

About MORNSUN

- Basic information & Milestones
- Structure
- Markets & Turnovers
- Culture



Basic information & Milestones



Established in 1998 by Mr. George Yin (Xiangyang Yin)



Production area: 80000m²



Employees: 4300+

R & D Engineers: 700+

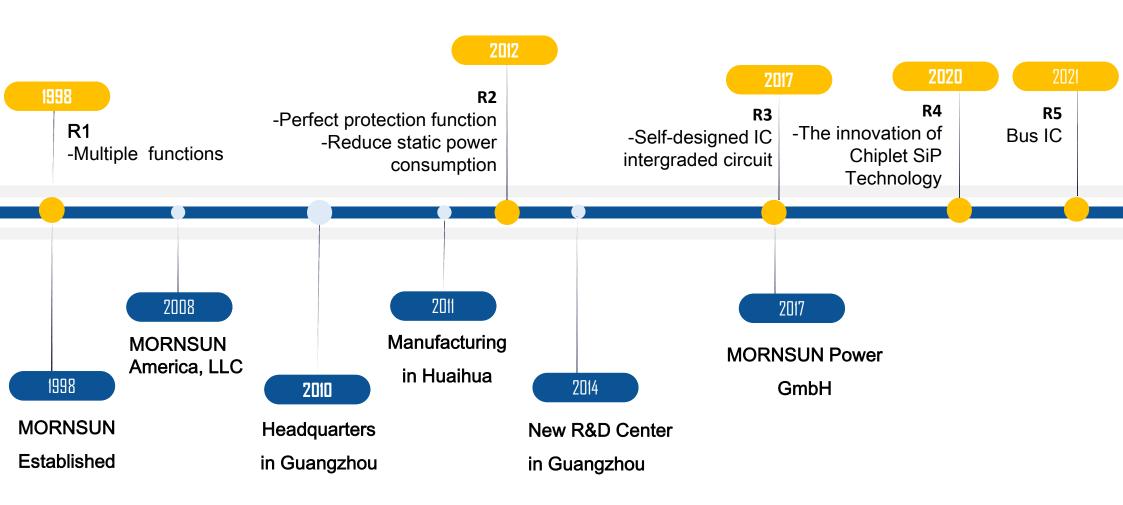


Channels: 70+

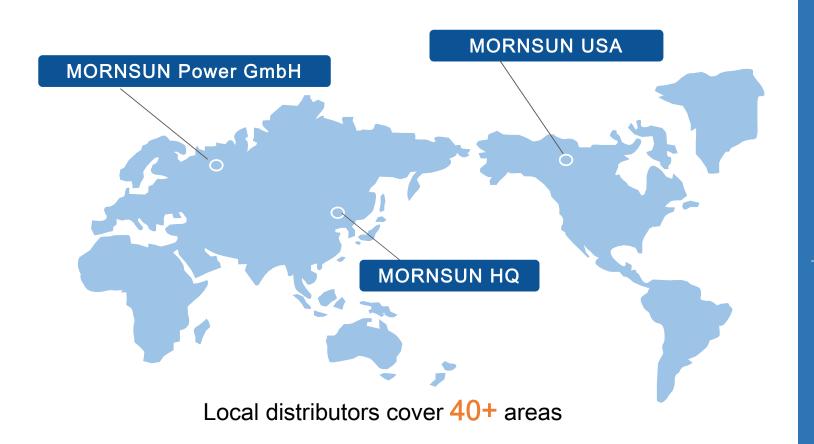


Patents & IPRs: 1200+

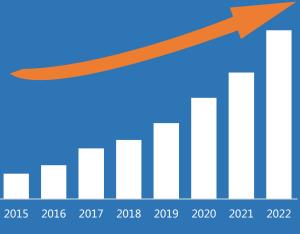
Basic information & Milestones



Markets & Turnover



The Annual grows steadily



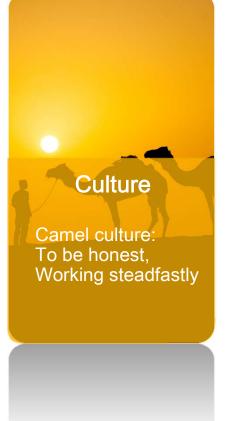
Culture













Innovation

Basic circuit structure (topology)



- Innovative topology and control technology of switching power supply circuit
- 150+ invention patents

Raw material



- Core structure
- CT(current transformer) structure
- Skeleton structure
- Patents and Awards

Integrated circuit



- Control IC development (hard to copy)
- 100+ invention patents

Manufacturing technology

- Spot welding technology
- Introduce the IC packaging technology into manufacture
- SMT product line meets automobile production requirements
- Transformer automatic winding technology

