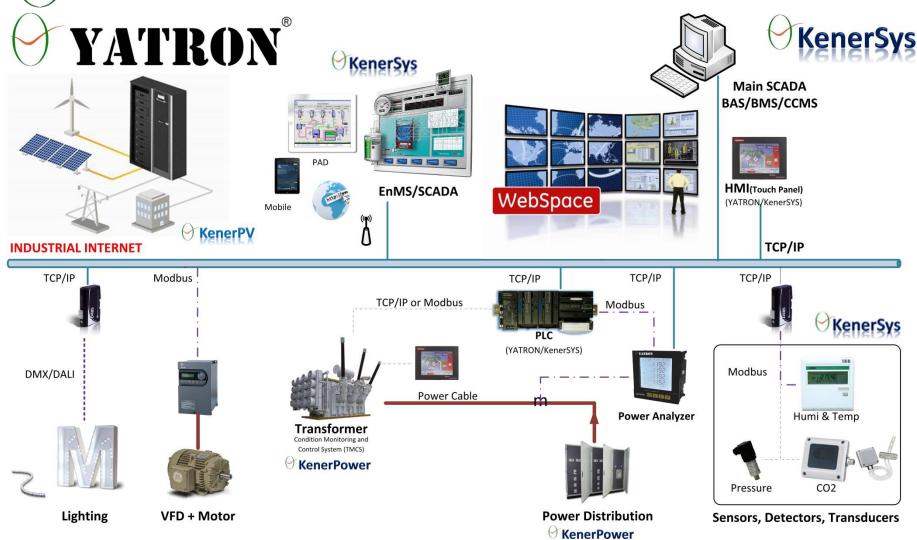


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### **MONITORING AND CONTROL**







# **MONITORING AND CONTROL**

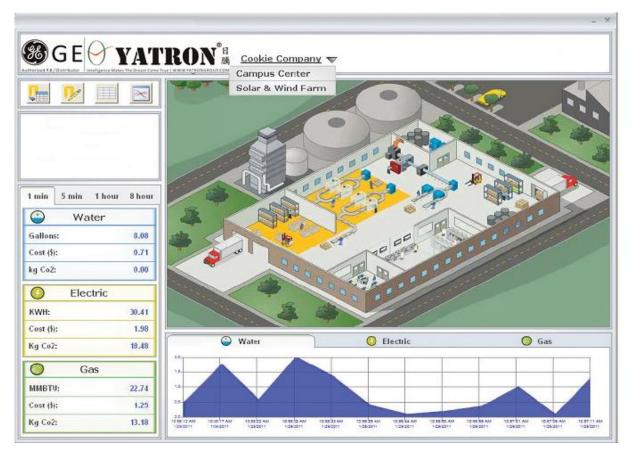






# **MONITORING AND CONTROL**





Leverage automatic and manual data collection methods

#### Contextualize raw data quickly

With a configuration wizard that includes CO2 conversion and/or cost conversion factors, you can immediately turn raw consumption figures into cost and emission figures that illustrate the value of reduction initiatives over time.

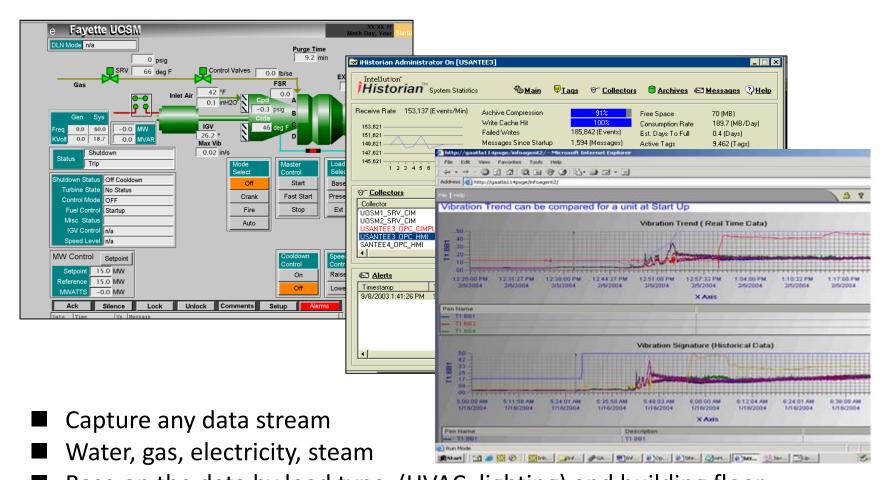
Use <u>Proficy</u> out of the box or build application-specific solutions

- Capture any data stream
- **Base on Consumer type and Loading**
- Water, gas, electricity, steam
- View data by load type (HVAC, lighting) or building floor



### **MONITORING AND CONTROL**





■ Base on the data by load type (HVAC, lighting) and building floor.

Collect and Evaluate the data. And we use those **BIG DATA** analysis and improve the system. **Energy saving up to 40%.** 



### **MONEY SAVING**





- → Energy saving up to 40%
- → Money saving up to 40%



→ As early you save one more day...

→ To earn more money \$\$\$...







### **SMART MUSEUM**

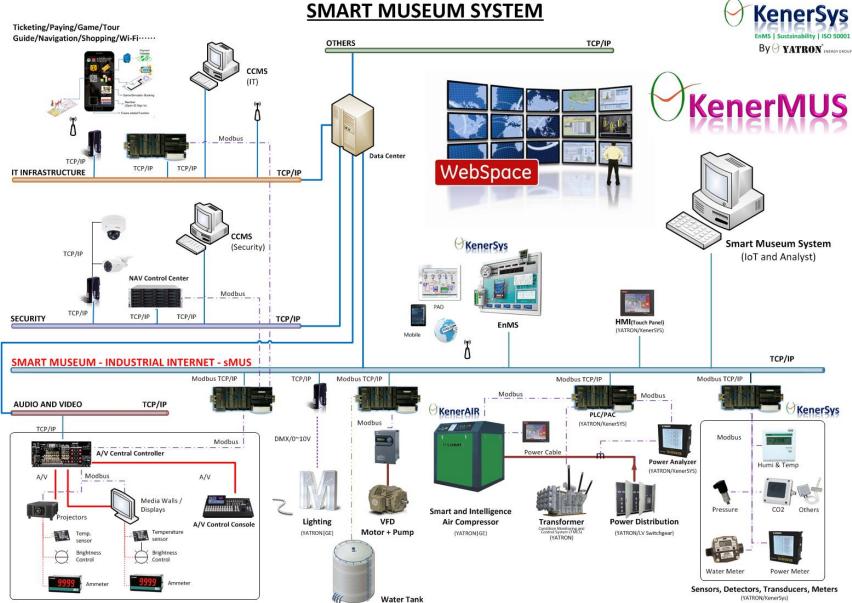
# Smart Museum System IOT | BIG DATA | MACHINE LEARNING | AI



Smart City need SMART MUSEUM
Let's be SMART ...



### **SMART MUSEUM**





### RENEWABLE ENERGY







### RENEWABLE ENERGY



**RENEWABLE ENERGY** 

WIND AND SOLAR ENERGY SYSTEM
TECHNICAL COOPERATION | SUPPORT FROM







工業技術研究院
Industrial Technology
Research Institute

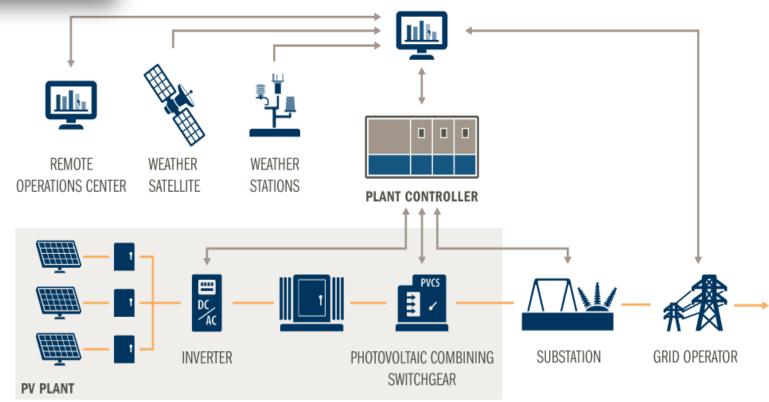






# BIPV Building-integrated Photovoltaics BIPV (large scale) & Grid Scale Solar Power Plant

PLANT SCADA





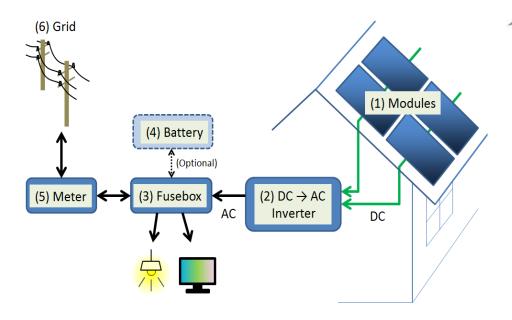


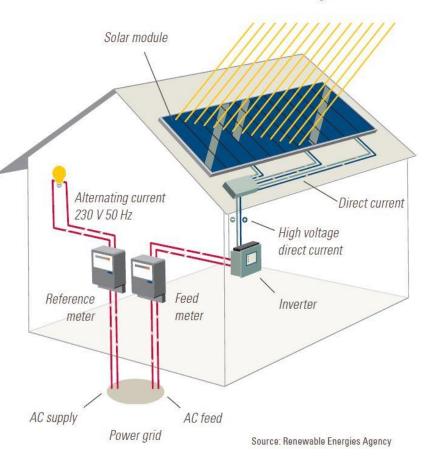
Sunlight



# **BIPV Building-integrated Photovoltaics**

**Home PV Solar Power Plant** 





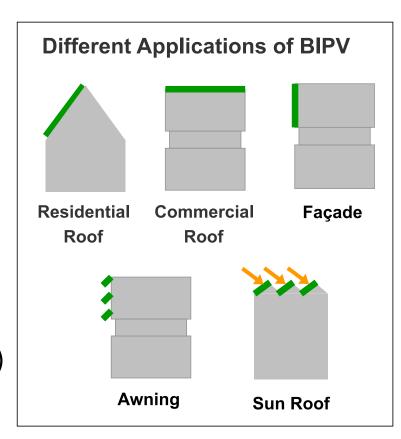




# BIPV Panel Building-integrated photovoltaics Panel

#### What is our Solutions?

- Polycrystalline Solar PV panels
- Polycrystalline Solar PV panels (Transparency)
- CIGS Solar PV panels
- CIGS Solar PV panels (Transparency)
- Monocrystalline Solar PV panels
- EnMS (Energy Management System) Integrate to YATRON's **KenerSys** EnMS...







