



SMACH's **Smart Technologies**



JQA-QMA16427
DESIGN / DEVELOPMENT AND
MANUFACTURING OF
POWER ELECTRONICS EQUIPMENT

SMACH


SMART TECHNOLOGY

SMACH Co.,Ltd.

SMACH converts "can't" to "CAN!"

SMACH is a team of technology specialists providing product development and technology development services that meet the market's needs with its advanced power electronics technologies centered on saving energy for driving and controlling motors and high-efficient power converters.

SMACH can develop various power electronics products 

SMACH can provide mass production to various fields regardless of production volume 

SMACH can provide development tools as original products packed with energy saving technologies 

Along with the growing concern for protection of the environment, to reduce the amount of power consumption, energy saving technology is advancing. Such technology includes miniaturization of motors, improvement of energy efficiency, incorporation of inverter drivers, and improved performance of power conversion equipment such as converters, etc. However, in many areas, the transition is not smoothly carried out due to technological difficulties.

That is where "SMACH" comes in.

SMACH is a venture company specialized in power electronics technologies with its focus on technologies for controlling motors for energy efficiency.

Utilizing the flexibility of a venture company, we develop products and provide engineering services that will perfectly match with customers' needs.

Through power electronics technologies, we will contribute to development of society that is friendly to the global environment and comfortable for people.

You can expect to see highly value-added engineering services by SMACH, a technological innovation company.



C.E.O. Sadao Kawahara



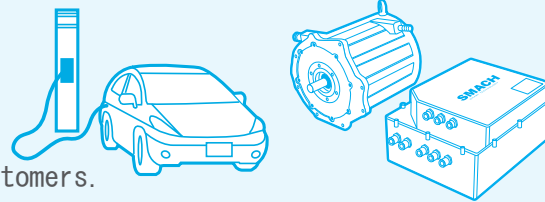
Solutions that **SMACH** can provide.

SMART TECHNOLOGY

SMACH is a professional of power electronics technology.

Development
Services

With power electronics technologies centered on motor & inverter and power source management, SMACH provides product development support services tailed to the needs of our customers.



SMACH can provide mass production regardless of production volume.

Mass Production

SMACH
SMART TECHNOLOGY

- Custom design
- High quality

**ISO9001
certified factory**
Inverter/converter/motor



Customer

SMACH can provide development tools packed with energy saving technologies.

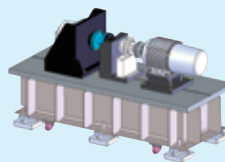
SMACH Original
Products

Universal Inverter Driver



We can make it rotate smartly by any motors.

Motor Testing System



LED stroboscope

Handy type
Easy to use



*) Please refer to a catalog for details.

SMACH's universal technologies will support newly developing power conversion tools, such as motor inverters and converters.

SMACH's Vision

Through power electronics technologies, SMACH will contribute to realization of society that is friendly to the global environment and comfortable people.

SMACH is a team of energy saving professionals leaped out of Panasonic.



Just a few
examples of
development
by SMACH

SMACH's

"CANs" reach out to various fields

SMACH
SMART TECHNOLOGY



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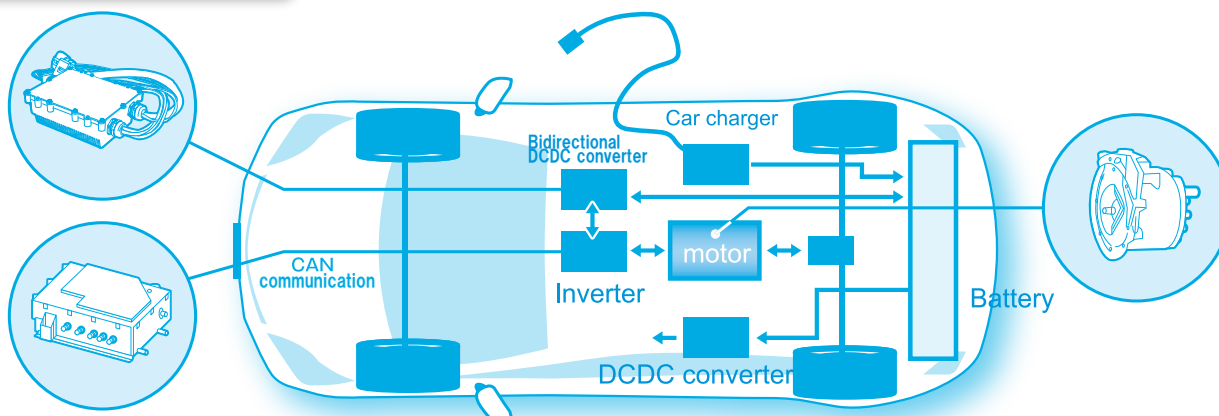
can



