

Sysgration Corporate Profile

Jan-2019

Integrity (誠信)

Passion (熱忱)

Commitment (承擔)

Innovation (創新)

Through
System Integration
to differentiate
Customers
from **competitors**

Milestones

SYSGRATION

Certification	
ISO 9001:2008	
ISO 14001:2006	
CG 6004	
IECQ QC080000	
ISO 14064:2006	
IATF-16949	
ISO-13485	
IEC-80079-34	

1977 - Company founded in Taipei Taiwan

1988 - Nantou Plant established for **Microsoft**

1995 - Awarded business from **American Power Inc. (Schneider)**

1996 - **IPO** in Taiwan (TW 5309)

2009 - TS-16949 Certificated (Nantou)
Tier One Supplier of **Volkswagen Group**

2009 - Awarded business from **Toyota Middle East**

2010 - Awarded business from **Alpine** and **Voxx/ASA Electronics**

2011 - Awarded business from **Porsche** and **SEAT**

2014 - Equipment Supplier of **Mercedes Benz**

2015 - BLE TPMS Shipped to **Michelin** and Kenda

2015 - The EV Battery Pack Shipped to CRRV and ZEV Motor

2016 - 16949 Certificated for HuiZhou and Zhenjiang
BLE TPMS Shipped to **ShangHai Motors Group**

2018 - EV BP Approved and Shipped to **DongFeng Motors**

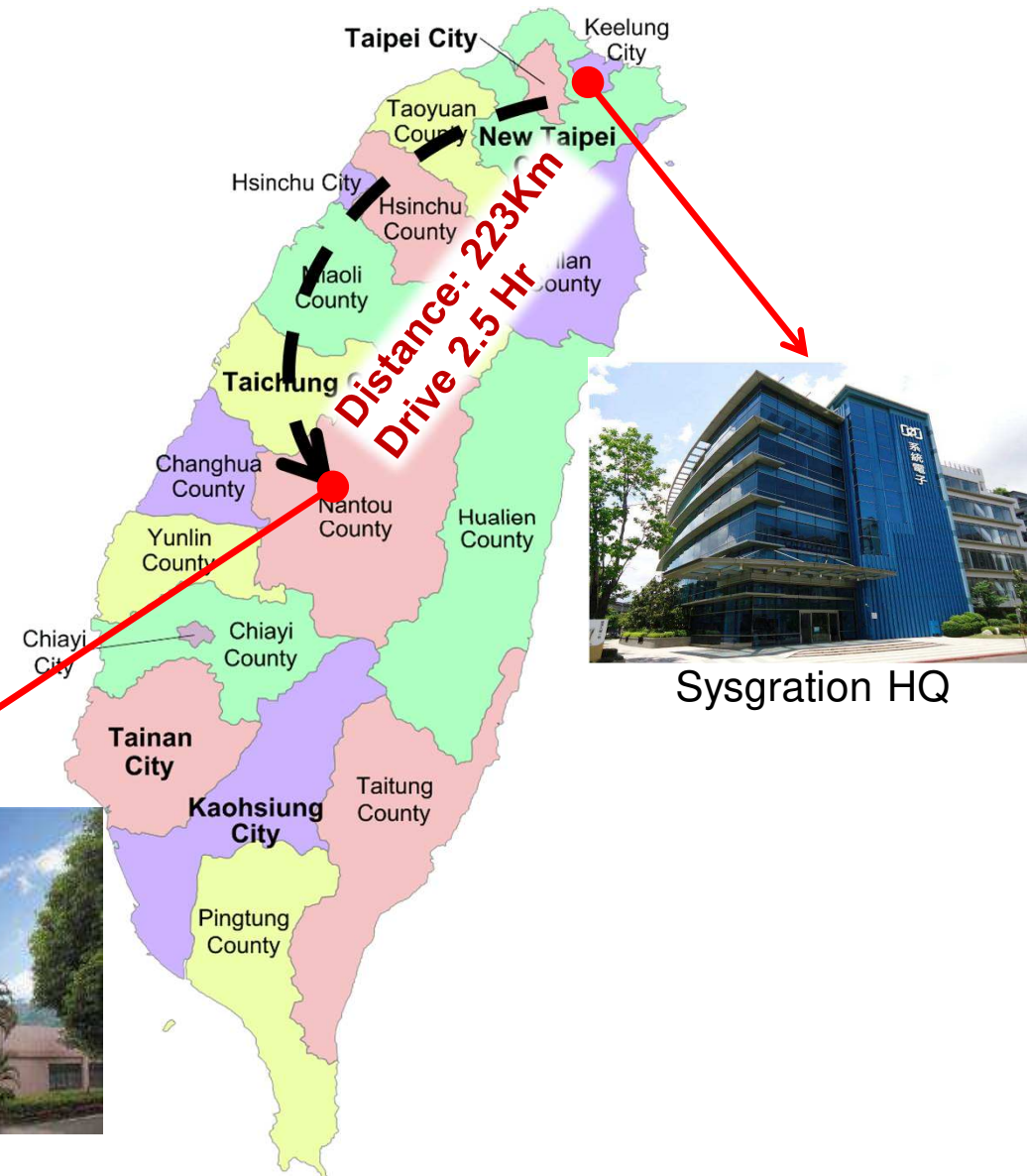
2018 - UPS BP Approved and Shipped to **TSMC, Eaton, & Delta**



HQ and Taiwan Factory

SYSGRATION

- HQ: Taipei, Taiwan
- Factory: NanKang, NanTou, Taiwan
 - ✓ 1-Hr Drive from TaiChung Harbor
 - ✓ 2.5-Hr Drive from Taipei
- Facility Space: 355,000 Ft²
- Products: RV, IIoT, RPS, UPS, BP, TPMS



TaiChung Harbor

Distance: 67.5Km
Drive: 1Hr



NanKang Factory

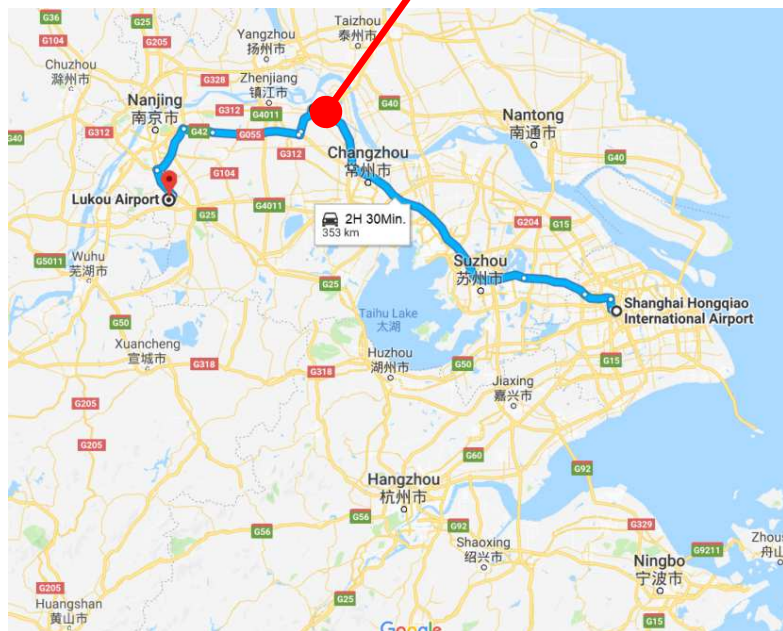


Sysgration HQ



ZhenJiang Factory

- Location: ZhenJiang, JiangSu, China
 - ✓ 1.5-Hr Drive from NanJing Airport
 - ✓ 2.5-Hr Drive from ShangHai HongQiao Airport
- Facility Space: 195,000 Ft²
- Products: Battery Pack, ESS