BIPV Panel
Building-integrated photovoltaics
Panel





**CRYSTAL** Polycrystalline Solar PV

#### **SYSTEM BENIFITS**

- Global Level and Certificates
- 11 years long term operation.
- Comply with Most Exacting Standards
  - EN, TÜV SÜD/ISO, ITRI in the world.
- Transparency available.
- EnMS (Energy Management System) Integrate to YATRON's **KenerSys** EnMS...



**BLACKKA** CIGS Solar PV





#### **APPLICATIONS**

- Curtain Wall
- Canopy
- Rooftop

#### **BENEFITS**

- Beauty and Integrate to Building Façade Curtain wall.
- Transparency available.
- 4 standard colors. Other colors are available.
- Customer made available.



**CRYSTAL** Polycrystalline Solar PV











**CRYSTAL** Polycrystalline Solar PV

■ Crystal Black : 220W

■ Crystal Red: 240W

■ Crystal Green : 240W■ Crystal Amber : 235W

■ Size : Customer made

■ Cell Type : Poly crystalline cells

■ Wind Load: 5,400Pa

■ IP rating : IP67

Standards : EN, TÜV SÜD/ISO , ITRI

Transparency available





#### **APPLICATIONS**

- Curtain Wall
- Canopy
- Rooftop

#### **BENEFITS**

- Largest Size in the world
- Beauty and Integrate to Building Façade Curtain wall.
- Easy maintenance.
- Walkable
- Transparency available 5~20%.



**BLACKKA** CIGS Solar PV









- BENEFITS
- Beauty and Integrate to Building Façade Curtain wall.
- Easy maintenance.
- Walkable.
- Transparency.



**BLACKKA** CIGS Solar PV











**BLACKKA** CIGS Solar PV







**BLACKKA** CIGS Solar PV

■ Power : 130W ~ 160W

■ Size : 1100 x 1400mm

■ Cell Type : CIGS cells

■ Front Cover: Tempered glass

■ Back Cover : Tempered glass

■ Wind Load: 5,400Pa

■ IP rating : IP67

■ Standards : EN, TÜV SÜD/ISO, ITRI

■ Glass, EVA, Glass, EVA, Glass Transparency available

**5**~20%











#### **APPLICATIONS**

- Curtain Wall
- Canopy
- Rooftop

#### **BENEFITS**

■ Highest efficiency







**BLACKSTONE** Monocrystalline Solar PV









**BLACKSTONE** Monocrystalline Solar PV

■ Power : 285W ~ 310W

■ Size : 1100 x 1400mm

■ Cell Type : Mono crystalline cells

■ Front Cover : Tempered glass

■ Back Cover: Tempered glass

■ Wind Load: 5,400Pa

■ IP rating : IP67

■ Structure : Glass, EVA, Glass, EVA, Glass

■ Standards : EN 62716, EN 61701

☐ TÜV SÜD/ISO, ITRI



### **CONTROL SYSTEM**







YT-WM Industrial Enclosure

- Industrial Type
- BS EN, IEC, GB (EU, UK, China)
  - ☐ TÜV SÜD/ISO Certificate
  - ☐ IEC, BS EN 62208
- Excellent performances
  - **■** IP66
  - Outdoor type Powder coating, 15 years warranty.



### **POWER ANALYZER AND METERING**





**KenerSys** Power Analyser



- Industrial Type
- BS EN, IEC, GB (EU, UK, China)
  - ☐ TÜV SÜD/ISO Certificate
  - ☐ IEC, BS EN, EMC
- Excellent performances and accuracy
- Power consumption and CO rating.
- Long distance RS485 communication (Modbus RTU Mode)



### **SOFTWARE AND INTEGRATION**

























**SOFTWARE AND INTEGRATION** 





**KenerSys** Energy Management System

# Integrate KenerPV to KenerSys Energy Management System

- International Level and Certificates
- Industrial Grade
- BS EN, IEC, GB (EU, UK, China)
  - ☐ TÜV SÜD/ISO Certificate
  - ☐ IEC, BS EN, EMC
- Excellent performances and accuracy



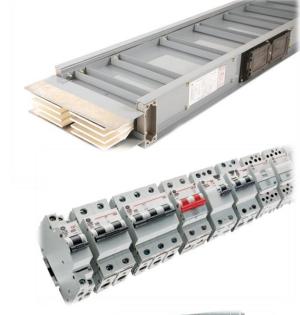




KenerPower



Modula Plus - Modula 630











- Power Distribution, Renewable and Green Energy
  - □ HV, MV, LV Switchgear and Controlgear, Component, RMU, Busway
  - ☐ UPS, ATS, PLC, SCADA, Power Analyzer, Transformer
  - ☐ Solar and Wind System | EV Charger Station



Lighting Solutions













# **GLOBAL PARTNERS AND RESOURCES**

























**EMERSON** 



**Panasonic** 

















































































### ■ Low voltage Switchgears and Controlgears Assembles

Brand:	*YATRON®	YATRON®	<b>YATRON</b> ®
Series:	Modula Plus	Modula 630	YT-M
Standard:		BS EN / IEC 61439	
Nominal Current:	Up to 4000A	Up to 630A	Up to 125A
Nominal Voltage:	690AC-50/60Hz	690AC-50/60Hz	690AC-50/60Hz
Degrees of protection:	IP30, IP41, IP43, IP55	IP30, IP41, IP43, IP55	IP40, IP43
Size and Units:	H: 2000mm W: 400, 650, 900mm D: 500, 700, 1000mm	H: 545~1910mm W: 600, 900mm D: 250, 300mm	4~60 Units
TATION AND THE RESIDENCE OF THE PARTY OF THE			O YATRON:





### Busway (Busbar Trunking System)

Brand:	<b>YATRON</b> ®
Series:	KenerBuss
Standard:	BS EN / IEC 61439
Nominal Current:	100 to 5000A
Nominal Voltage:	690AC-50/60Hz
Degrees of protection:	IP40, IP54, IP66
Plugin Units:	25 to 400A
Options:	Temperature and Vibration Monitoring, IoT





### ■ Industrial Enclosure and Rack System

Brand:	<b>YATRON</b> ®	<b>YATRON</b> ®	<b>YATRON</b> ®
Product name:	Industrial Enclosure	Weather proof Encl.	Computer Rack
Standard:		BS EN / IEC 62208	
Series:	YT-WM	YT-SMB	YT-R
Nominal Current:	Up to 630A	Up to 125A	24, 42, 48U
Nominal Voltage:	690AC-50/60Hz	690AC-50/60Hz	400AC-50/60Hz
Degrees of protection:	IP41, IP43, IP55, IP66	IP55, IP66, IP67	IP20
Size and Units:	H: 300~2000mm W: 300~1000mm D: 200~300mm	H: 30~1910mm W: 50~900mm D: 50~300mm	H: 1200~2250mm W: 600, 800mm D: 1100, 1200mm





### ■ Low voltage and Medium Voltage Components

Brand:	EAT-N	SE FATON	<b>YATRON</b> ®
Product name:	ACB	ACB	ACB
Series:	M-Pact	Entelliguard G	KenerPMP
Nominal Current:	400~4000A	400~6400A	400~6300A
Nominal Voltage:	690AC-50/60Hz	690AC-50/60Hz	690AC-50/60Hz
Breaking capacity:	50~80kA	50~150kA	50~80kA
EMERSON Schneider Electric SIEMENS	MACT TALL		TATION TO SECURE A SE





### ■ Low voltage and Medium Voltage Components

Brand:	GE FATON	GE FATON	<b>YATRON</b> ®
Product name:	МССВ	МССВ	МССВ
Series:	Record Plus	Record MC	KenerPMC
Nominal Current:	Up to 1600A	Up to 1600A	Up to 1600A
Nominal Voltage:	690AC-50/60Hz	690AC-50/60Hz	690AC-50/60Hz
Breaking capacity:	25~150kA	25~35kA	25~35kA
EMERSON Schneider Electric SIEMENS		ACC	TATHOX