1

Development
Service Business

Motorize a variety of vehicles



Electric car



Electric motorcycle



Forklift



Construction Machinery



Farm machine

Case 1 Traction motor inverter for electric vehicles

Case 2 Motor inverter for mild hybrid system

Case 3 Hydrogen pump inverter for fuel cell vehicles

Case 4 Inverter for electric car air conditioners

Case 5 DC-DC converter for construction machineries

SMACH
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can



2

Development
Service Business

Insulated bidirectional DCDC converter

SMACH developed the DCDC converter optimal as a router
which distributes electricity wisely.



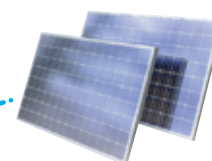
Electric car fast charge



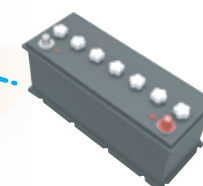
Central control & visualization



Insulated bidirectional DCDC converter



PV panel

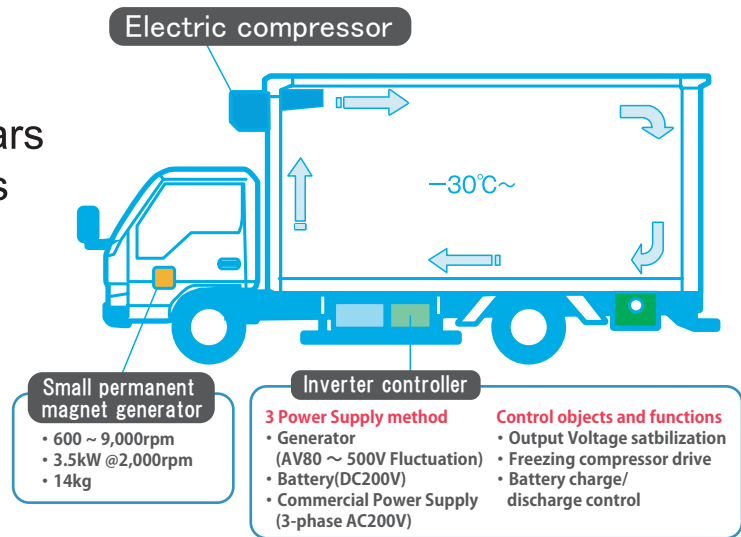


Electric storage device

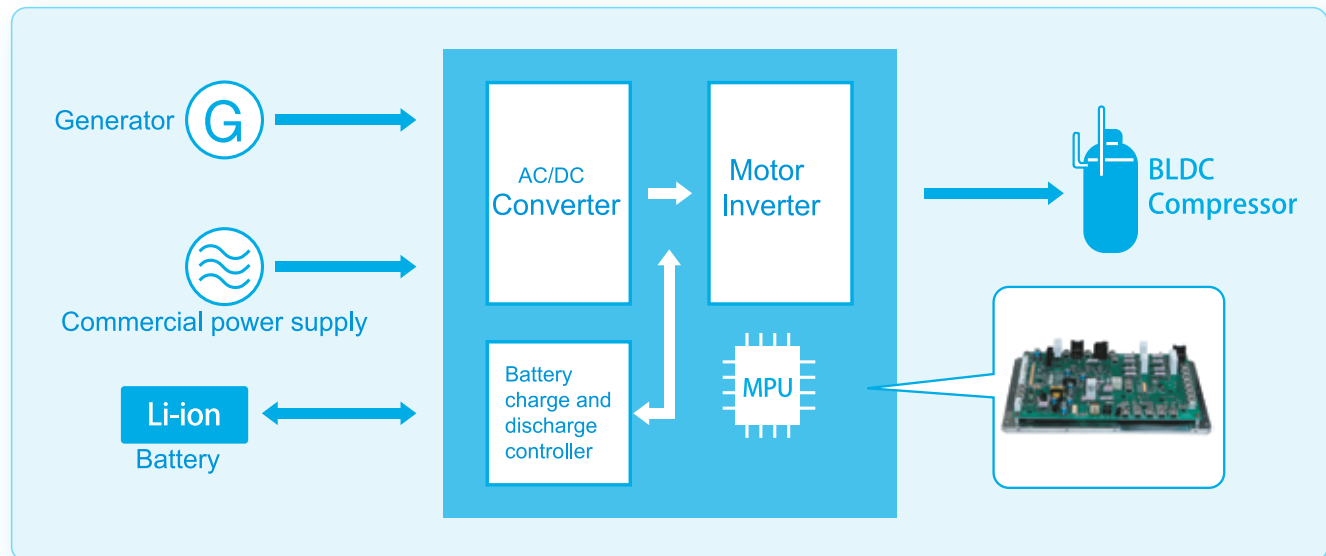
Mass Production
Business

Inverter controller for freezer cars with in-house power generators

Next-generation freezer truck with high energy efficiency and meticulous temperature control equipped with an electric compressor generated by a special power generator via an inverter.



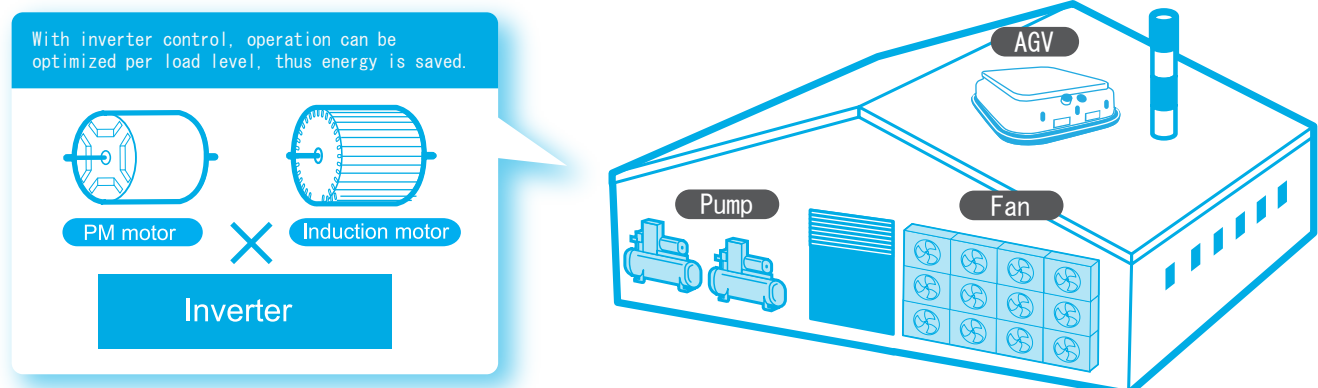
System configuration



Mass Production
Business

Inverter for factory equipment (pump, fan)

To reduce CO2 emission, devices with motors need to have higher energy efficiency, by utilizing permanent magnet brushless motor for fans and pumps that are continuously run, with highly efficient inverter, a significant amount of energy saving has been accomplished.



■Corporate Profile

SMACH Co.,Ltd.