IATF-16949



High-Tech Enterprise



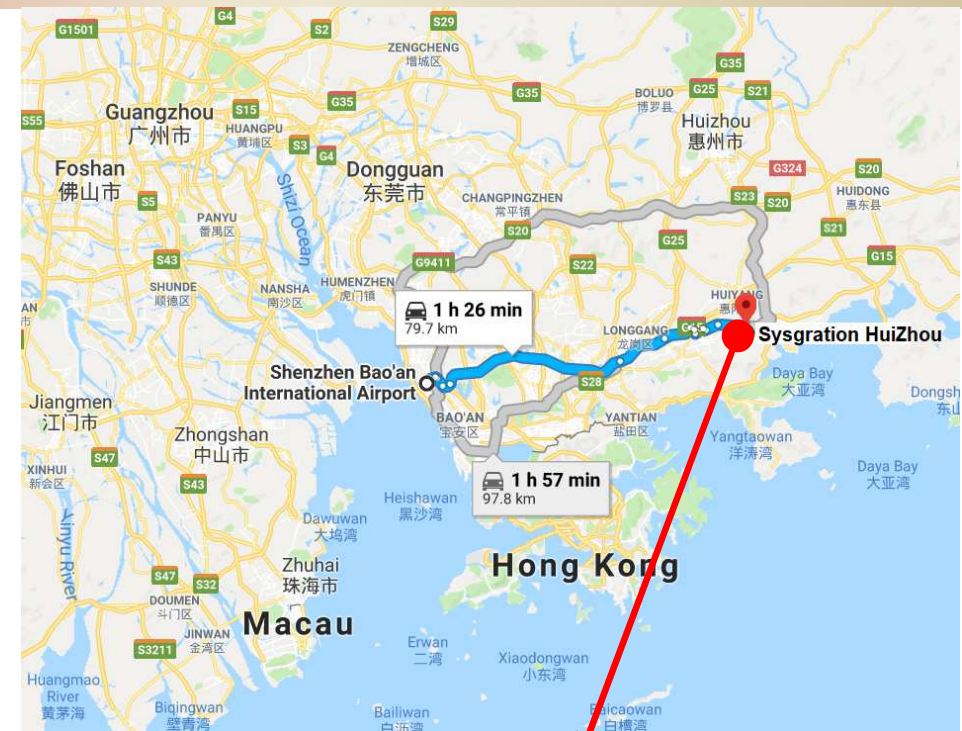
38 Patents



China Factory – HuiZhou

SYSGRATION

- Location: HuiZhou, GuangDong, China
 - ✓ 1.5-Hr Drive from ShenZhen Airport
- Facility Space: 76,000 Ft²
- Products: TPMS, Smart Home Devices



High Speed SMT Line



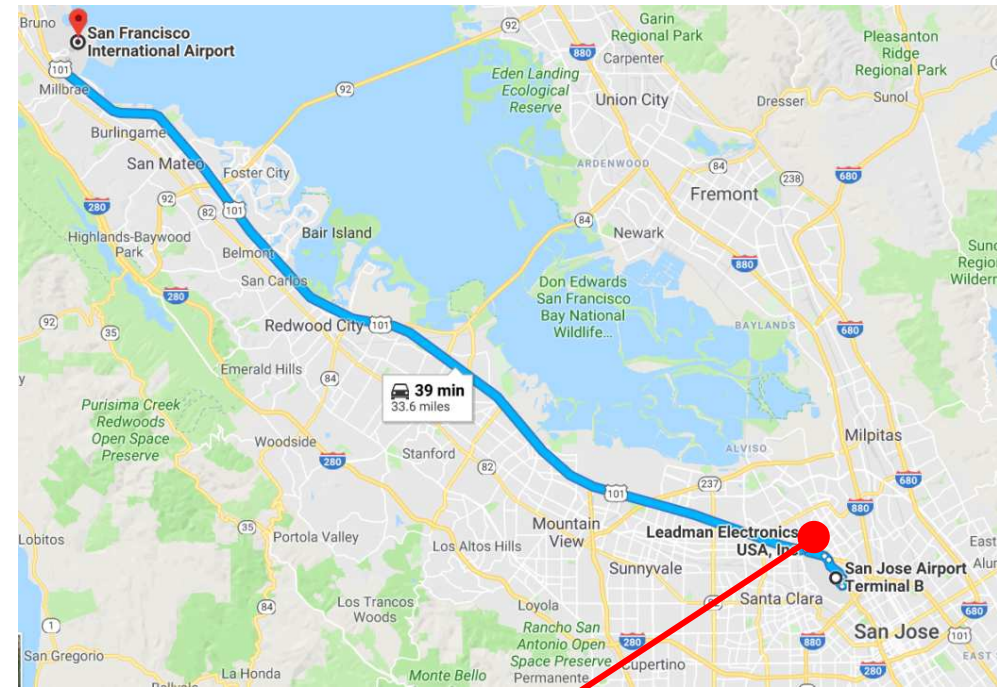
Auto Insertion Line



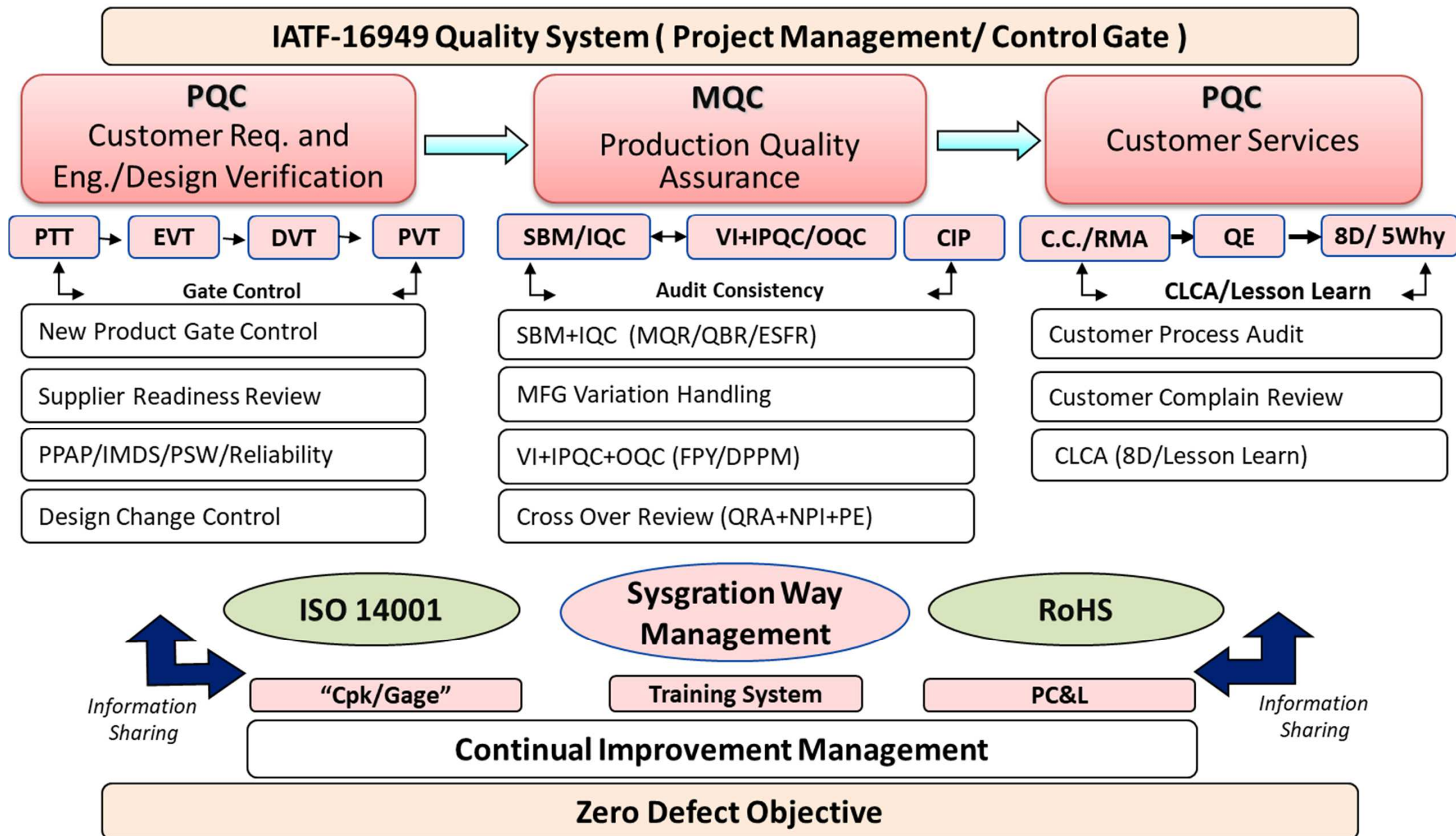
HuiZhou Factory

USA Factory and Service Center **SYSGRATION**

- Location: Santa Clara, California, USA
 - ✓ 10-Min Drive from San Jose Airport
 - ✓ 40-Min Drive from San Francisco Airport
- Facility Space: 53,000 Ft²
- Products: High Performance Servers, Networking Solutions, Data Center, Cloud Computing, Data Center



Leadman Electronics, Inc.



- All Major Manufacture Sites Have ISO-9001:2008, ISO 14001:2004, SA 8000, IECQ QC 08000, and IATF-16949 Certificates.
- NanKang Factory Got Volkswagen A+ Rating (92 Points).