### ■ Low voltage and Medium Voltage Components

Brand:	EAT-N	<b>YATRON</b> ®	<b>YATRON</b> ®
Product name:	MCB Surge Arrester	МСВ	Surge Arrester
Series:	Redline	KenerPGL	KenerPGL
Nominal Current:	Up to 125A	Up to 125A	limp 15~100kA
Nominal Voltage:	400AC-50/60Hz		
Breaking capacity:	6~125kA	6~10kA	
Schneider Electric SIEMENS		TATION COLUMN TO THE PARTY OF T	THEORY  THEORY





### ■ Low voltage and Medium Voltage Components

Brand:	EAT-N	<b>YATRON</b> ®	FAT•N
Product name:	Isolator Loadbreak Disconnector	Isolator Loadbreak Disconnector	Fuse Link Fuse Holder
Series:	<ul><li>Dilos</li><li>Fulos</li></ul>	> KenerPD	> Bussmann
Nominal Current:	20 ~ 2500A	20 ~ 2500A	2 ~ 1250A
Nominal Voltage:	Up to 690AC-50/60Hz	Up to 690AC-50/60Hz	Up to 690AC- 50/60Hz
ABB			











# AUTOMATION AND CONTROLS OKenerPower

### **I** Control and Instrument Components

Brand:	FAT-N	EMERSON  EAT•N OMRON	<b>YATRON</b> ®
Product name:	> Contactor	<ul><li>Relay, Controls</li><li>Lamps , Button</li></ul>	<ul><li>Power Analyzer</li><li>Sensors</li></ul>
Series:	M, CL, CK, CB Line		KenerSys
Nominal Current:	9~1250A		
Nominal Voltage:	690AC-50/60Hz	690AC-50/60Hz	
MOTION & CONTROL*  NSK  ABB  Schneider  Electric  SIEMENS	1tr 3tg 5tg		YATRON  192  192  192  192



# **POWER QUALITY**



### Low voltage and Medium Voltage Components and System

		itage Components	
Brand:	<b>YATRON</b> ®	<b>YATRON</b> ®	<b>YATRON</b> ®
Product name:	Capacitor bank	Reactor	Harmonic Filter System
Series:	KenerCAP	KenerRA	KenerHAR
Nominal Current:			
Nominal Voltage:	240V, 480V, 525V, 600V, 900V		
Capacity:	10kVar ~ 100kVar	0.6kVar ~ 20kVar	
Schneider Electric	Tatles Tables		O YATRON MARADIPET
<b>SIEMENS</b>			



# **POWER QUALITY**

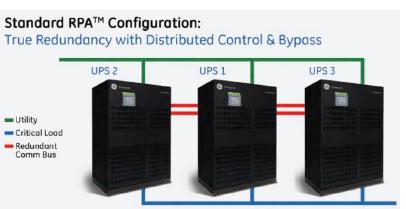


#### **■** UPS (Uninterruptible Power Supply)

Brand:	(ge)	FAT•N	ABB
Series:		Tower Rack Mount	
Output power rating:		1 to 600kVA	
Nominal Voltage:	380/400/415VAC-50/60Hz		
Efficiency:		Up to 99%	









# RENEWABLE ENERGY



#### Solar Photovoltaics (PV)

Brand:	<b>YATRON</b> ®	<b>YATRON</b> ®
Product name:	PV Panel	PV Panel
Series:	KenerPV - BLACKSTONE	KenerPV - CRYSTAL
Cell type:	Mono crystalline	Polycrystalline
Power:	285W ~ 510W	220W ~ 240W
Size:	1100 x 1400mm	Customer made
Standards:	EN 62716, EN 61701	EN 62716, EN 61701



# RENEWABLE ENERGY

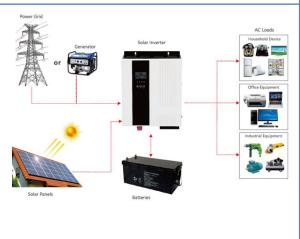


#### **■** Solar Inverter

Brand:	<b>YATRON</b> ®		
Product name:	Inverter		
Series:	KenerPV		
Application:	Solar PV		
Power:	1000 ~ 7200W		
Battery voltage:	12, 24, 48VDC		
Standards:	BS EN / IEC		
	Power Grid  AC Loads  Insualinist Device		









# RENEWABLE ENERGY



#### **■** ESS (Energy Storage System)

Brand:	<b>YATRON</b> ®			
Product name:	ESS (Energy Storage System)  KenerPV			
Series:				
Application:	Solar PV	EV Charging Station		
Power:	3 ~ 3!	50kW		
Size:	Customer made			
Standards:	BS EN / IEC			









## AUTOMATION AND CONTROLS OKenerPower



#### **Security System**

#### **Brand:**



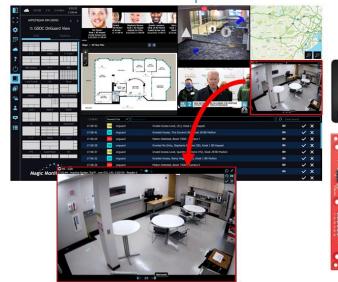
#### Honeywell



#### **SIEMENS**

#### **Product name:**

- **Security Management System**
- **Access Control System**
- **CCTV**
- ✓ People Counting, Analystic and Facial Recognition
- ✓ Multi-imager
- ✓ Thermal













## **AUTOMATION AND CONTROLS**



#### Automation and Pneumatic Components

#### **Brand: FESTO EMERSON EMERSON NATIONAL ASCO | AVENTICS INSTRUMENTS TESCOM | TOPWORX** PLC, PAC, IPC, HMI **Fluid Control Fluid Control Product name:** Industrial I/O **Pneumatics Pneumatics Motion Control Precision Fluid control Precision Fluid control Ethernet Switches Position Sensing & Indication** Schneider Electric Rockwell Automation Honeywell

Ver.: 2024.04.01

**SIEMENS** 



**Brand:** 

## AUTOMATION AND CONTROLS



#### Software – Smart Manufacturing and Automation











#### **Product name:**

- PLC, PAC, IPC, HMI
- **EnMS (Energy Management System)**
- **SCADA**
- **Smart Manufacturing**













# 3D PRINTING



Brand:	# phrozen	formlabs 😿	<b>YATRON</b> ®
Product name:	3D Printer	3D Printer	3D Printing System
Application:	Commercial	Commercial Industrial	Commercial Industrial Custom made
Series:	Sonic	Form	KenerSys
Standards:		BS / EN / IEC / UL / ASTM	
Grade:	Player	Professional	Professional
			DOER.



# CABLE AND WIRE



Brand:	<b>YATRON</b> ®	<b>YATRON</b> ®	<b>YATRON</b> ®
Product name:	H07V-U (Solid, Class 1)	H07V-R (Stranded, Class 2)	H07V-K (Flexiable, Class 5)
Series:			
Nominal Cross Section Area:	0.5 ~ 4mm2	1.5 ~ 240mm2	1.5 ~ 240mm2
Standards:	IEC 60227-3 EN 50525-2-31	IEC 60227-3 EN 50525-2-31	IEC 60227-3 EN 50525-2-31
Rated Voltage:	300/500V, 450/750V	450/750V	450/750V
Temperature:	<b>70</b> °C / <b>90</b> °C	<b>70</b> °C / <b>90</b> °C	<b>70</b> °C / <b>90</b> °C
	YATRON H07V-U 1x1.5 450/750V IEC 60227-3	YATRON H07V-R 1x16 450/750V IEC 60227-3	YATRON H07V-K 1x16 450/750V IEC 60227-3



# CABLE AND WIRE



Brand:	<b>YATRON</b> ®	<b>YATRON</b> ®	<b>YATRON</b> ®
Product name:	XLPE/PVC	Halogen Free (LSOH)	SWA or AWA
Series:			
Nominal Cross Section Area:	1.5 ~ 800mm2	1.5 ~ 800mm2	1.5 ~ 800mm2
Standards:	IEC 60502-1	IEC 60332-1 & 3 IEC 60754, IEC 61034	IEC 60502-1
Rated Voltage:	0.6/1kV	0.6/1kV	0.6/1kV
Temperature:	90℃	90℃	<b>90</b> ℃
	Copper Conductor  XLPE Insulation  Inner Covering  PVC Sheath	Copper Conductor  XLPE Insulation— Inner Covering— Polyolefine Sheath	Copper Conductor————————————————————————————————————



# LIGHTING SOLUTIONS

Brand:	QQ OG	OSRAM LEDVANCE	<b>YATRON</b> ®
Application:	Commercial Industrial	Commercial Industrial	Commercial Industrial Custom made
Lamps:	Traditional LED	Traditional LED	Traditional LED
Color temperature:	2700K / 3000K / 4000K / 6500K / RGB		
Working time (hours):	50,000 (standard) and up to 100,000 (options)		
Degrees of protection:	IP3	0, IP41, IP43, IP55, IP66	6, IP67















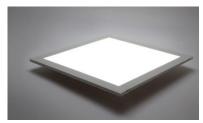
# LIGHTING SOLUTIONS

Brand:	Ge e	OSRAM LEDVANCE	<b>YATRON</b> ®	
Application:	Commercial Industrial	Commercial Industrial	Commercial Industrial Custom made	
Fixtures:	Traditional LED	Traditional LED	Traditional LED	
Color temperature:	2700K / 3000K / 4000K / 6500K / RGB			
Working time (hours):	50,000 (standard) and up to 100,000 (options)			
Degrees of protection:	IP3	IP30, IP41, IP43, IP55, IP66, IP67		