R&D - Reliability Laboratory



6/700+

R&D Centers /Engineers

15%+

Annual turnover being invested into R&D

1000+

Annual new products

1200+

Patents & IIPRs

R&D -Reliability Laboratory

Authorized Test



CE/CB Standards

IEC/EN 60950 IEC/EN 62368 IEC61000-4-2

IEC/EN 60035

IEC61000-4-4

IEC61000-4-5



UL/CSA Standards

UL 1741 UL/CSA 60950

UL/CSA 60065

UL/CSA 60601





UL/ CSA/ TUV Certified Lab





Certificate



Certificate











Manufacture

Automation

70%

Production Capacity

150KK/year

Dust-free SMT workshop with

48 SMT lines







Industry Standard

- ✓ UL/CE/CB/REACH/ROHS/CSA
- ✓ AEC-Q100
- ✓ Rail EN50155
- ✓ Medical EN/UL 60601



Reliability Assurance

- √ Technology Management Platform
- √ Material Management Platform
- √ Failure Analysis Platform
- ✓ Manufacturing Platform
- √ Process Control Platform
- √ Personnel Training Platform
- √ Service Platform



Management System

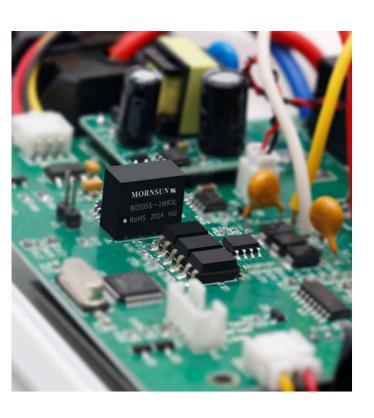
- √ Technology Management Platform
- √ Material Management Platform
- √ Failure Analysis Platform
- ✓ Manufacturing Platform
- √ Process Control Platform
- ✓ Personnel Training Platform
- √ Service Platform



360°Services

- √ Global Sales Network
- √ Fast Response
- √ Localization Service
- √ FAE Supports

Service





Localization Service

- a) Localized inventory
- b) Point-to-point delivery, delivery-on-time



FAE Supports

- a) Customized Solution: develop costeffective power solutions
- b) Technical supports: regular visits, occasional technical discussions and exchanges



Global Sales Network

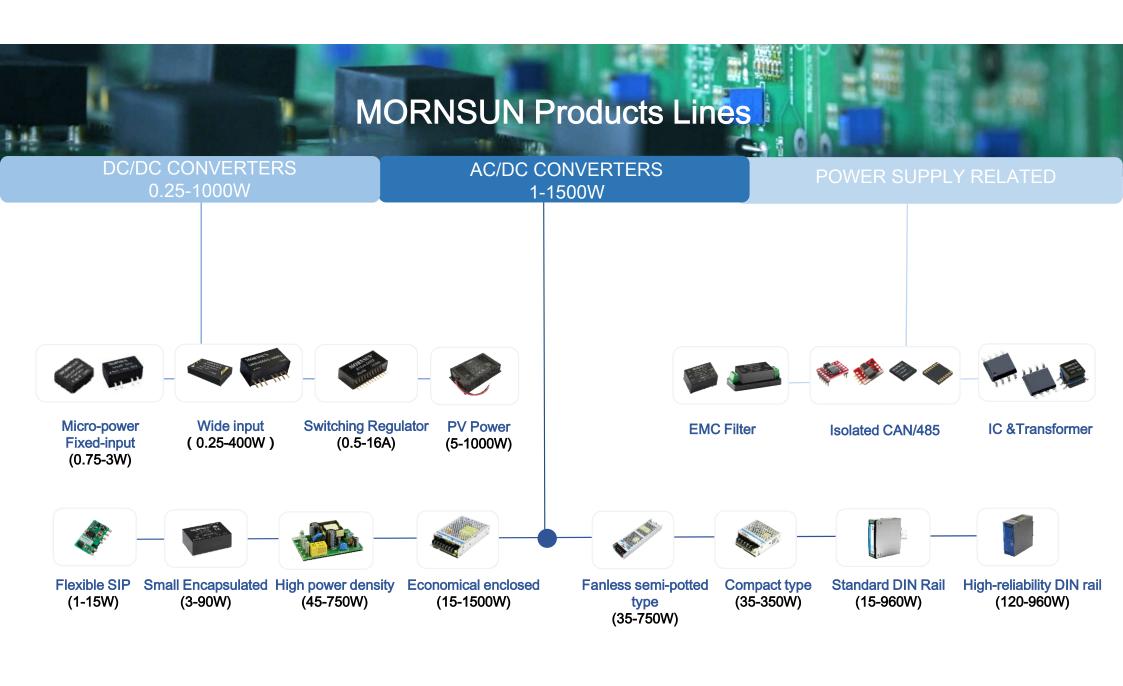
- a) 70+ Channels
- b) 2 Branches
- c) 9 Offices



