

# ADAPTERS & POWER SUPPLIES

## Supplier capability in China

### EXECUTIVE SUMMARY

Accounting for nearly half of global adapters and power supplies output, China makers are generally optimistic about the line's steady growth amid the economic slowdown, albeit at a slower rate.

Expanding applications in mobile phones, PCs, industrial equipment, vehicles and consumer electronics are driving production.

Europe and the US are main export destinations, although makers are boosting domestic sales to make up for the recent decline in exports.

To forestall market saturation, suppliers offer product upgrades and replacements. Small form factors, lightweight models, high efficiency and power density, and modularization are major advancements.

The following are some of the key trends observed in China's adapters & power supplies industry:

- The general movement toward "green" production is redefining makers' design customization and OEM capability. Models adopting solar power continue to rise in popularity despite their high manufacturing costs.

- 3G technology development is spurring product design in converters, the application of which in the telecom industry increasing steadily. The trend in modularization is also encouraging suppliers to integrate DC-DC converters and other components, including MOSFET and pulse width modulator or PWM controllers, to lessen production costs and provide a solution to space concerns.

- Manufacturers are developing more compact adapters with higher efficiency and better energy consumption. Speed and intelligent features top makers' R&D agenda for their chargers line. Many have also started adopting PWM to enhance product performance.

- Safety and quality are consistently emphasized, particularly in terms of product reliability, power density and anti-EMI properties. Products incorporating overcurrent, overvoltage and overheat protection are also becoming standard. Most exports comply with RoHS, UL and CE.

- External designs and housings are also upgraded to attract orders, particularly in the portable segment. New releases come in various colors and shapes, and with multiple accessories.

- New applications are targeted to expand the reach of AC/DC adapters. Laptops are expected to fuel growth in both overseas and domestic markets.

- Makers are addressing several challenges, including the rising costs of materials such as copper and plastic, and general weakening of some product lines, by increasing production efficiency and boosting sales in alternative markets.

- Prices will increase by as much as 5 percent if costs continue to rise, although some makers have preferred to leverage their price advantage to draw in more orders.

This report covers adapters and power supplies, including AC converters, AC/AC and AC/DC adapters, AC/DC switching adapters, desktop power supplies, DC-DC converters, universal AC/DC adapters, chargers and power distribution units. The power supplies section features high-voltage, LED, linear-power, medical, open-frame, precision and switching models.

The Industry Overview section discusses developments in China's supply, product development and price trends.

The supplier base is made up of about 5,000 companies, which are clustered mainly in Guangdong, Jiangsu, Zhejiang, Fujian and Shanghai.

### In this report

- 28 in-depth company profiles
- 28 additional suppliers
- 98 top-selling export products
- Supplier demographics
- Supplier survey
- Industry statistics & charts

### METHODOLOGY

To produce this report, Global Sources surveyed a wide range of suppliers. Rather than focus simply on high-profile makers, we compiled a representative sample of large, midsize and emerging manufacturers. All profiled companies are export-oriented professional suppliers that may or may not be clients of Global Sources.

The selection of suppliers is designed to reflect the composition of the industry in China in terms of geographic spread, business type and company ownership.

For in-depth company profiles, our research teams interviewed senior executives and export managers who discussed their recent performance and provided price, R&D, production and export forecasts for the next 12 months. The interviews were done in person, by phone or e-mail.

In each case, companies were required to answer specific questions designed to verify their manufacturing and export credentials, including their production and export statistics, and a breakdown of exports by product type and market. Our production checklist details the product-specific manufacturing capability of each supplier.

All profiled suppliers participated in a survey designed to provide insight into product and price trends, and challenges facing the industry. All survey questions are single choice. Results were calculated based on the actual number of valid responses to each question.

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## INDUSTRY OVERVIEW

China is still the world's largest manufacturing base for adapters and power supplies, accounting for about 50 percent of the global output. It produced an aggregate 7.2 billion units in 2008, half of which were exported. Suppliers estimate that output will reach 7.56 billion this year and shipments will exceed last year's 100 million.

Despite the positive outlook, makers continue to hurdle obstacles, including the rising cost of components and materials. During the economic slump, makers stepped up domestic production to make up for the decline in overseas sales. Several companies were compelled to lower their production capacity during the first half of 2009 to streamline operations.

Accelerating demand from the mobile phone, PC, industrial equipment and automobile segments, however, is expected to revitalize the adapters and power supplies line.

Abetted by growing sales from new markets and the China central government's efforts to rejuvenate the entire electronics industry with preferential policies, exports of adapters and power supplies are likely to climb 5 percent in the second half. Europe and the US are currently the main export destinations.