# **AUTOMATION AND ROBOTICS**



Brand:	ABB YATRON®	ABB YATRON®	<b>YATRON</b> ®
Product name:	Robot	AGV, ARM	UAV
Series:	IRB / KenerBOT	KenerBOT	KenerBOT
Payload:	1.5 ~ 800kg	Up to 10,000kg	Up to 5kg
Reach, Speed: Time:	0.37 ~ 4.2m	Up to 2m/sec Up to 60 mins	Up to 80km/hr Up to 60 mins
Standards:		BS / EN / IEC / UL / ASTM	1













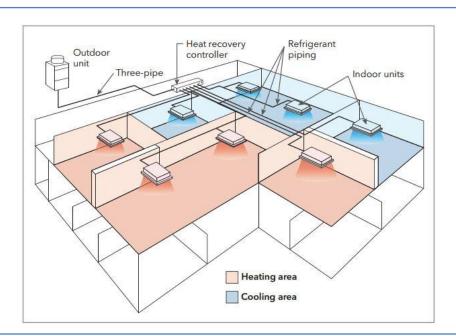
Brand:	<b>GREE</b>	<b>GREE</b>	<b>GREE</b>
Product name:	Industrial	Commercial	Residential
Series:	Chiller	VRF / Solar	Split / Window
	DC / E	. / 150 / 111 / ACT A / 5T	ALIDI

#### Standards: BS / EN / IEC / UL / ASTM / ETL, AHRI











# **MONITORING AND CONTROL**







# **MONITORING AND CONTROL**



**Operation Report** 



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**Alarm** 

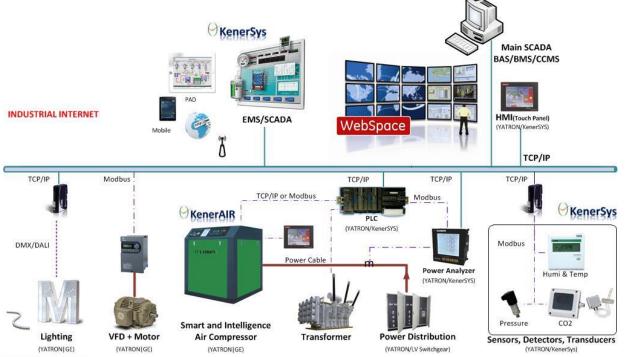
**KPI Monitoring** 

**Historical Analysis** 

**SCADA Control** 



## **SOFTWARE AND INTEGRATION**





**KenerSys** Energy Management System

# **Integrate KenerPV to KenerSys Energy Management System**

- International Level and Certificates
- Industrial Grade
- BS EN, IEC, GB (EU, UK, China)
  - ☐ TÜV SÜD/ISO Certificate
  - ☐ IEC, BS EN, EMC
- Excellent performances and accuracy







# POWER QUALITY MANAGEMENT SYSTEM









#### RPC&HF equipment



- Capacitor units
- Reactors
- Electronic products
- Capacitor banks
- Active filters

#### Special applications



- FACTS solutions
- HVDC projects
- · AC/DC rectifier substations

#### Services



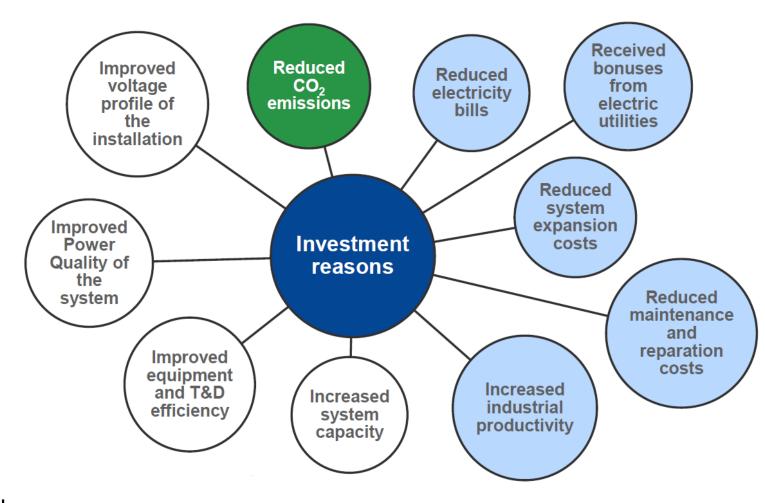
- · Network consulting
- Project support
- · After sales





# POWER QUALITY MANAGEMENT SYSTEM (PQMS)

#### **INVESTMENT REASONS**









#### INVESTMENT REASONS

#### REDUCED ELECTRICITY BILLS

- Power consumption reduced
- Low power factor penalties avoided

#### REDUCED SYSTEM EXPANSION COSTS

■ Reduction in demand allows increase the loads in the installation without needing more contracted power

#### REDUCED MAINTENANCE AND REPAIR COSTS

- ☐ The lifetime of switchgear and cables increases due to reduction of current passing through them (which leads also to decreasing the operating temperature)
- Avoided blown fuses and blown distribution boards



# POWER QUALITY MANAGEMENT SYSTEM (PQMS)



#### INVESTMENT REASONS

INCR	FASFD	<b>SYSTEM</b>	CA	ΡΔΛΙΤΥ
HACII	LAJLU	JIJILIVI		ACIII

- Extra kVA availability from the existing supply allow the connection of new loads
- Overloaded transformers are avoided

#### ■ IMPROVED EQUIPMENT AND T&D EFFICIENCY

- Increased active power output from power transformers
- Decreased power losses (decreased of total current flow)

#### IMPROVED POWER QUALITY OF THE SYSTEM

- Improved power factor
- Improved system stability
- Reduced harmonic content

#### IMPROVED VOLTAGE PROFILE OF THE INSTALLATION

- Rise of installation voltage
- Reduced voltage drop in cables



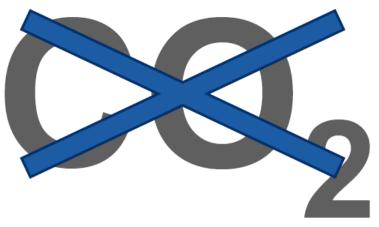




#### **INVESTMENT REASONS**

#### ENVIRONMENTAL

■ Use of PQ&EE equipment reduces the amount of carbon emissions released into the atmosphere



PQ&EE = Money savings + Better installation efficiency + Reduced CO2 emissions





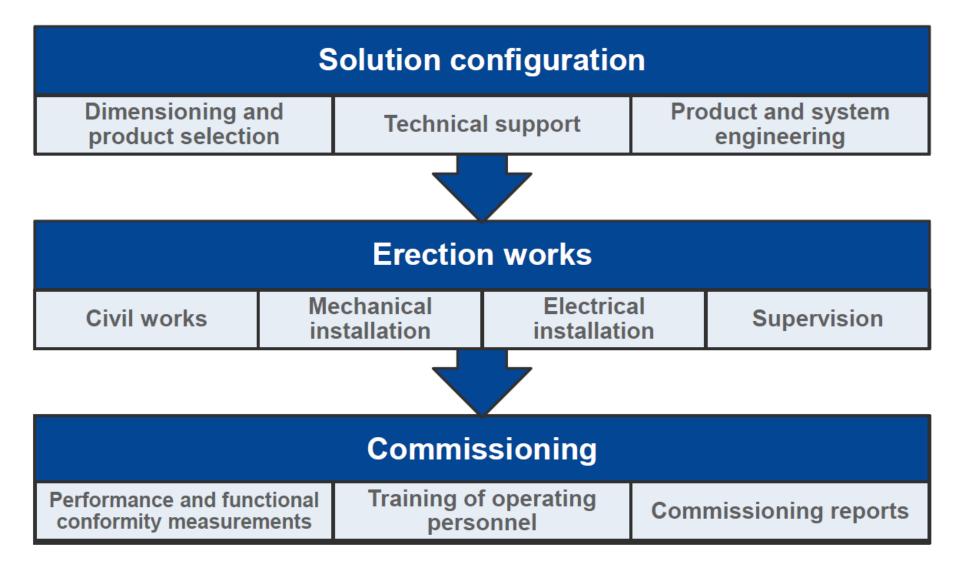


Targets		
Existing systems	Systems' expansions and upgrades	New systems
On-site measurements		
Power (V, I, P, Q, S)	Harmonics (V & I spectrums)	Flicker
Reports and studies		
Evaluation of measurements	Calculation of the network and consumer harmonics	Technical recommendations