Foundation April 16, 2003

President & CEO Sadao Kawahara

Director Makoto Yoshida(CTO)

Director Ken Hineno (CPA)

Auditor Yoshito Fujikawa (LAttorney, Patent Agent)

Capital ¥95 million

Main Banks

Mizuho Bank

Sumitomo Mitsui Banking Corporation

[Location]

Head Office 2-1-61, Shiromi, Chuo-ku, Osaka, 540-6114, Japan

Development Center 18-8 Kinoshita-cho, Otsu, Shiga, 520-0812, Japan

Evaluation Center 7-3-46 Nojihigasi, Kusatsu, Shiga, 525-0058, Japan

[Business Contents]

1. Development and mass production supply of power electronics equipment
2. Manufacturing and selling of smack original power electronics development tools
3. Technical assistance and technology consulting business

■Company history

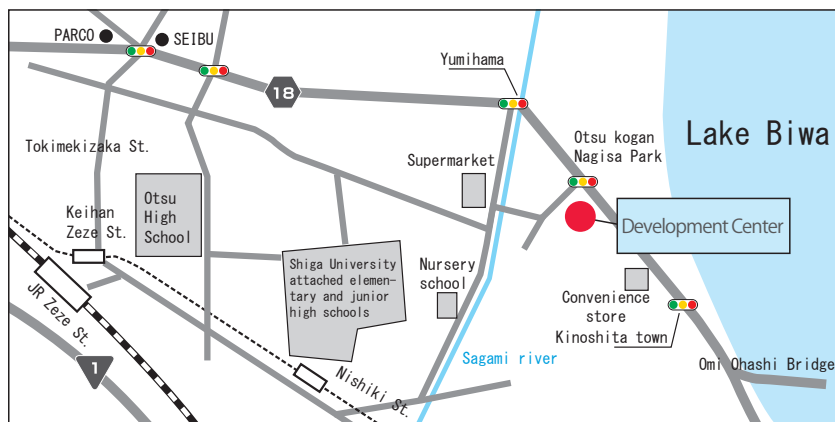
- Apr., 2003 Started a business as an in-house venture company of Panasonic.
- Sep., 2006 Established Universal Inverter Driver technology and started build-to-order manufacturing.
- Apr., 2007 Development and Mass Production of inverter controllers for refrigerated vehicles that support idling stop.
- Apr., 2010 Development and commercialization of inverter controller for turbo molecular pump.
- Aug., 2011 Started build-to-order manufacturing of Motor Testing System.
- Dec., 2013 Independent from Panasonic Corporation by MBO.
- Jan., 2015 Universal Inverter Driver selected as "Kansai Manufacturing New Selection 2015" by Kansai Bureau of Economy, Trade and Industry, Ministry of Economy, Trade and Industry.
- Jan., 2016 Motor Testing System selected as "Kansai Manufacturing New Selection 2016" by Kansai Bureau of Economy, Trade and Industry, Ministry of Economy, Trade and Industry.
- Jan., 2017 Compact high-efficiency engine power generation and power storage system selected as "Kansai Manufacturing New Selection 2017" by Kansai Bureau of Economy, Trade and Industry, Ministry of Economy, Trade and Industry.
- Dec., 2017 Selected as "Regional future leadeing company" by the Ministry of Economy, Trade and Industry.
- Jan., 2018 Universal Inverter Driver development engineers received the Excellence Award of "7th Manufacturing Japan Award" of Ministry of Economy, Trade and Industry.
- Jan., 2020 The large capacity motor test site installed.