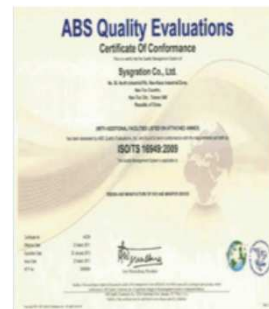
SA8000



RoHS



ISO14001



IATF-16949



VW VDA 6.1

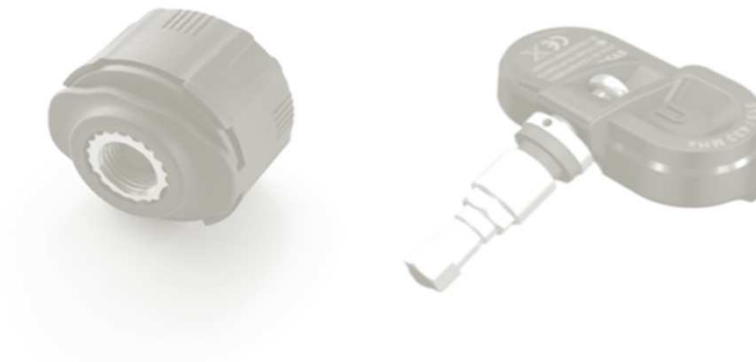


QS-9000



ISO-9001

Tire-Pressure Monitoring System (TPMS) Solutions



RF TPMS



Internal TPMS



Internal TPMS



TPMS Tool



BLE TPMS



Internal TPMS



External TPMS



Voice Receiver



Display Voice Receiver



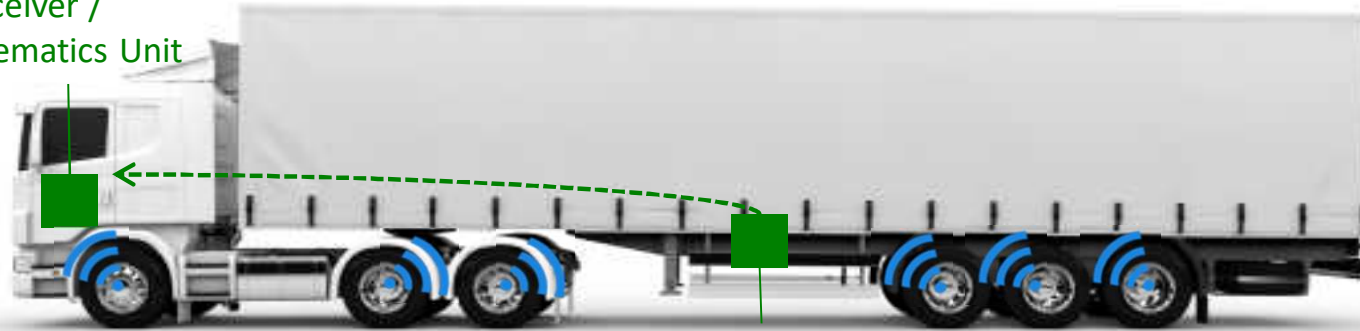
Repeater



Easy Integration into Fleet Management System Via BLE

- Supports up to 38 wheels
- Max. pressure 185 psi
- Repeater for wireless range extension
- Voice warning or display warning
- Anti-theft patent for external type
- T-Valve for easy inflation