#### **FACTORY AND BUILDING AUTOMATION**







## **HOTEL, HOME AUTOMATION**



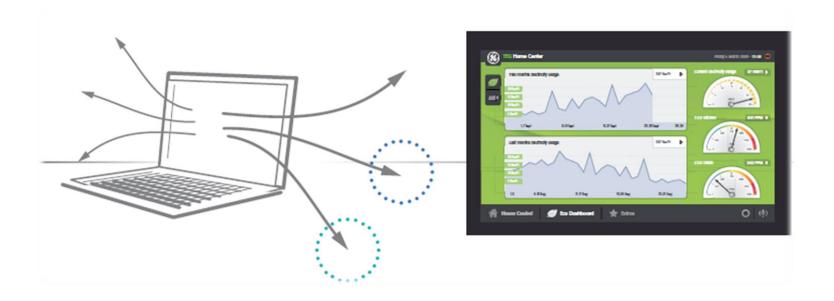




## HOTEL, HOME AUTOMATION



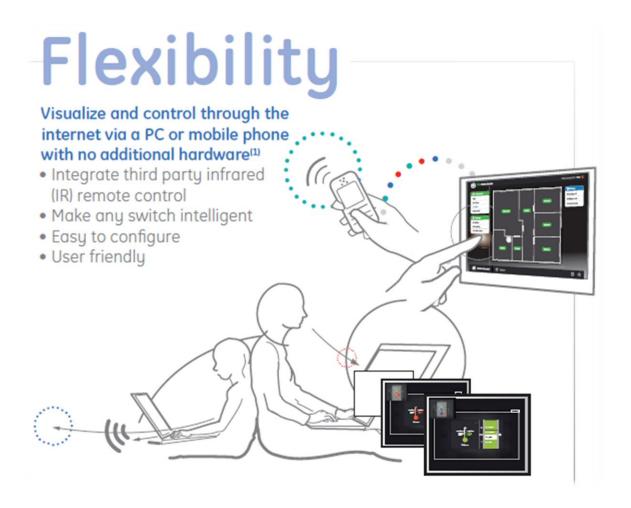
- Home and Building Automation
  - Lighting Control System





## HOTEL, HOME AUTOMATION





- Home and Building Automation
  - Lighting Control System

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# High Tech R&D









工業技術研究院
Industrial Technology
Research Institute

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## **Smart City and Smart Manufacturing**









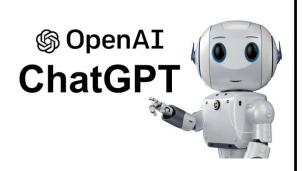






# **Smart City and Smart Manufacturing** Operational technology (OT) & AI PLATFORM

- Industrial Internet
- > Industry 4.0
- Internet of Things (IoT)
- Big Data and Analytics
- Machine Learning
- > Energy Management
- > SCADA

























# Smart City and Smart Manufacturing Operational technology (OT) IoT PROTOCOL















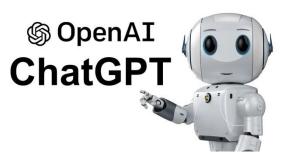


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# **Smart City and Smart Manufacturing**Information Technology (IT) **PLATFORM**

- > Web
- Mobile App
  - > Android
  - > ios
  - HarmonyOS
- Office Automation (OA)
- Enterprise Resource Planning (ERP)
- WeChat Mini Program



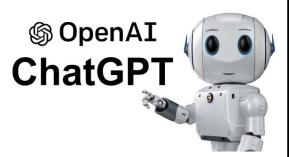


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# **Smart City and Smart Manufacturing Artificial intelligence (AI) PLATFORM**

- > Web
- Mobile App
  - > Android
  - > ios
  - HarmonyOS
- Office Automation(OA)
- Enterprise Resource Planning (ERP)
- WeChat Mini Program





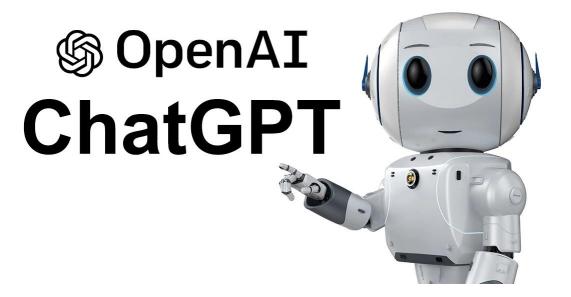




# **Artificial intelligence (AI)**







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# **Energy (Power, Solar etc...)**





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### **Lighting Solutions**









### **Smart City**

















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### **Big Data and Analytics**









### IoT – Internet of Things









### **Machine Learning**









### 3<sup>rd</sup> Inspection and Test







### **CORE BUSINESS**



## POWER PLANT POWER SUBSTATION







# GLOBAL KEY ACCOUNTS (ENERGY, POWER UTILITY AND

INFRASTRUCTURE)





**WORLDWIDE PARTNER** 







Hong Kong-CLP Power



China粤電-珠海電廠:: 2024.04.01



# GLOBAL KEY ACCOUNTS (ENERGY, POWER UTILITY AND INFRASTRUCTURE)



Malaysia National Energy









**Philippines National Power** 



### GLOBAL KEY ACCOUNTS (OIL & GAS)











## GLOBAL KEY ACCOUNTS (HOTEL, RETAIL, BANK)



















## GLOBAL KEY ACCOUNTS (DEVELOPER, HOTEL & RESORT)





## GLOBAL KEY ACCOUNTS (INDUSTRIAL AND INFRASTRUCTURE)





日本-松下集團 Japan







## GLOBAL KEY ACCOUNTS (GOVERNMENT, UNIVERSITY)



澳門民政總署

IACM - Civic and Municipal Affairs Bureau, Macau

澳門土地工務運輸局

**DSSOPT-** Land services, Public Works and Transport Bureau of Macau



澳門建設發展辦公室

**GDI** - Office for the development of infrastructure, Macau

澳門交通事務局

**DSAT** - Services for the affairs of traffic Bureau, Macau



澳門教育暨青年局

**DSEJ** - Education and Youth Services Bureau, Macau

澳門旅遊局

**DST** - Tourism services Bureau, Macau



GLOBAL KEY ACCOUNTS (TRANSPORTATION)







香港-港鐵 Hong Kong-Metro

澳門國際機場 Macau International Airport





airport



## GLOBAL KEY ACCOUNTS (EPC)



**China Construction** 





中國鐵建 China Railway Construction



廣東建工 Guangdong Construction Engineering Group Co., Ltd China



廣東省工業設備安裝公司 Guangdong Industrial Equipment Inst. Corp. China



**French Corporation** 



## GLOBAL KEY ACCOUNTS (EPC)



台灣-中鼎工程 CTCI Engineering Taiwan



澳門-豪進建築 Hou Chun Construction Macau



台灣-鼎台營造 TingTai Construction Taiwan



香港-高雅 Krueger Engineering Hong Kong



### **BUSINESS CONCEPT**

Intelligence Makes the Dream Come True

Efficiency | Quality | Service

Sincerity | Commitment | Success



### **COMPETITION/ADVANTAGE**

#### Customer support and service



Customer satisfaction and recognition is our eternal pursuit!

- GE Global technical support
  - ☐ YATRON is the Core Business partner of GE Energy in Macau, HK, Taiwan, China and Asia
- Service hotline
  - 24/7 hrs hotline and within 2 hrs respond
- Emergency service(Pay)
  - 24/7 hours Emergency On site service
- On site service(Free)
  - ☐ According to customer's requirement to provide the site service
- Technical update
  - ☐ Update the newest and leading Products & technology of Energy, Power distribution, Industrial and Building Automation



### AWARD | HONG KONG



CSR (Corporate Social Responsibility) by MIRROR POST
Chief Executive of Hong Kong, CY Leung





### **AWARD | HONG KONG**

積極參與企業社會責任獎評選活動,獲「企業社會責任大使」稱號 Participating in Corporate Social Responsibility Award (CSR) Selection Activities, Became One of the CSR Ambassador

日騰是一家以能源管理和建設可持續發展為發展目標的企業。社會的發展與企業的發展息息相關。 社會發展得好,為企業提供良好經濟的環境。企業 發展得好了,力所能及地回饋社會,創造更好的經濟環境。如此良性循環。日騰能源集團就是在這個理念經營下才有今天的成績。

於2014年11月24日,日騰獲選「企業社會責任大使」稱號。



YATRON is an enterprises specializing on energy management and sustainably development as goals. The development of the society and the enterprise is closely related to each other. Provide a good economic environment for enterprises, so that enterprises development better; Serving society the best, Society will create a better economic environment for enterprises. This is such a virtuous cycle. YATRON energy group knows this business philosophy and practice it personally. Thus, we get the achievement today.

On 24th Nov 2014, YATRON was awarded "Corporate Social Responsibility Ambassador" title.





### AWARD | MACAU



YATRON Energy Group
BUSINESS AWARDS OF MACAU
Environmental Performance
26th November, 2015 Year









### RECOMMENDATION



**Macau Electric** 

From: Four Seasons Hotel Macao, Cotai Strip®

To: Wynn Resorts (Macau) S.A.

Rua Cidade de Sintra NAPE, Macau

NAFE, Macat

Attention: Ms. Kimberly Tan, Director of Purchasing

Email: Kimberly.Tan@wynnmacau.com

Tel: (853) 8986 5401

From: Companhia de Electricidade de Macau - CEM, S.A.

To: Wynn Resorts (Macau) S.A.

Rua Cidade de Sintra

NAPE, Macau

Attention: Ms. Kimberly Tan, Director of Purchasing

Email: Kimberly.Tan@wynnmacau.com

Tel: (853) 8986 5401

Subject: Trade Reference Check

This is to certify that the service of YATRON Engineering Co., Ltd. has been exceptional.

We would have no hesitation in recommending them as a supplier to you.

**Authorized Signatory:** 

(Cheung Chi Fai)

Designation of the signatory: Manager/Procurement and Logistics Department.

Date: 02<sup>nd</sup> Jan,2014 Company Chop:

Tel: +853 28339933 Email address: ccf.cheung@cem-macau.com

Subject: Trade Reference Check

This is to certify that the service of YATRON Engineering Co., Ltd. has been exceptional.

We would have no hesitation in recommending them as a supplier to you.