■Main customer

- | | | | |
|---------------------------|---------------------------------------|----------------------------|--|
| • Toyota Motor Corp. | • Valeo Japan Co., Ltd. | • Yanmar Co., Ltd. | • EXEDY Corp. |
| • DENSO Corp. | • Taiho Kogyo Co., Ltd. | • Kubota Corp. | • Samsung R&D Institute Japan Co.Ltd. |
| • Toyota Industries Corp. | • Musashi Seimitsu Industry Co., Ltd. | • Iseki & Co., Ltd. | • RENAULT Group |
| • AISIN Corp. | • Mitsubishi Heavy Industries, Ltd. | • Panasonic Corp. | • AQUA Co., Ltd. |
| • Toyota Boshoku Corp. | • Kawasaki Heavy Industries, Ltd. | • Shintec Hozumi Co., Ltd. | • LG Electronics Inc. |
| • Hino Motors, Ltd. | • IHI Corp. | • OMRON Corp. | • Hanon Systems Corp. |
| • SUBARU Corp. | • Sumitomo Electric Industries, Ltd. | • DAIKIN INDUSTRIES, Ltd | • Guangzhou Automobile Group Co., Ltd. |
| • JTEKT Corp. | • Sumitomo Heavy Industries, Ltd. | • FUJITSU GENERAL LIMITED | • Osaka University |
| • Nissan Motor Co., Ltd. | • Nabtesco Corp. | • Hitachi, Ltd. | • Tohoku University |
| • Honda Motor Co., Ltd. | • ShinMaywa Industries, Ltd. | • Toshiba Corp. | • Kyushu University |
| • SUZUKI MOTOR Corp. | • NIPPON STEEL Corp. | • Topre Corp. | • Osaka Prefecture University |
| • MAZDA Motor Corp. | • Shimadzu Corp. | • Osaka Vacuum, Ltd. | • Ritsumeikan University |
| • Hitachi Astemo, Ltd. | • NACHI-FUJIKOSHI Corp. | • NAKANISHI Inc. | • Akita University |
| • Yamaha Motor Co., Ltd. | • Komatsu Ltd. | • NISSEI Corp. | etc. |
| • Nichicon Corp. | • NIDEC Corp. | • DAIHATSU MOTOR Co., Ltd. | |

A c c e s s

Development Center (Otsu, Shiga)



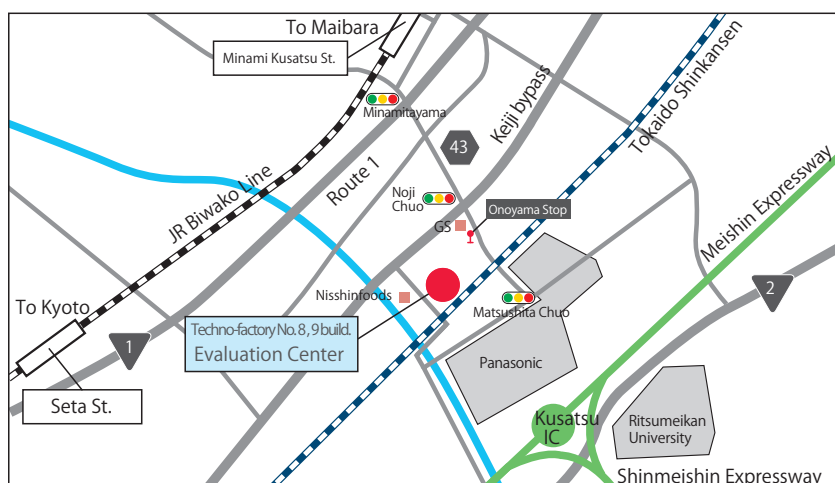
○About 15 minutes walk from the JR Biwako Line Zeze Station or Keihan Electric Railway Zeze station.

About 10 minutes walk from Keihan Electric Railway Nisiki station.

TEL. +81-77-526-8815

FAX. +81-77-526-8816

Evaluation Center (Kusatsu, Shiga)



○About 10 minutes by taxi from JR Biwako Line Minami Kusatsu Station.

From the JR Biwako Line Minami Kusatsu Station and ride about 5 minutes bus to Onoyama bus stop and walk about 10 minutes.

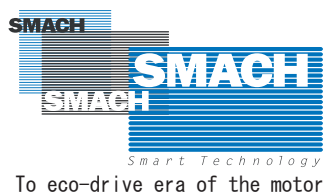
TEL. +81-77-569-5884

FAX. +81-77-569-5885

共存共栄

Co-existence and co-prosperity





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