The adapter and power supply segment in the country is composed of five broad categories: switching power supplies or SPS, UPSes, DC-DC converters, AC/DC adapters and battery chargers. For all segments, suppliers are focusing on strengthening their capability for "green" production, design customization and OEM to improve their export performance.

With energy efficiency as a prime consideration for buyers, makers are introducing power-saving features and increasing the turnout for solar-powered units. Despite high manufacturing costs, which limit the

current output, several companies are planning to focus on these products in the coming months.

### Industry composition & production hubs

The supplier base in China is composed of 5,000 companies, most of which are engaged in mixed production.

There are about 3,000 makers of SPS, about 60 percent of which have manufacturing centers within the Pearl River Delta.

Located mostly in Guangdong, Jiangsu and Zhejiang provinces, about 200 suppliers, meanwhile, offer UPSes. Some of these companies used to specialize in batteries, inverters, transformers, mobile power supplies and emergency power supplies. Higher demand and profits, however, compelled them to branch out to adapters and power supplies.

The DC-DC converter segment is composed of about 500 enterprises, the majority of which are locally owned small and midsize enterprises. AC/DC adapters are usually produced in the same production line as the former. Beijing and Shenzhen in Guangdong are the two major production hubs for the lines.

Battery charger manufacturers, meanwhile, currently number

### Supplier summary

Suppliers surveyed	28
Export sales	\$248.4mn
Export ratio	62%
OEM business	40%
Capacity utilized	73%
Annual R&D spending	\$44.3mn
Full-time employees	20,191

Data: All surveyed suppliers

between 50 and 60. Like most battery makers, about 90 percent of adapters and power supply enterprises have manufacturing facilities in Guangdong.

The province offers a complete supply chain and is strategically located for global trade purposes. International brands such as Amerson, Tyco, Ericsson, Artesyn, Lambda and Power-One have established factories in the area.

Shenzhen is the preferred location with its established manufacturing and trading infrastructure, transportation network, mature supply chain and solid government backing. The city accounts for about 25 percent of total production in the Pearl River Delta.

The city is home to many large-scale operations and material suppliers and agents of global IC makers. Other components such as transformers, capacitors, PCBs and

### Major customers

Company	
BMZ	Bosch (Germany), Dyson (UK)
Dongguan City Dazhong	Delta (Taiwan), GYS (France), Emerson, Taiyo Yuden (US)
Guangzhou Shunda	Myatech (Brazil), Viera (Iran)
HCT	BP (UK)
Intelink	Philips (Netherlands), Logitech (Switzerland), Sony (Japan), Yamaha (Japan)
Shenzhen Shanjing	Bona (Taiwan); System Q (UK)
Xiamen Kehua	Mitsubishi (Japan)

Data: All surveyed suppliers

### BMZ Co. Ltd

With average exports of 270,000 units of adapters and power supplies monthly, BMZ is expecting its overseas sales to increase by more than 20 percent in the next 12 months. The line currently accounts for the entirety of total revenue. Last year, the line generated \$18 million from sales.

Producing a monthly average of 300,000 units, BMZ has a workforce of 120, including a 30-member team that handles product development. About \$1.8 million is invested in R&D every year. This amount represents 10 percent of BMZ's total sales.

The Germany-invested manufacturer has a monthly production capacity of 800,000 units of adapters and power supplies. Bosch of Germany and Dyson of the UK are its major customers.

Currently, overseas shipments account for 90 percent of output, with North America, Europe as the markets. Product prices decreased less than 5 percent during the past three months. The company is holding capital expenditure at current levels.

The EU will be the main target market in the next 12 months.

#### Company facts

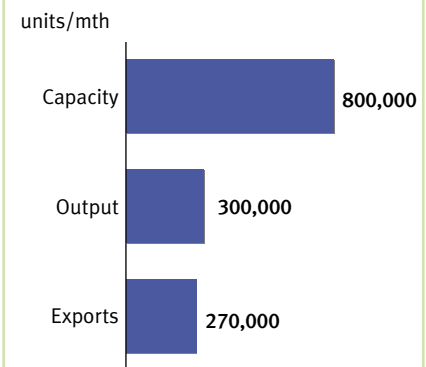
Year established	1995
Business type	Manufacturer
Company ownership	Germany-invested
Head office location	Frankfurt (Germany)
Number of factories	1
Factory location(s)	Shenzhen (Guangdong)
Total factory area	5,000sqm
No. of full-time employees	120
No. of R&D/design staff	30
No. of QC staff	12
Annual sales (all products)	\$18.0mn
Annual R&D spending	\$1.8mn
ISO certification	Yes