Authorized Signatory:

(Kennix Pak)

Designation of the signatory: Engineering Coordinator

Date: 02<sup>nd</sup> Jan, 2014

Company Chop:

Tel: +853 81128506 Email address: Kennix.Pak@fourseasons.com





## Chairman and CEO - Kenneth Chan Interviewed by Macau Asia Satellite Television

On 2014/10/28, Chairman and CEO Kenneth Chan was interviewed by MASTV and attended "Moved Macau" TV programs. YATRON Energy Group CEO Mr. Kenneth Chan was such a practical person, with their diligence and wisdom to achieve his dreams. After he finished his University in Taiwan, he return Macau for hometown's construction as a special zone identity of the owner with other community. Contributing for the motherland's prosperity and stability and set a good example for the majority of adolescents in Macau.













BUSINESS



### At light speed

A local energy management and lighting solutions company will roll out a second factory after six successful years of operation

fter just six years, Yatron Energy Group, a local tric Company (GE) technology. company providing energy management services and lighting solutions, is about to open a new factory in mainland China. It will triple its current manufacturing unit capacity as the business expands from Greater China to Southeast Asia.

In an exclusive interview, Kenneth Chan Chio Hong, chairman and chief executive officer of the firm, tells Macau Business how he started a business with MOP10,000 (US\$1,250) and grew it into a US\$15 million-revenue con-

Yatron is a diversified organisation providing energy management and lightning solutions to utilities and energyintensive industries, including commercial, healthcare, data centres and transportation. The company uses General Elec-

GE is an American multinational technology and financial services company, with products and services ranging from aircraft engines, power generation, water processing, and household appliances to medical imaging, business and consumer financing and industrial products. It serves customers in more than 100 countries.

Yatron is GE's sole authorised switchgear panel builder and distributor here, opening its factory in Zhuhai in 2010.

#### **Targeting millions**

It has branches in Macau, Hong Kong, Taiwan and, more recently in Malaysia, which is overseen by Mr. Chan's French partner, who is in charge of tapping the Southeast Asian

54 | macaubusiness | DECEMBER 2014

上圖:日騰能源集團CEO陳超雄

接受《澳門商業雜志Macau Business》採訪

Let there be a new light www.macaubusiness.com

Newsdesk | 18/12/2014 | in BUSINESS

A local energy management and lighting solutions company will roll out a second factory after six successful years of operation

After just six years, Yatron Energy Group, a local company providing energy management services and lighting solutions, is about to open a new factory in mainland China. It will triple its current manufacturing unit capacity as the business expands from Greater China to Southeast Asia.

In an exclusive interview, Kenneth Chan Chio Hong, chairman and chief executive officer of the firm, tells Macau Business how he started a business with MOP10,000 (US\$1,250) and grew it into a US\$15 million-revenue conglomerate.

Yatron is a diversified organisation providing energy management and lighting solutions to utilities and energy-intensive industries, including commercial, healthcare, data centres and transportation. The company uses General Electric Company (GE) technology and Yatron is GE's sole authorised switchgear panel builder and distributor here, opening its factory in Zhuhai in 2010.

(Page 1/2)



2014/12/18

"In November, we will move into a new plant and our capacity will triple. I had to increase our manufacturing unit's capacity in order to meet our clients' demands. With our business setting foot in Southeast Asia, the market is very big." Mr. Chan says.

He is expecting the company to rake in around US\$15 million in revenues this year; as of October, Yatron had made almost US\$13 million.

"We [aim for] our 2015 revenue to be around US\$25 million. This year, the target should be US\$15 million," the local businessman says.

The firm's major manufacturing products are switchgar and automatic components for energy management and lightning fixtures, and it has now started manufacturing air compressors for industrial use.

Yatron provides end-to-end products and service solutions that seek to ensure the reliability and protection of electrical infrastructure, from power plant, substations, to a facility's critical equipment, and all the power technology in-between. "The purpose of these systems is to increase the efficiency and reliability of operations and become more competitive," he says.

#### Casino world

The company's main clients are located in Macau, followed by Hong Kong and Taiwan. It also has clients in Southeast Asia now.

"In Macau, our major client two years ago was the government. The government's requirements are very high and we are making high-end products and solutions. Then, fortunately, we started doing casino projects two years ago, like Sands China Ltd, Galaxy Entertainment Group and Melco Crown Entertainment Ldd," he says.

Yatron is providing air conditioning and ventilation systems for Melco Crown's new signature project in Cotai, Studio City, and energy management systems and low voltage switchgear for Sands Cotai Central.

"Two years ago, most of the casino business was controlled by Hong Kong consultants and end-users. We didn't have any connection there. That's why we established the Hong Kong branch and got Hong Kong clients step by step," he saws.

When asked about his recipe for success, Mr. Chan laughs out loud, "We're growing now. I cannot say we are successful yet. We're studying the market. I established Yatron with MOP10,000. When I rented the office we didn't have any money [he laughs]. Up to now, we're focused on quality service.

"We have no secrets; just honesty, quality and service". Energy management includes planning and operation of energy-related production and consumption units. It embraces resource conservation, climate protection and cost savings, while users have permanent access to the energy they need.

#### Virgin lands

Mr. Chan believes that Macau is still at the beginning stage of environmental control and sustainability.

"For the last 10 years, economic growth has been very high and the government is arranging some departments in this area. The Environmental Protection Bureau was established only a few years ago.



Mr Chan is expecting his company to rake in around US\$15 million in revenues this year; as of October, Yatron had made almost US\$13 million

"Yatron and GE are focused on energy management, which is one of the tools for sustainability. When the government or a client would like to bet on sustainability, we have to do energy management. I think the local market is a very big market for energy management," he says.

He adds that the company has been discussing with some existing casino projects how they can improve energy management systems; and also private and government schools, and other government departments. He says that most end-users are still in the 'considering' stage.

"We're talking to some chairmen and top managers of companies and they would like to try energy management. We're still providing consultancy services," he says.

In what concerns environmental and energy conservation rules and laws, Macau also has a long way to go, he says. "In Macau, people are more relaxed. It will take three to five years for society to develop some mentality in this regard. In Taiwan and Southeast Asia, they accept our ideas.

DECEMBER 2014 | macaubusiness | 55

上圖:日騰能源集團CEO陳超雄 接受《澳門商業雜志Macau Business》採訪 Let there be a new light www.macaubusiness.com

Newsdesk | 18/12/2014 | in BUSINESS

A local energy management and lighting solutions company will roll out a second factory after six successful years of operation

"In November, we will move into a new plant and our capacity will triple. I had to increase our manufacturing unit's capacity in order to meet our clients' demands. With our business setting foot in Southeast Asia, the market is very big," Mr. Chan says, adding that "our aim for 2015 is for revenue to be around US\$25 million. This year, the target should be US\$15 million," the local businessman says.

The company's main clients are located in Macau, followed by Hong Kong and Taiwan. It also has clients in Southeast Asia now. "In Macau, our major client two years ago was the government. The government's requirements are very high and we are making highend products and solutions. Then, fortunately, we started doing casino projects two years ago, like Sands China Ltd, Galaxy Entertainment Group and Melco Crown Entertainment Ltd," he says.

The full story can be read in this month's issue of Macau Business magazine, available at newsstands or online at www.magzter.com

(Page 2/2)



### Chairman and CEO interview by Mirror Post, Hong Kong | Nov, 2014



### 尋找GE的第二故鄉

#### —訪日騰能源集團董事長**陳超雄**

「智慧成就夢想」。日應能源集團董事長陳超雄這樣說,日隨集團憑藉美國通用電氣(General Electric-GE)智慧化系統等的技術力量、管理思維、企業文化,把本地化企業帶起來,成就中國人偉大的夢想。

⊙文/天樂

面接到 國在過去20年的時間 相響,基礎設施方面投資力度巨大,當中為能源管理的發展提供了必備的條件。今天,由年輕工程師陳超雄成立的日點能源集團將如何把握亞洲這個能源市場的管理及發展機遇,使集團成為港澳能源管理企業的標桿?



◆日騰能源集團董事長陳超雄精,日騰作為能源管理者、GE在中國的合作夥伴, 隊抓堅中國能源管理行業的機遇。

#### 與GE一起把企業達致本地化

談起能源管理這一課題,日騰 能源集團董事長陳超雄這樣說、自愛 她生發明電燈泡以及GE面世以來, 人類開始使用電力,帶來科技的進步 和便利,但同時地造成巨大的能源消 耗,一直以來人們亦忽略能源管理這 一概念。陳超雄稱,直至近5年來, 能源管理才逐漸成為世界各地的重要 議題,能源管理涉及天然氣、石油、 買岩氣、電力、煤炭等類別。能源管 理是一種管理手法,但其操作模式不 只是以人力去管理,而是以自動化系 统、電氣組件、軟件以及人的經驗去 作綜合管理。 成立於2006年的澳門日騰能源 集團至今已發展成為一個多樣性組織 企業,包括能源管理、能源全方位解 決方案等,從事能源、數據中心、水 處理、交通乃至醫療系統的業務。在 業務進入快車道上,陳超雄如何帶領 集關在促進能源發展的前提上擴富着 個重要的角色?陳超雄這樣回答, 集團一直與美國通用電氣(GE)合作, GE目前主要為全球提供最新技術, 例如電氣軟件、監察系統等進行生產 發合。它雖然是全球最領先的設備和 系統生產商。但它仍需要在本地化市 場擁有一個作系統整合及具生產能力 的企業,與他們一起把企業達致本