Receiver /
Telematics Unit



Repeater

One Sensor per wheel



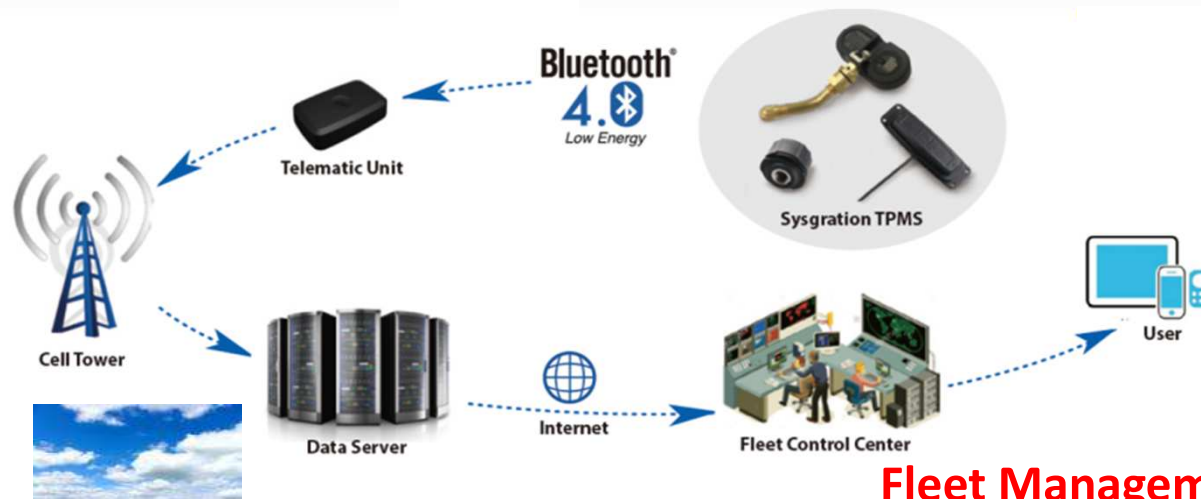
Internal TPMS



External TPMS



Repeater



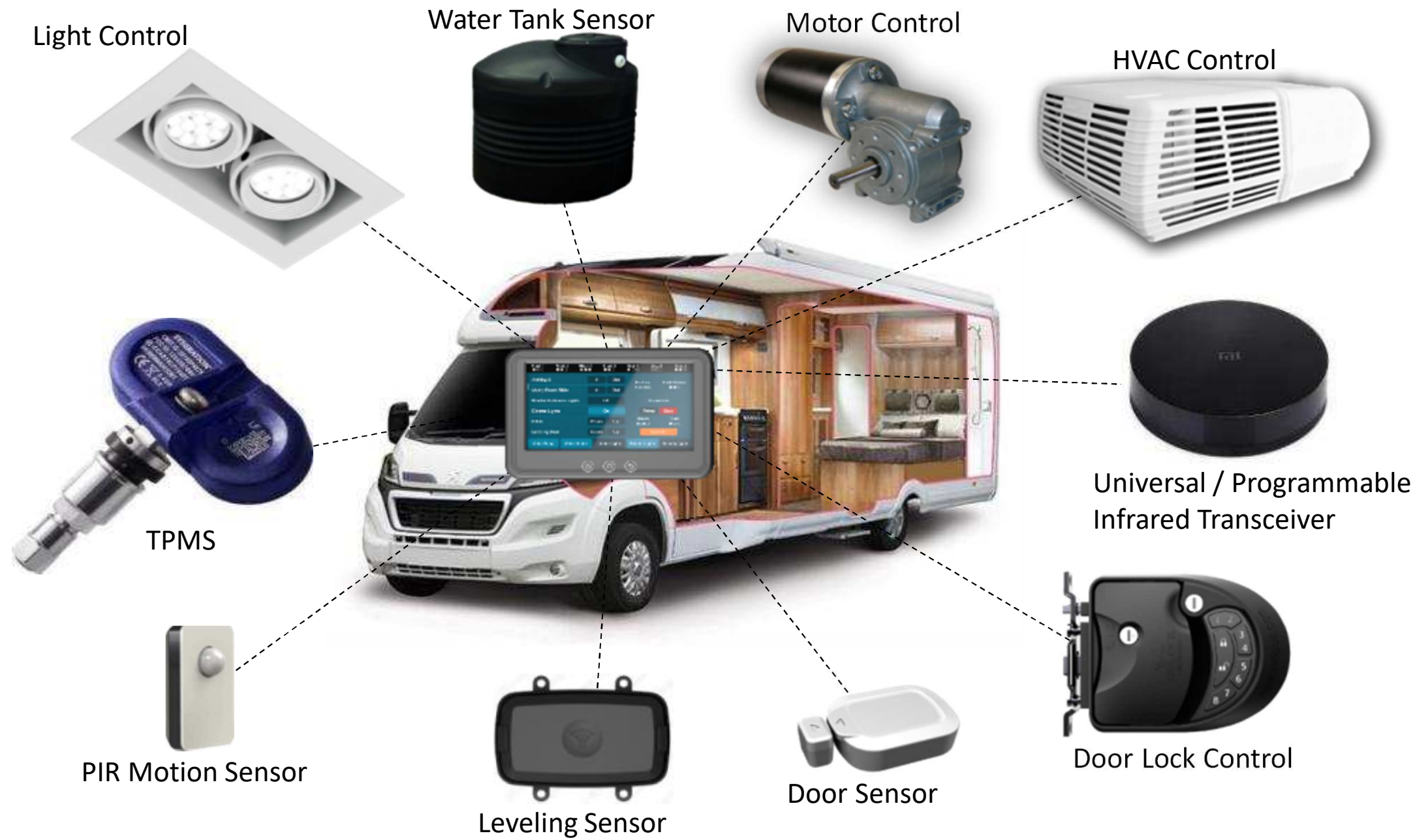
Fleet Management System

Recreational Vehicle Smart Control System

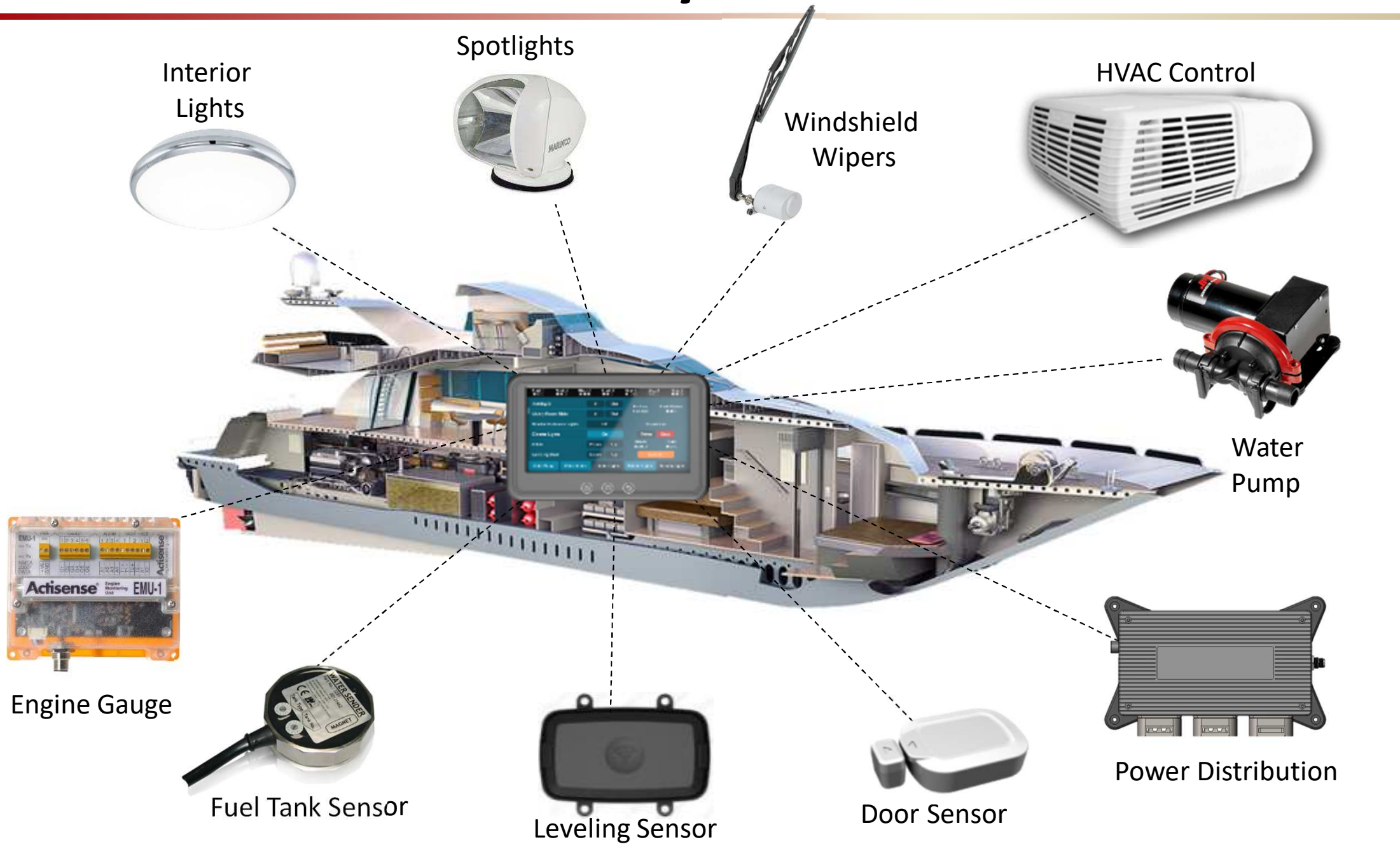


RV Appliances Control System

SYSGRATION

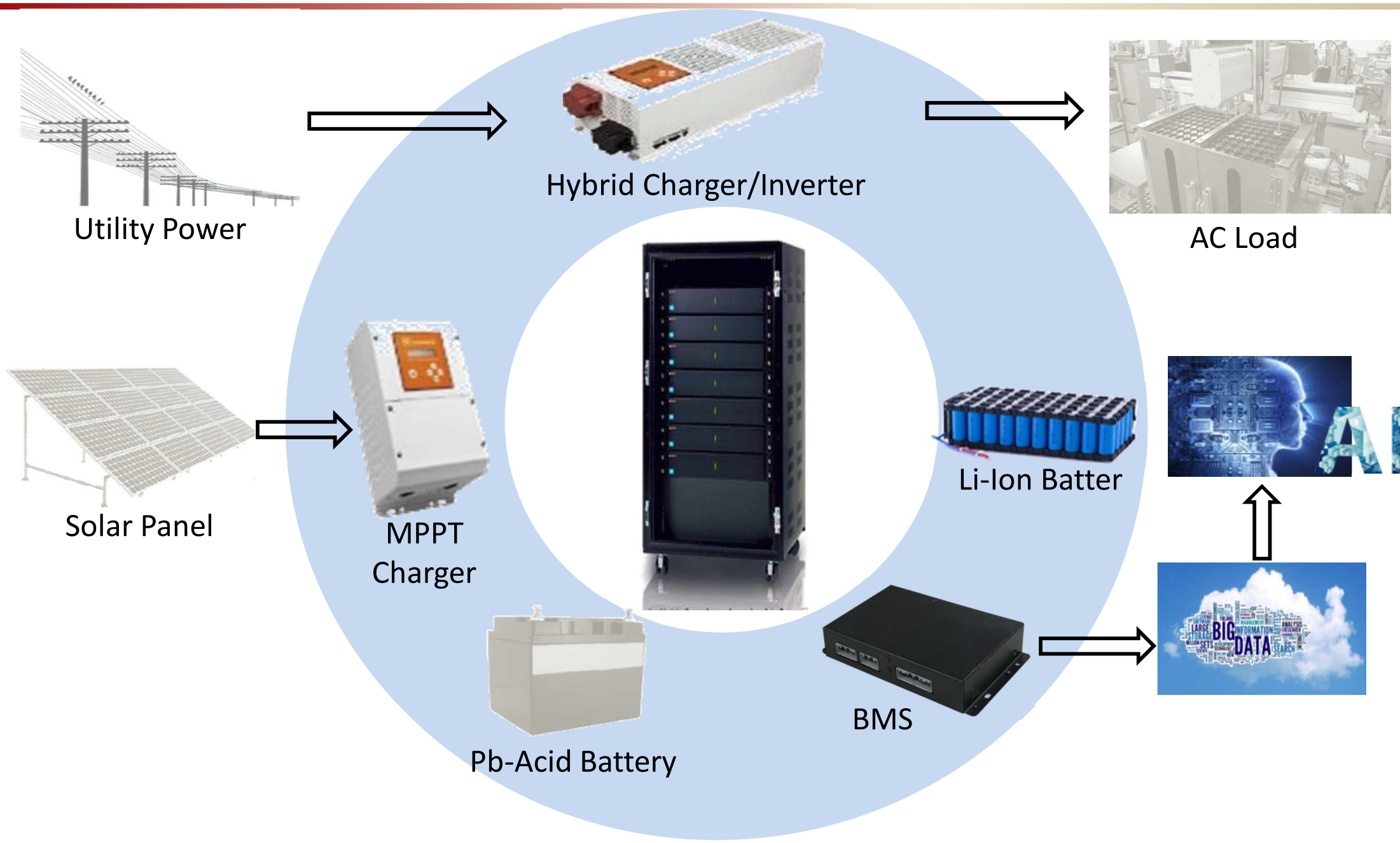


Marine Central Control System **SYSGRATION**



儲能系統

**Energy Storage System
(ESS)**



Focused on Industrial APP.