#### Sales & output: Adapters & power supplies

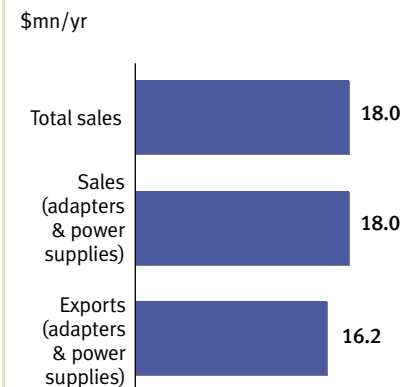
Annual sales	\$18.0mn
Share of total sales	100%
Annual export sales	\$16.2mn
Total monthly capacity	800,000 units
Average monthly output	300,000 units
Capacity utilized	38%
Average monthly exports	270,000 units
Export ratio	90%
OEM % of exports	40%
ODM % of exports	40%
OBM % of exports	20%
Major customers	Bosch (Germany), Dyson (UK)

#### Profile

##### Production



##### Sales



#### Contact details

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### Capability

#### Production checklist

Mold making	Yes
Plastic injection	Yes
Metal/plastic parts manufacturing	No
SMT	Yes
PCB making/design/subassembly	Yes

#### Exports by product

Adapters	15%
Power supplies	85%

#### Exports by market

North America	20%
European Union	70%
Europe (non-EU)	10%
Asia-Pacific	—
Middle East	—
Other	—

### Survey

- **Export prices**  
Decreased
- **Export price decrease**  
Less than 5%
- **Export sales**  
Increase more than 20%
- **Target market**  
European Union
- **Capital expenditure**  
No increase
- **Major challenge**  
Price competition
- **Export capability**  
Shorten design/development time
- **R&D focus**  
Enhance safety feature

### Popular export models



#### Power supply

Model	18V,3A
MOQ	100 units
Packaging	•
Delivery	15 days
Price	\$20

**Description:** Power tool power supply; 18V output voltage; 54W output power; -20 to 60 C operating temperature; 36x72x37mm, 300g



#### Power supply

Model	14.4V,4.4Ah
MOQ	100 units
Packaging	•
Delivery	15 days
Price	\$50

**Description:** Power tool power supply; 14.4V output voltage; 63.36W output power; -20 to 60 C operating temperature; 36x72x70mm, 300g



#### Power supply

Model	16.8V,2Ah
MOQ	100 units
Packaging	•
Delivery	15 days
Price	\$20

**Description:** Battery charger; 100 to 240V input voltage; 50 to 60 Hz frequency; 45W power output; 81% maximum power efficiency; 0 to 45 C operating temperature; 133x58x34mm; 280g

• Information not disclosed

## PRODUCT GALLERY

### Adapters



**Dongguan City Dazhong**

(profile page 32)

**Model:** 001

**MOQ:** 1,000 units

**Packaging:** Paper box

**Delivery:** 28 days

**Price:** •

**Description:** Standard adapter; 120V input voltage; 50/60Hz input frequency; 11W output power; 70% power efficiency; -10 to 45 C operating temperature; 63x51x42mm, 300g



**Dongguan City Dazhong**

(profile page 32)

**Model:** 002

**MOQ:** 1,000 units

**Packaging:** Paper box

**Delivery:** 28 days

**Price:** •

**Description:** Standard adapter; 230V input voltage; 50/60Hz input frequency; 11W output power; 70% power efficiency; -10 to 45 operating temperature; 63x51x42mm, 300g



**Dongguan City Dazhong**

(profile page 32)

**Model:** 003

**MOQ:** 1,000 units

**Packaging:** Paper box

**Delivery:** 28 days

**Price:** •

**Description:** Standard adapter; 240V input voltage; 50/60Hz input frequency; 11W maximum output power; 70% power efficiency; -10 to 45 C operating temperature; 63x51x42mm, 300g



**Dongguan City Dazhong**

(profile page 32)

**Model:** 004

**MOQ:** 1,000 units

**Packaging:** Paper box

**Delivery:** 28 days

**Price:** •

**Description:** Standard adapter; 100 to 240V input voltage; 50/60Hz input frequency; 3 to 10W output power; 65% power efficiency; -10 to 45 C operating temperature; 60x39x26mm, 160g



**Dongguan City Dazhong**

(profile page 32)

**Model:** 005

**MOQ:** 1,000 units

**Packaging:** Paper box

**Delivery:** 28 days

**Price:** •

**Description:** Standard adapter; 100 to 240V input voltage; 50/60Hz input frequency; 15 to 60W maximum output power; 65% power efficiency; -10 to 45C operating temperature; 145x71x40.5mm, 680g



**Dongguan Yingju**

(profile page 34)

**Model:** YJS060A

**MOQ:** 1,000 units

**Packaging:** White box

**Delivery:** 20 days

**Price:** \$6.73

**Description:** Standard adapter; 100 to 240V input voltage; 50 to 60Hz input frequency; 60W output power; 85% power efficiency; 0 to 40 C operating temperature

• Information not disclosed