Fast Response

- a) Sales' response within 48 hours
- b) Technical support





Products Lines – AC/DC Enclosed SMPS



15-1500W LM Series

35-350W LM-R2 series

- Volume reduced by 37.7%compared to mainstream products \{\}
- Multiple certification
- Supporting higher transient load

200-750W LMF-UH series

- Fanless & Semi-potted design
- 85-305VAC/120-430VDC
- 150% Peak load output for 1s

15-1500W Economical enclosed

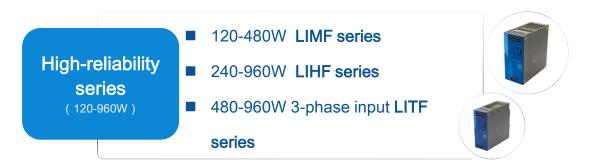
- Multiple certification : (€ ((() N) CB
- Cost-effective
- Stronger environment adaption

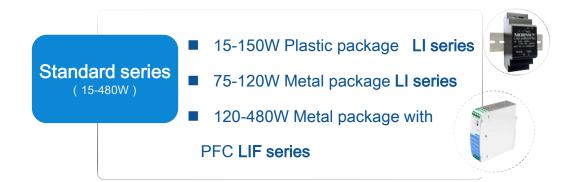




Products Lines – AC/DC DIN rail







Products Lines - AC/DC High power density



120-750W LOF Series

Features:

• Power: 120-750W

 Wide input voltage range: 90-264VAC/85-305VAC/57-528VAC

Industrial grade operating temperature & low ripple

EMC/EMI performance: Class B

High reliability & multiple protections

Products Lines - AC/DC Flexible SIP



Features:

- Ultra-compact size: 26.40*14.73*11.00mm(5W)
- Ultra-wide input: 85-305VAC
- Operating temperature range: -40°C to +85°C
- Ultra-low power consumption as low to 0.1W
- Flexible design, high reliability
- IEC/EN/UL62368, IEC/EN60335 safety approval(pending)

6+ Applications

Security White Instrument Intelligent Electric Power goods





building



control

Industrial

Optional EMC levels

EFT Surge EMI Line to line ±1kV ±2kV Class A ±4kV Line to line ±2kV Class B

305RAC: Reliable under all conditions with 305VAC input



Voltage fluctuation

Input voltage may rise over 264VAC caused by load change Or source powered by a generator



High altitude

Operating altitude up to 5000m Passed altitude test: high/low-temperature. aging, etc



Humidity

Passed humidity test: temperature/humidity cyclic test, high temperature-high humidity test, constant temperature & humidity test



High/Low temperature

Low temperature: -25°C to -40°C High temperature: +70°C to +80°C



EMI

Lightning/Surge Immunity: IEC/EN61000-4-5 EMI: CISPR32/EN55032 CLASS B



Products Lines - DC/DC Converters

Features:

- Power: 0.75-1000W
- Package: SIP/DIP/SMD/DIN-Rail/Brick
- Stand-by power consumption as low as 0.1W
- · Industrial grade operating temperature
- Protections: input under-voltage, output over-voltage, over-current and short-circuit protections
- International standard pin-out



0.75-3W Fixed input voltage



0.5-16A Switching regulator



6-400W Rail power



1-400W Wide input voltage



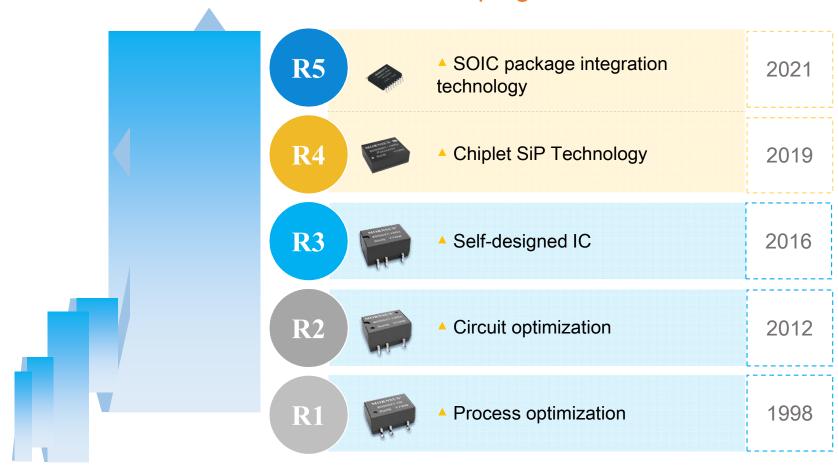
0.75-40W high voltage output



5-1000W PV / SVG power

Products Lines – Fixed Input Voltage

R5 series: Keeping innovation



Products Lines - Isolated CAN/485

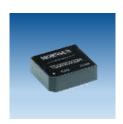
CAN Transceiver Module



485 Transceiver Module



232 Transceiver Module



Protocol conversion module



Features

- Two-terminal isolation (input and output are mutually isolated)
- Built-in isolated power supply bus protection
- Industrial grade operating temperature suitable for harsh environments
- ESD protection, complete EMC recommended circuit
- High baud rate