SYSGRATION



Optics



Semiconductors



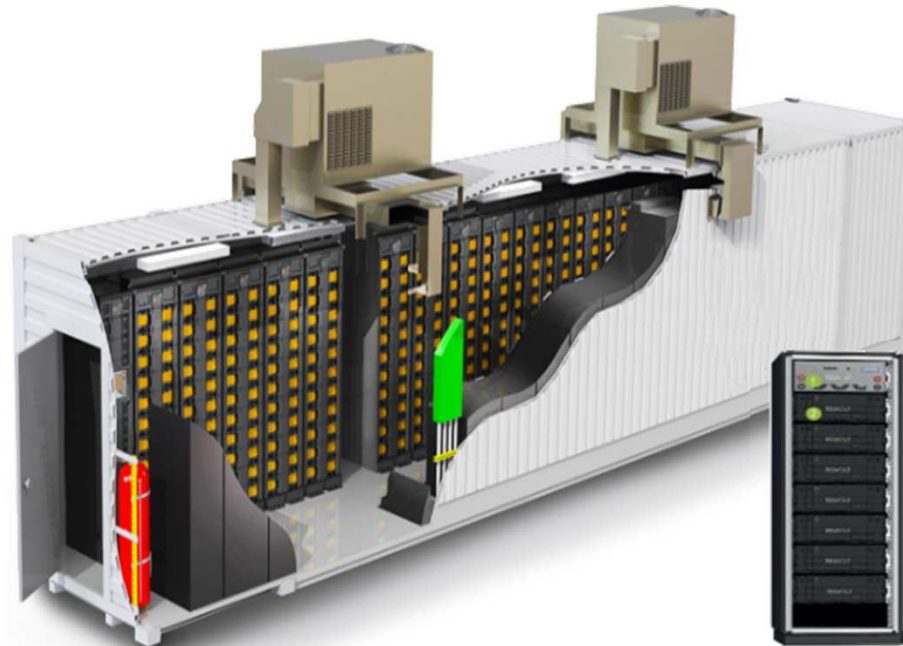
LCD



CNC Machinery



Hospital



Battery Backup PSU 300W ~ 550W



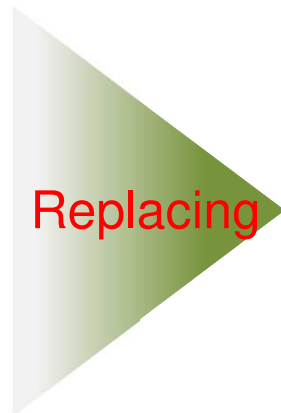


HyperScale DataCenter Power Solutions

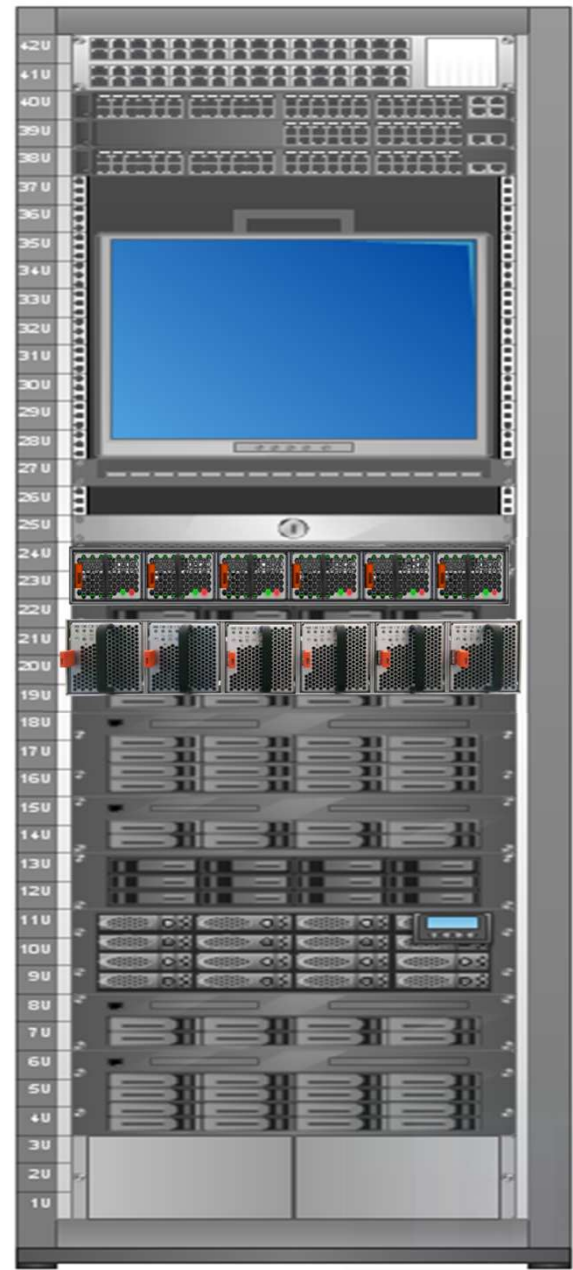
PSS
(Power Supply System)



BBS
(Battery Backup System)

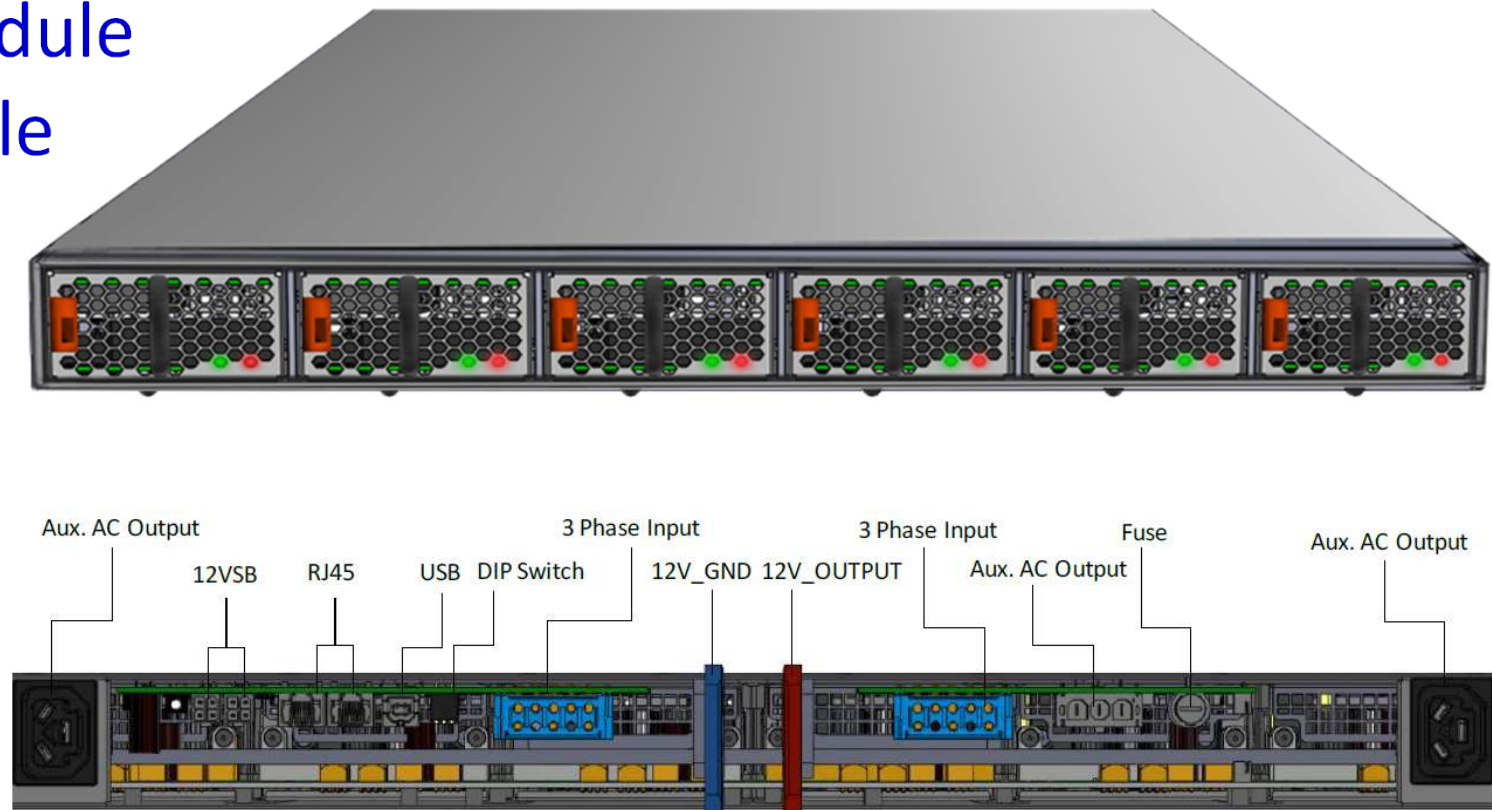


Traditional UPS



Power Supply System

- ✓ Dual 3-Phase with 5 wires @ 380Vac inputs
- ✓ 5+1 Redundancy = 15KW+3KW
- ✓ 3KW PSU Module
- ✓ Hot-swappable



Battery Backup System vs. Traditional UPS

- ✓ Power Backup Device up to 15KW > 3 Minutes
- ✓ BBS Adopts Li-Ion Battery with 13S/4P Configuration
 - Redundancy- Fault Tolerance
 - Maintainability- Hot-swappable Module
 - Extended Life Cycle
- ✓ Peak Load Assistant of Power Surge Demand