### 式。 成就中國人偉大的夢想

「智慧成就夢想」是日騰的宗 旨。陳超雄指出,集團為GE的授權生 產商,由建廠、規劃到生產都得到GE 很大的支持。日騰集團憑藉GE智慧化 系統等的技物力量、管理思維、企業 文化,把本地化企業帶起來,成就中 國人偉大的夢想。

地化,打造堅實的合作夥

伴關係以實現共同發展和

達致雙贏, 日騰能源集團

便是GE在大中華區其中一

個主要的授權合作夥伴。

也正因為這概念,GE可以

130多年來屹立不倒,因

為它深知再大的企業,當

處在不同市場時,都需要

適應當地的文化和溝通方

能源管理是一個資金密集型、 人才技術密集型的行業,日鵬在亞洲 區域的戰略部署又是如何?陳超雄表 示,集團除了一直在香港、澳門等地 發展外,其亞洲重心將是大中華區, 當然東南亞遠全球市場的焦點亦不容 忽視,集團最近已在馬來西亞成立東 南亞地區總部。集團將與GB和GB最新 收購的法國阿爾斯通,共同發展亞洲 市場。

#### 為客戶提供全方位能源管理服務

國家發展能源短屬起步階段, 這舗要吸引世界專才和國際級企業來 扶助當地企業及政府部門來發展能源 企業事業。GE公司大中華區總裁兼首 席執行官夏智誠(Mark Hutchinson) 曾稱中國將成為GE第二故鄉,故每年 會作大力度的投資項目,例如:在中 國培訓管理人才、企業整合,以達致

本地化;與此同時,GE履行企 業社會責任,將中國的人才交 流、技術增長帶動起來。

日鵬作為能源管理者、 GE在中國的合作夥伴、將抓緊 中國能源管理行業的機遇。陳 超雄稱,現在建造智能化大廈 和工廠,一般企業成本會增加 3%,但3至5年內可回本。日騰為客戶 提供全方位能源管理支援技術服務, 集團會先與客戶作簡單的溝通,了解 他們有什麼問題,怎可達致可持續發 展。之後會給予顧客簡單的建議書。 為對方提供能源顧問服務,評估在能 源方面上有什麼可改進空間。他類 說,這個社會若不抓能源管理,會衍 生很多問題,例如:空氣污染、員工 質素下降、效能降低,這或令企業帶 來更大的損失。所以,一系列能源管 理措施不僅可改善企業自身,也可提 升員工質素乃至實現社會的可持續發



日騰能源集團工廠

#### 把握粤港澳三地的合作契機

随着港珠澳大橋的即將興建落 成和橫琴新區開發項目的進一步落 資、將深化場港澳三地的合作。日騰 又如何使澳門在能源管理的發展上得 到提升,把握導港澳三地的契模。陳 超雄表示,澳門雞是個小城市。但 顯立志朝着成為澳門輸配電及空調產 品領算者角色題進。他創立的日騰已 有8年的時間。在澳門擔當着輸配電 的重要角色。他認為,空調控制系統 塑有待改進空間。現時澳門的大型企 業、工廠、酒店都設有被宇自動化系 统、然而,沒有將

> 能源管理落到實處。他希望 集團未來可把那些現有已實 行樓宇自動化的企業、大樓 再作改善,未有的則會幫他 們建立樓宇自動化和能源管 理系統。

陳超雄特別指出,日 騰將借助橫琴、深圳前海、

泛珠三角9+2區域等周邊地區進行發展。現在集團先在模琴、海南等地進行治談發展項目,扶助當地企業發展 能源管理,踏出第一步。他表示,要 與世界接軌並不容易,他感謝GE給 予他們平台和學習機會,特別是以其 專業技術、財務等方面為集團作出援 助,讓他們逐漸地成長壯大。

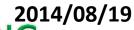
近年中國經濟正在急速增長, 它有望成為全球最大經濟體。日鶶將 繼續紮根自己家鄉港澳,並密切配合 GE在中國及亞太區的發展、將能源管 理做深做大。我們有理由相信在條日 勝這樣默默耕耘企業的努力下,他朝 中國可成為GE的第二故鄉。﴿亞



◆日脈能源集團至今已發展成為一個多樣性組織企業,包括能源管理、能源全方位解決方案等、從事能源、數據中心、水處理、交通乃至醫療系統的業務。

2014年11月 1 月 87

86 [[]] 2014年11月





## YATRON Energy Group Business Development in Asia Press Conference

2014/08/19 YATRON Energy Group Business Development in Asia Press Conference was held in Sands City Center Sheraton Hotel. Taking this opportunity for more Macau and Asian company have a in-depth understanding of YATRON business and products. In hope of provide assistance from different aspects so that to promote the enterprises to establish a set of efficient energy management systems and solutions.

The conference invited the Chinese Liaison Office Ministry of economic management of Enterprise Department Mr. Yan, senior manager of Macao productivity and technology transfer center director office Mr. Zeng, General Manager of General Electric (GE) Group of Energy Industry system in North Asia and Greater China Mr. Liu Fang and representative Li Qing, Macao Electric Ltd power system Dispatching Department manager Mr. He and Purchasing Department manager Mr. Zhang, Macao the Chinese General Chamber of Commerce, Executive Director Mr. Chen, Vice President of the Macao small and Medium Enterprises Association General Chamber of Commerce Mr. Ye and over 150 overseas guests and business political representatives attended the activities, lively atmosphere.



Chairman and CEO of YATRON Energy Group Interview by TDM Macau



Press Conference



YATRON Energy Group Chairman and CEO Mr. Kenneth Chan said, with the Hong Kong Zhuhai Macao Bridge Construction and Hengqin new area development project opportunity, make the development and demand of energy management, wisdom city building get the attention and promotion focus. YATRON was founded in 2006, now we are focusing on service in Macau. With the support of all parties, the group's business gradually extended to other regions, the realization of Macau enterprises to go out of the target. Provide solutions for customers. Then, respectively YATRON energy group held agreement signing ceremony with Macao Investment Development Company Limited cooperation for "Studio City Macau", "Venetian Resort 110kV substation" projects.

In this business development conference, hope that with the help of our Asia layout, and General Electric (GE) technology, financial support, to help enterprises to go out. There are a number of projects in Hengqin development, participate in some government infrastructure, commercial buildings, including the LED lighting technology, motor control.

Technical promotion will be actively facing to relevant departments in future. 8 years since YATRON was found, we kept training and had hired a number of local engineers, they are using GE technology and the new technology for the working.

GE Energy Group Industrial System in North Asia and greater China GM Mr. Liu Fang said YATRON energy group is a long-term partner in China, the future will support YATRON in the technology, finance and other aspects, hoped YATRON will develop in scale, or even go public.



Left to Right: Chairman and CEO (Kenneth Chan) | Managing Director of Asia (Christophe Fliou) YATRON Energy Group



James Liu | General Manager, North Asia and Greater China

GE Energy, Industrial Solutions

Ver.: 2024.04.01





陳超雄 Kenneth Chan Chairman and CEO YATRON Energy Group















柳方 James Liu General Manager North Asia and Greater China GE Energy, Industrial Solutions



李克賢 Christophe Fliou Managing Director, Asia YATRON Energy Group

















Signing ceremony Business Development GE | Investment Institutions | YATRON Energy Group

in Asia Press Conference



Macao Daily

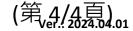
2014/08/19



2014年08月20日: 澳門日報 Macao Daily



2014年09月: 香港鏡報 Mirror Post





### MULTIMEDIA | EXHIBITION



Macau Asia Satellite Television
Macau



**GUANGZHOU | CHINA** 



Mirror Post | Hong Kong



Macau

The Technology Showcase for the Building, Electrical Engineering and Security Industries

Hong Kong Convention and Exhibition Centre

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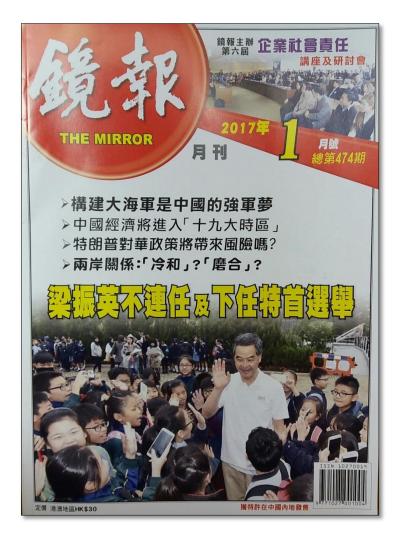




### MEDIA | SEMINAR | MACAU, HONG KONG 2017/01

2017.01

**CSR** seminar Hong Kong Mirror – City University of Hong Kong







### MEDIA | SEMINAR | MACAU, HONG KONG

2014/11/20

CSR seminar Hong Kong Mirror – City University of Hong Kong

2016年12月06日, 2017年1月號

The 6th CSR Seminar and Seminar YATRON - CEO Kenneth Chan / TUV SUD - LAI MIN











### MEDIA | SEMINAR | MACAU, HONG KONG 2017/01

### **CSR** seminar Hong Kong Mirror – City University of Hong Kong

2017.01



#### 為何要用最好的能源管理系統

-ISO 50001能源管理系統概論

⊙文/本刊記者

方工業革命使人類工業文明前進了一大步,能 源效益提高了很多。伴隨着工業革命的開展, 也給生態環境和城市發展帶來了破壞性影響。在 二十一世紀的今天,我們應重新思考要否擁抱生態 文明? 我們與生俱來肩負着責任,不論是對家庭 朋方、社會、環境, ISO 50001 今我們思考到我們要 繼續造成能源虛耗,還是應有效地管理能源?本刊 將推出系列關於善用能源管理和對如何履行保護環 境責任的文章,以饗讀者。