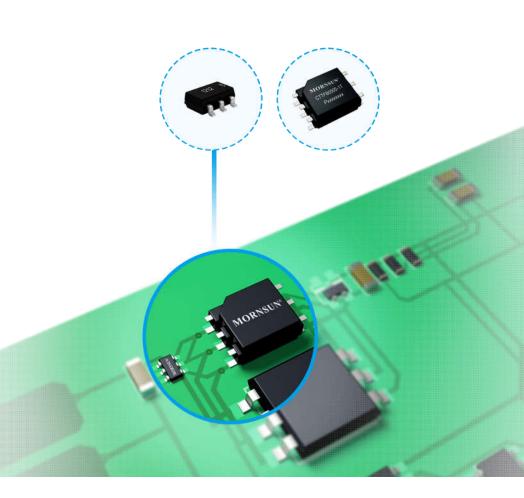
IC product family: Tailed to the specific needs but cost-effective and safe

IC product

- 0.1-20W AC/DC power supply control ICs
- 0.1-40W DC/DC power supply control ICs
- Interface ICs(485&CAN)
- Digital Isolator
- Relay power saving control ICs

Features

- Interface ICs-RS485/CAN: meet customer's requirement of high reliability, compact size and low cost
- Contactor power saving control ICs: power supply range is 16.5~40V, reduce energy lost
- Digital isolators: 3V to 5.5V working voltage and 3V to 5.5V level translation, insulate sub-systems





PRODUCT ADVANTAGES

Various Packages

SIP, DIP, SMD, DIN-Rail, Brick, etc.

Multiple Protection

- input under-voltage protection
- output over-voltage protection
- over-current protection
- over-temperature protection
- short-circuit protection

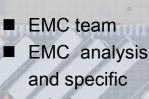
Low Power Consumption & **High Efficiency**

- low power consumption (e.g. DC/DC: 0.096W)
- high efficiency up to 98%

EMC performance

- and specific solution





Applications











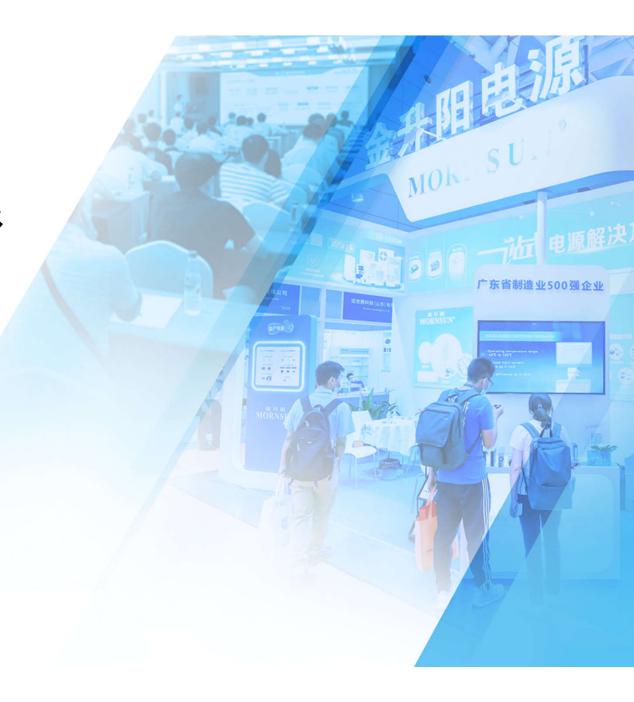






Market Promotions & Supports

- Digital Marketing
- Events
- Technical & Promotion Materials



Digital Marketing

- ✓ Official Websites
- ✓ SEO&SEM
- Social Media



Webinars

Advertising

Precise digital marketing network

Digital Marketing

MORNSUN promotes in major medias in various countries.



Events

MORNSUN attended 400+ exhibitions and held many seminars.

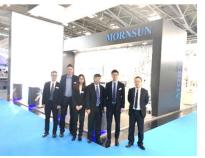














Technical Promotion & Materials

Catalogue & Selection guide



Application guide & White paper





Application case/NPI poster