Traditional UPS




Replaced by

Battery Backup System



AC to DC Power Supply System (PSS)



19" Rack



OCP 21" Rack



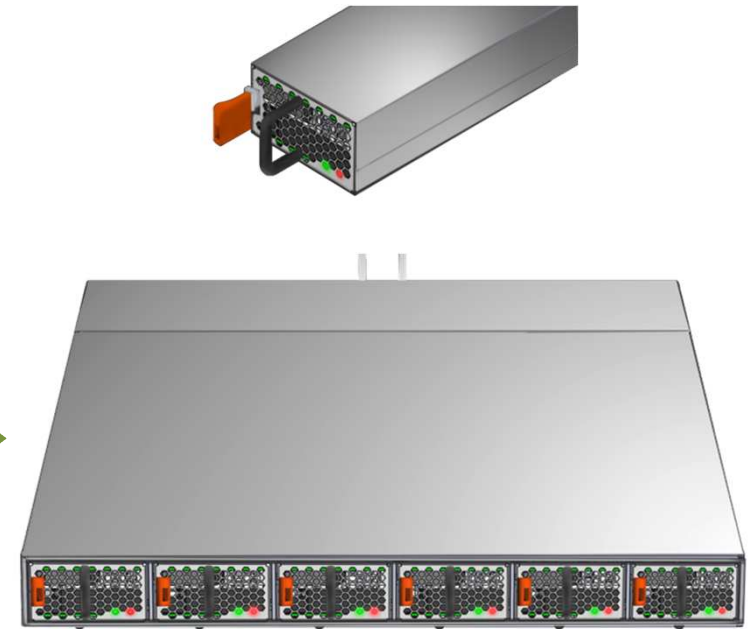
One for Two



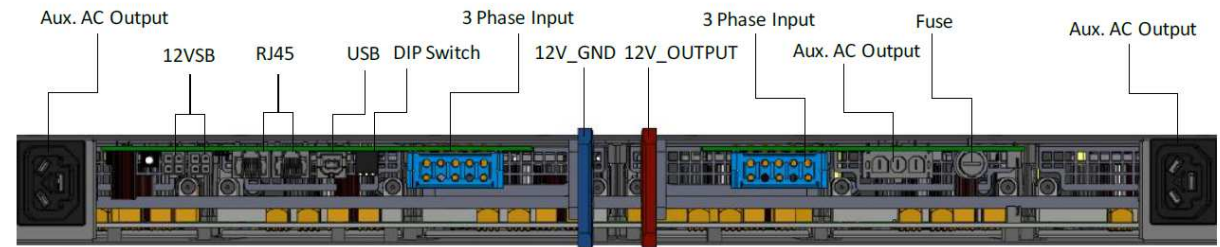
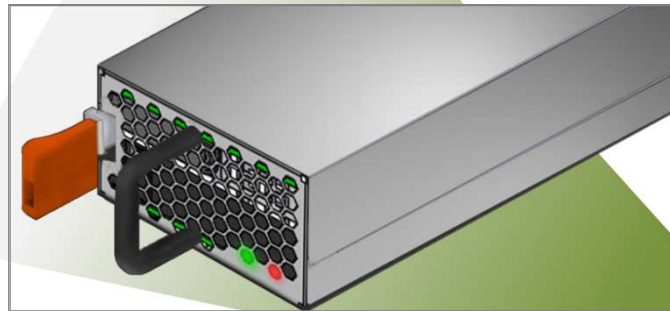
Traditional Server Power Configurations



Centralized System



Zoom in of Power Supply Unit **SYSGRATION**



- 5+1 Redundancy > up to 18KW
- 3KW PSU Module
- Hot-Swappable



Battery Backup System (BBS)

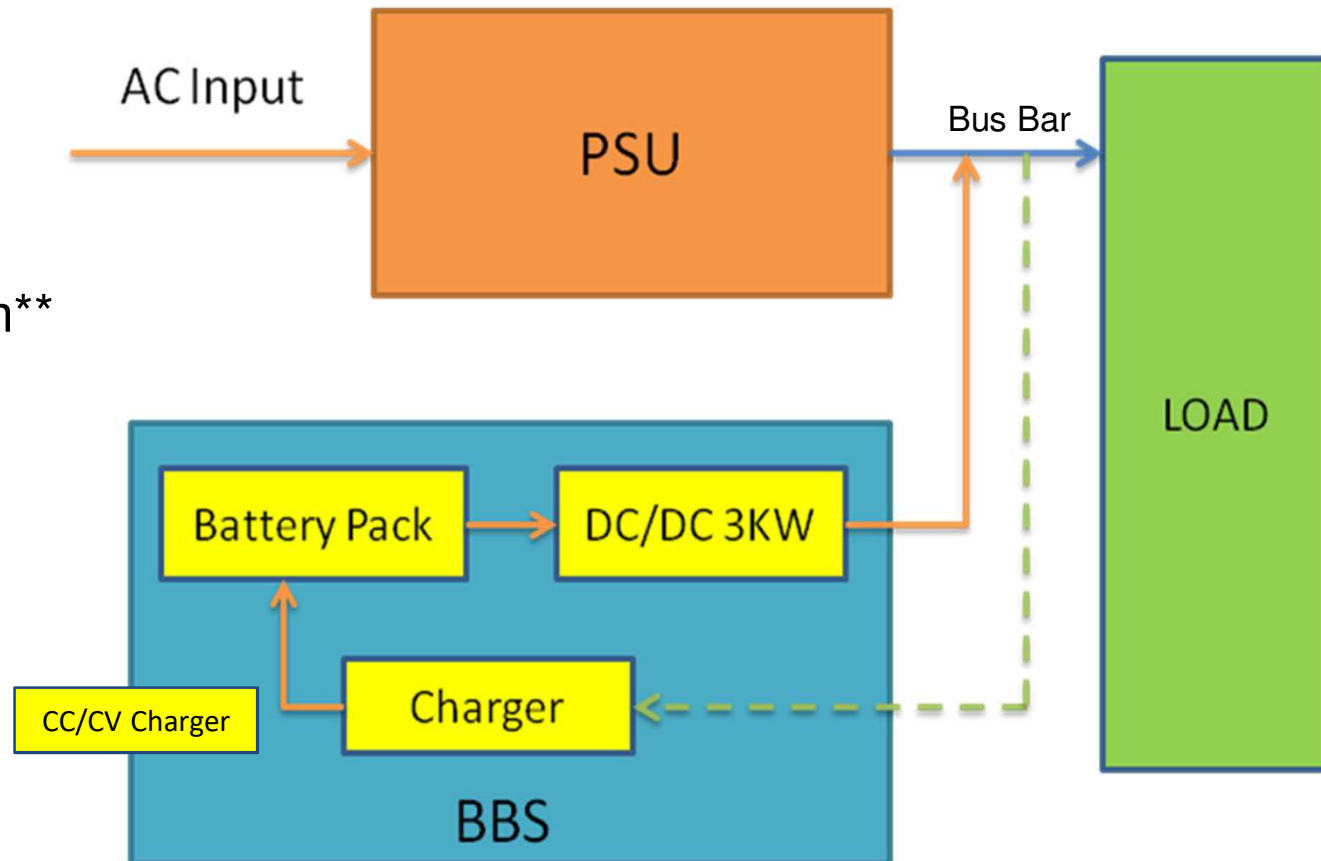
The Battery Back-up System (BBS)

- Power Backup Device up to 15KW
- Li-Ion BBS with 13S4P configuration
- Single-voltage 12.2V typical output voltage (with cells at typical 3.6V).
- Open 2U rack form factor align with OCP Standard or 19"