聯合國因應氣候變遷,多年來透過各國政府 民間和標準化組織的持續努力,制定了各種國際標 進和協議(簡減如下)。希望各國和地區,在享受無 濟成果之餘,對自己國家和國民以及全球生態平後 作出應有的同體和責任。

■全球性協議:《京都協議書》,1997年12月 在日本京都共有183個國家通過了該條約(超過全 球排放量的61%),條約於2005年2月16日開始強制 生效。《巴黎協議》取代將於2020年到期的《京都 協議書》。2015年在巴黎,工業革命啟動近250年 後,全球各國達成減少溫室氣體(二氢化碳為主)排 放的協定,展開挽救人類免於氣候變遷帶來毀滅的 第一步,也等於宣告了工業革命後仰賴石化燃料帶 來成長的時代終結,低碳與永續的時代正式展開。 《巴黎協議》目標是在二十一世紀後半葉,將全球 氣溫上升限制在與工業化前相比上升2℃以下,甚 至希望能達到限制在1.5℃。《巴黎協議》亦已於 2016年11月4日正式生效啟動,並通過中國簽定, 延伸至香港和澳門特區。

■國際標準化組織ISO及歐盟關於《可持續發 展》之相關標準: ISO 26000社會責任指引、ISO 統、ISO 50001 / EN 16001能源管 理系統。



#### ■國際標準化組織ISO及歐盟標準詳細介紹

\*ISO 26000社會責任指引簡稱(SR): ①SR中 7大要素的《環境》要素着重於能源管理系統、環境

管理系統、線 色產品管理系 統、溫室氣體 管理系統。② 折年全球孵化 的問題日趨嚴

重,企業須承



擔的企業社會責任亦隨之增加。目前國際間由投信 機構發起的「碳揭露計劃」,以作為投資決策之考量 因素。歐盟的整合性產品環保政策,已發展一系列與 市場機制相結合的環保指令,只有符合相關規範之產 品方能進入歐盟市場。

\*ISO 14001環境管理系統:①ISO從1993年開始 制定的一系列環境管理國際標準。②環境污染與公害 事件的產生使人們從治理污染的過程中逐步認識到 要有效的保護環境,人類社會必須對自身的經濟發展

\*ISO 50001/EN 16001能源管理系統:①人類從 發展能源、使用能源、節約能源, 現在必須升高其 層次至管理能源。②EN 16001: 歐盟於2009年7月發 布,期望合理地管理能源。(3)ISO 50001: 由ISO於 2011年6月頒布,將能源效率納入管理辦法框架中;

更好地利用現有能源消耗資產制定標準、測量、記錄 和報告能源強度,改進及其預計的對消減溫室氣體排 放量的影響;能源資料的透明管理和交流;能源管理 的最佳做法和良好的能源管理行為;評估並確定新能 源效率技術的實施和其優先順序;通過供應鏈促進 能源效率的框架和溫室排放消滅計劃有關的能源管 理改進。④ISO 50001/EN 16001包括: 能源審查、 能源基準、能源績效指標(EnPIs)、能源目標與能源 指標等,最終達到管理能源。⑤ISO 50001遵循PDCA (Plan計劃-Do執行-Check檢查-Action行動) 的原 則, 期 ISO 9001品質管理和 ISO 14001環境管理有 最大的相容性。⑥在今天,有效能源管理的議題對 任何企業的成功,比以往任何時候更具有重要性。 除了提升能源效率外,能源管理系統可降低成本並 減少溫室氣體排放和提升室內環境質量,讓員工和 企業組織更具有國際競爭優勢。(7) ISO 50001 適用於 任何企業組織,不論其規模、所屬的產業部門或地 理位置。如果企業組織屬於能源密集的產業,或面 随温宏氨糖排放立法的產業, 這面標準尤其重要 ®ISO 50001 能源管理的優點:

- (i)降低成本:透過架構化的方法以確認、監 測及管理能源消耗, 降低能源支出。
- (ii)改善企業績效:找出最高能源效率方案, 影響員工行為模式以減少能源消耗,准而促進更高的

(iii)符合法律法規: 達到目前或未來的強制性 能源效率目標及/或減少溫室氣體排放的法律要求。

- (iv)減少溫室氣體排放:於現在及未來達成利 害關係人的期待/善盡企業社會責任之義務。
- (v)整合管理系統:將您的能源管理系統與既 存的管理系統(ISO 9001, ISO 14001, ISO 18001 等)整合,提高管理效益,使利益擴增

(vi)國際調查機構BSI進行全球最大的能源管理 **調查,結果顯示:①78%資際經理人相信能源管理是** 重要或非常重要,其中能源管理代表有64%為董事會 圆锡。②為什麼需要能源管理系統?79%表示成本核 制是能源管理的主要原因,35%認為氣候變遷,28% 認為可以提高公司聲譽。

#### \* 先進技術YATRON KenerSys和TÜV SUD

①ISO 50001能源管理認證,使企業組織可利用 標準化流程,進行能源管理和程序架構。高效和實 用的能源管理系統,需要使用大量傳感器、儀錶等 收集大量數據作為系統分析和改善之用。這些資料 和數據極其大量和複雜,用傳統方法,使用人力抄 寫方式進行數據記錄實在是不可能,只有高效、穩 定和智能化的自動化能源管理系統,才能協助用戶 持續地作最有效的記錄、分析和改善

②日騰能源之能源管理系統KenerSys以ISO 9001, ISO 14001及ISO 50001為基礎和核心,透 過與國際能源和工商業巨頭如: GE美國通用電氣

Microsoft微軟、微 國TÜV SUD認證、 ITRI台灣工業技術研 究院的技術、課程和 認證合作,結合《物 聯網Internet of 《大數據Big Data》



技術之應用和分析, 長遠與用戶共同對系 統持續改善,創造更

③YATRON KenerSys是一套可持續性軟件和硬體 解決方案,在現有的自動化和系統中解鎖數據,以 及利用大量儀鈸和傳感器,使其同時作大數據分析 和消除過度使用的程序和設備。並可結合ERP系統和 KPI整合使用

節能系統,其更是一系列 的高效管理能源系統。

⑤ 適量減少和控制使用公用設施的投入、提升 工作環境質量和員工動力,節省最高達50%的能源 消耗,加:雷力、催屈冷氣系統、燃氣、水、應統 空氣等。回

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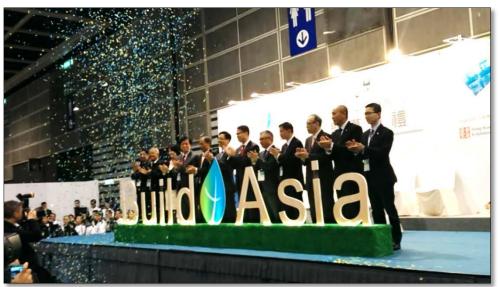
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### **EXHIBITION | HONG KONG**

YATRON exhibit the Build4Asia 2014 in Hong Kong





**Build4Asia** is the largest building exhibition in Hong Kong and Macao for building equipment in Asia. 2014/05/07 grand opening at the Hong Kong Convention and Exhibition center. As an exhibitor, YATRON not only shown our high quality products to clients from all over the world, but also got a quite good beginning.



### MEDIA | EXHIBITION | GUANGZHOU

2010/03/08

### CHIAF/SIAF 2010 - China (Guangzhou) International Industrial Control Automation and Instrumentation Exhibition

YATRON participated in CHIFA/SIAF 2010 - China Guangzhou International Industrial Automation Technology and Equipment Exhibition (SIAF) from March 8-11, 2010. SIAF exhibition is a perfect combination of SPS, the world's largest industrial automation exhibition, and CHIFA, the largest industrial automation exhibition in South China, in China.

YATRON met a large number of industry partners and customers at the exhibition.





SIAF is the largest Automation exhibition in China.





Smart Factory Automated and Management System (Demo)



### MEDIA | EXHIBITION | GUANGZHOU

2009/03/04

#### 13th (CHIFA 2009) in Guangzhou

YATRON participated in CHIFA 2009 - The 13th China Guangzhou International Industrial Control Automation and Instrumentation Exhibition from March 4-7, 2009, which was rated as one of the "Top Ten Brand Exhibitions in Guangzhou" by Guangzhou.

YATRON believes that as an exhibition with excellent brand value, it will provide an ideal business platform for exhibitors and visitors, where information meets and value is realized.





CHIAF is the largest Automation exhibition in China.

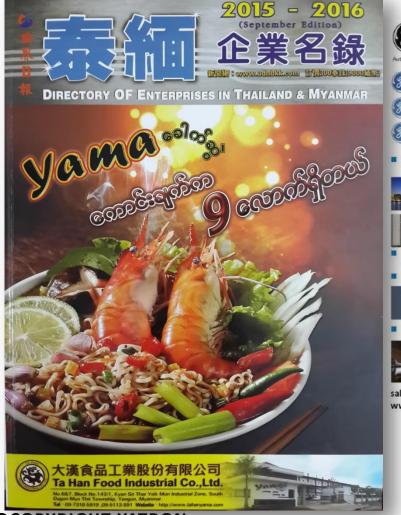






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