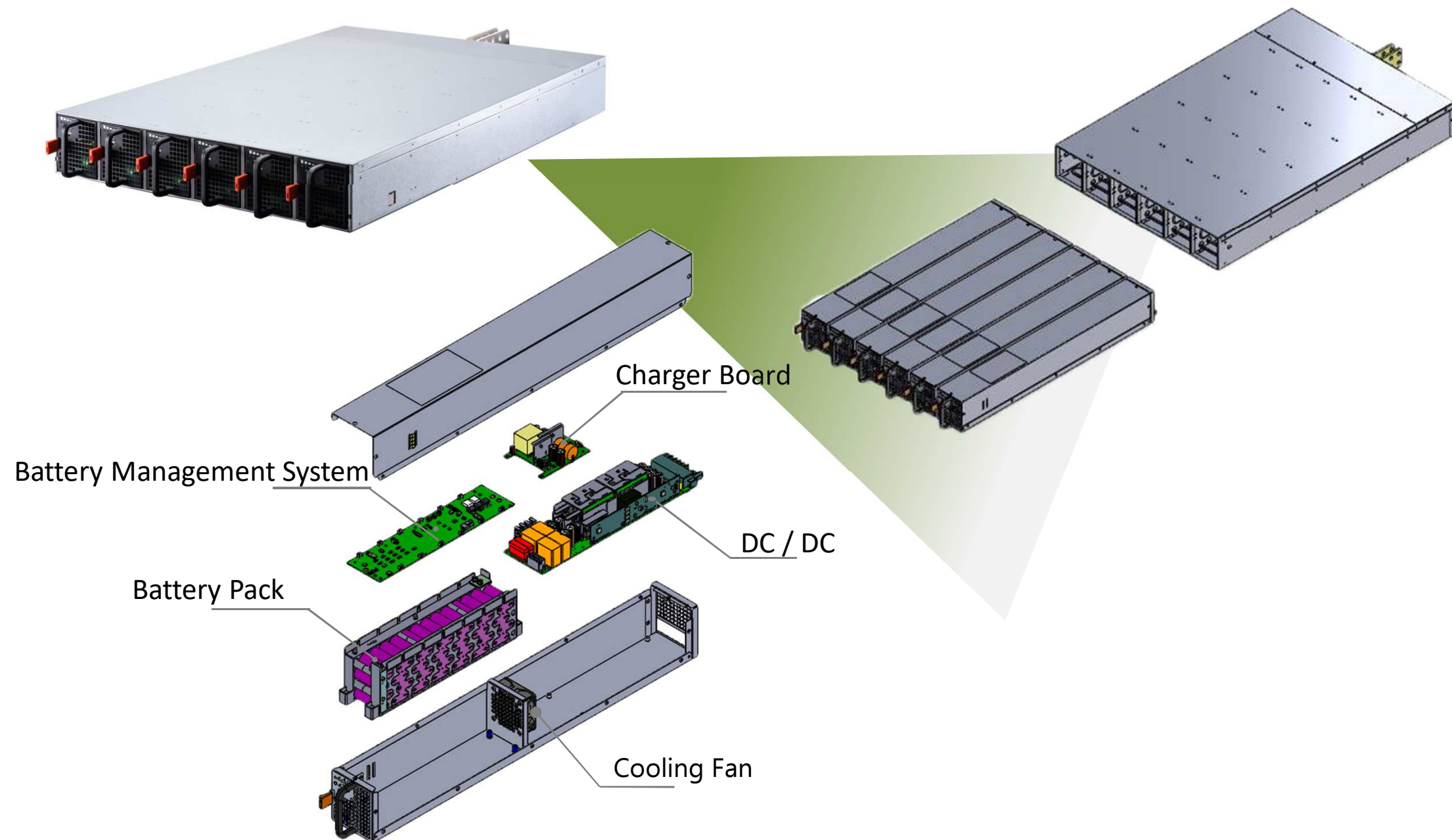
Battery Backup System contains:

- DC to DC converter (Isolated design)
- CC/CV Charger
- Battery Pack with BMC

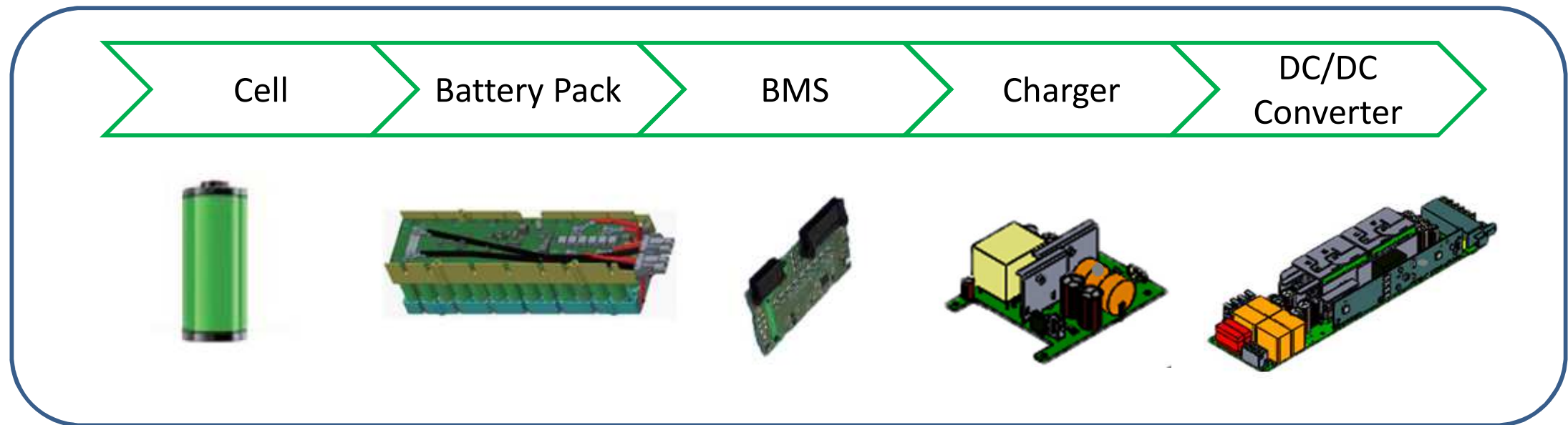
**** Application
Block Diagram****



Battery Backup System Composition **SYSGRATION**



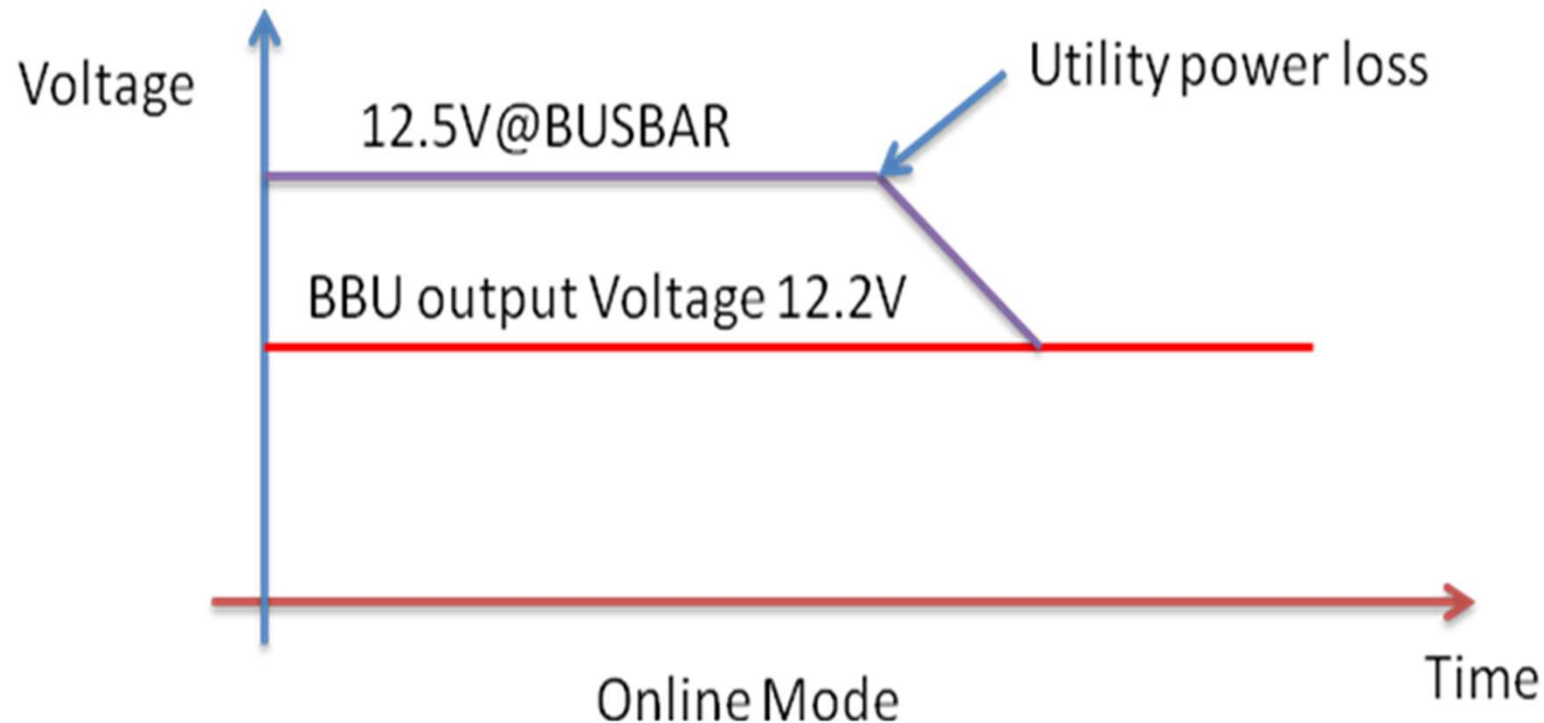
For Data Center and Cloud Computing Application



Composition	Li-ion Cell (18650)	Cell Assembly / BMS / Fuel Gauge	CC / CV Charger	3KW DC/DC Isolated Converter
Basic Requirement	High Drain	OVP / UVP / OCP / SCP /OTP /UTP /Cell Balancing	OVP / OPP / Auto Cut-off	BMC Control / Hot-swap / Communication
Additional Requirement	Long Battery Cell Life	High Accuracy / Higher security	Fast Charging	High Efficiency (>94%) / High Density

The BBS will be triggered to take over the overall power loading:

- 1) AC utility source in an abnormal condition
- 2) AC power shelf is disabled and the output voltage dropped to 12.2V

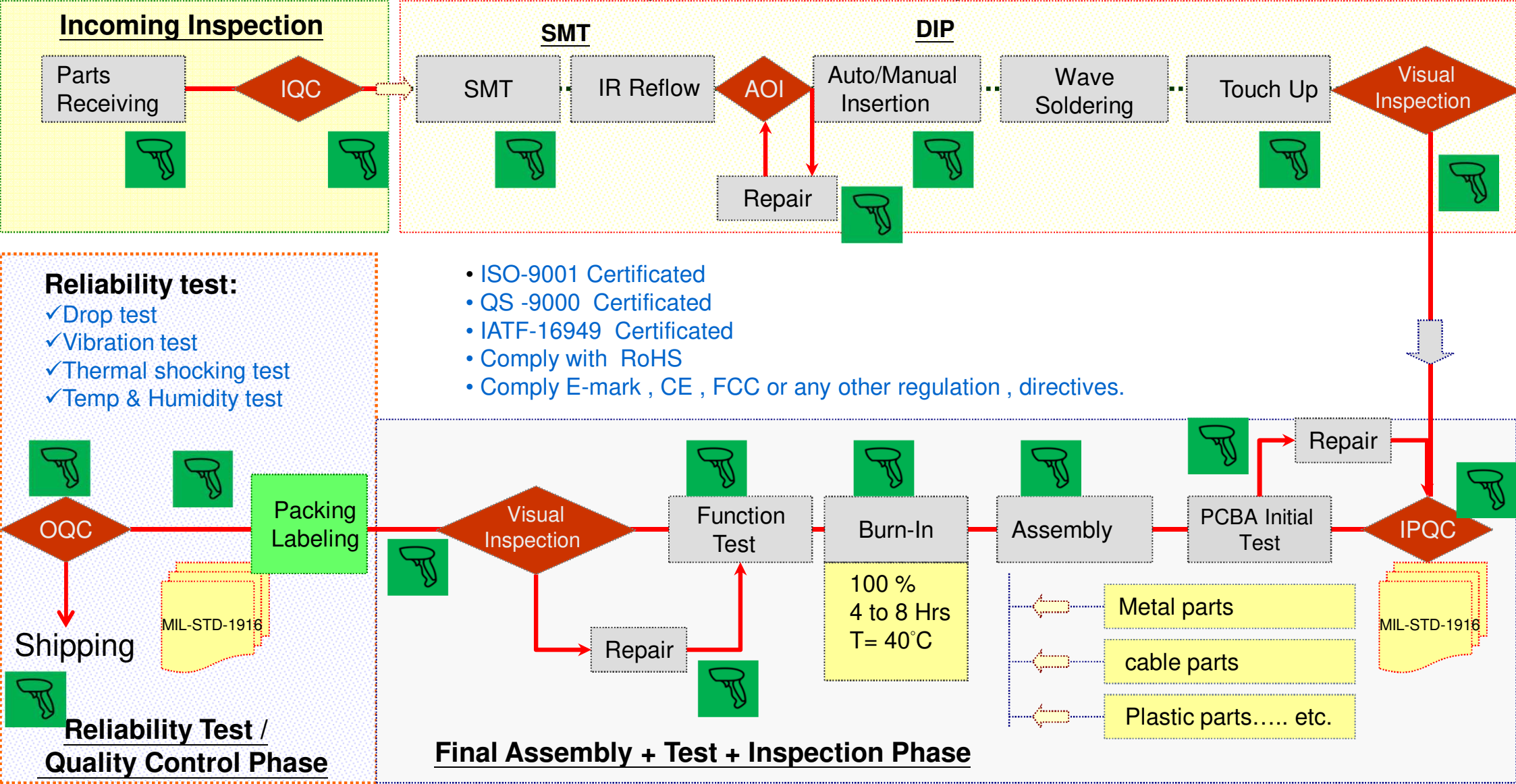




- **Total Space : 33,000 M2**
 - **Building 1 (1 Floor)**
 - **Building 2 (9 Floors)**
- **Production: 2 Storey**
 - **1 Storey : PCBA**
 - **2 Storey : System Assembly**
- **Warehouse: 2 Storey**
- **Shipping Dock: 1 Storey**
- **Employees: 150+ people**
- **6 Storey reserved**

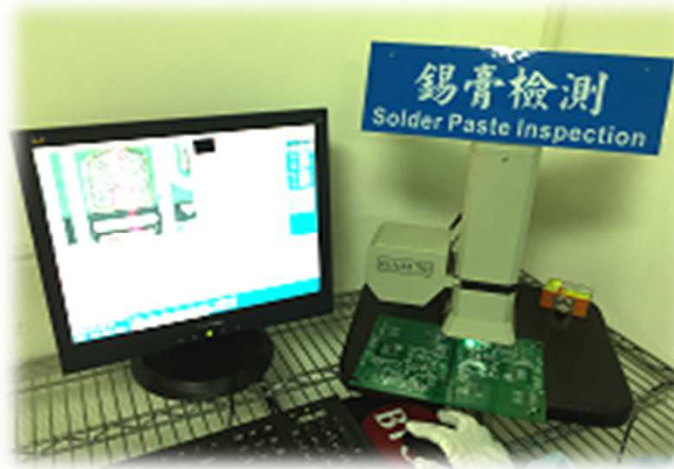
Production Flow Chart

**** SMT in-house or sub-contracting (Handle by sub-contractor)**
ICT Option, base on customer requirement





SMT Line



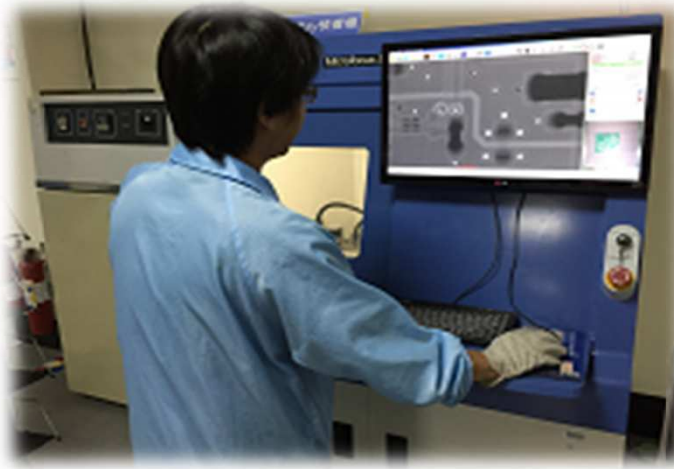
Solder Paste Inspection



Reflow Measure



BGA Rework



SMT X-Ray Inspection



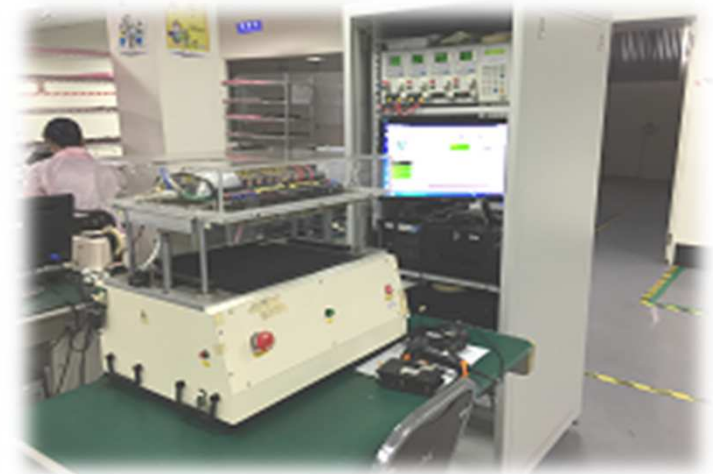
AOI Inspection



DIP Line



Wave Soldering



Automatic Testing Equipment



Battery Tester



Cell Line



Automatic Testing Equipment

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