

Taiwan, China, India, U.S., Europe Antenna Market - Industry Trends and Forecast to 2031

Market Report | 2024-02-01 | 460 pages | Data Bridge Market Research

AVAILABLE LICENSES:

- Single User License \$3500.00
- Corporate Users License \$4200.00

Report description:

Taiwan antenna market is expected to reach USD 265.82 million by 2031 from USD 142.57 million in 2023, at a CAGR of 8.3% in the forecast period of 2024 to 2031.

China antenna market is expected to reach USD 3,433.89 million by 2031 from USD 1,482.82 million in 2023, at a CAGR of 11.2% in the forecast period of 2024 to 2031.

India antenna market is expected to reach USD 2,120.57 million by 2031 from USD 962.32 million in 2023, at a CAGR of 10.6% in the forecast period of 2024 to 2031.

U.S. antenna market is expected to reach USD 12,675.83 million by 2031 from USD 6,701.44 million in 2023, at a CAGR of 8.5% in the forecast period of 2024 to 2031.

Europe antenna market is expected to reach USD 12,647.91 million by 2031 from USD 7,002.58 million in 2023, at a CAGR of 7.9% in the forecast period of 2024 to 2031.

Market Segmentation

Taiwan, China, India, U.S., Europe Antenna Market, By Antenna Type (Stamped Metal Antenna, Chip Antenna, Printed Circuit Boards (PCB) Antenna, Flexible Printer Circuit (FPC) Antenna, and Laser Direct Structuring (LDS) Antenna), Placement (External and Internal), Frequency Range (Very High Frequency, Ultra-High Frequency, and High Frequency), Technology (MIMO (Multi Input Multi Output), SIMO (Single Input Multi Output), MISO (Multi Input Single Output), and SISO (Single Input Single Output)), Coverage Type (Omni-Directional, Semi-Directional, and Directional), Application (Cellular Systems, GNSS/GPS, Radar, WiFi/Bluetooth Systems, WiMAX, and Others), End-User (Networking/ Communications, Consumer Electronics, Military/Defense, Automotive, Industrial, Medical, IoT, 5G, and Others), Type (Reflector Antenna, Aperture Antenna, Wire Antenna, Lens Antenna, Micro Strip Antenna, and Array Antenna, Country (Taiwan, China, India, U.S., Germany, U.K., France, Spain, Italy, Switzerland, Netherlands, Belgium, Russia, Turkey, Rest of Europe) - Industry Trends and Forecast to 2031

Industry Trends and Forecast to 2031

Overview of Taiwan, China, India, U.S., Europe Antenna Market Dynamics

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Driver

- Growing consumption of internet services

Restrain

- Increasing concern about antenna effects on health, aesthetics, and others

Opportunity

- Technological advancement in antennas for automotive application

Market Players

Some of the key market players operating in the Taiwan, China, India, U.S., Europe Antenna market are:

- Amphenol Corporation.
- TE Connectivity
- Molex
- Taoglas
- Quectel Wireless Solutions Co., Ltd.
- Vishay Intertechnology, Inc.
- Sunway Communication Co., Ltd
- YAGEO Group
- HL Global Inc.
- Fractus S.A., Airgain
- KYOCERA AVX Components Corporation
- Grand-Tek Technology Co., Ltd
- Abracon
- PARTRON Co., Ltd.
- Antenna Products Corporation
- Johanson Technology
- Nhait

Table of Contents:

TABLE OF CONTENTS

1 INTRODUCTION 43

1.1 OBJECTIVES OF THE STUDY 43

1.2 MARKET DEFINITION 43

1.3 OVERVIEW OF THE TAIWAN, CHINA, INDIA, U.S., EUROPE ANTENNA MARKET 43

1.4 LIMITATIONS 45

1.5 MARKETS COVERED 45

2 MARKET SEGMENTATION 52

2.1 MARKETS COVERED 52

2.2 GEOGRAPHIC SCOPE 53

2.3 YEARS CONSIDERED FOR THE STUDY 54

2.4 CURRENCY AND PRICING 54

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

2.5 RESEARCH METHODOLOGY	55
2.6 MULTIVARIATE MODELLING	60
2.7 PRIMARY INTERVIEWS WITH KEY OPINION LEADERS	61
2.8 DBMR MARKET POSITION GRID	62
2.9 MARKET APPLICATION COVERAGE GRID	69
2.10 ANTENNA TYPE TIMELINE CURVE	73
2.11 SECONDARY SOURCES	76
2.12 ASSUMPTIONS	76
3 EXECUTIVE SUMMARY	77
4 PREMIUM INSIGHTS	81
4.1 PORTER'S FIVE FORCES	86
4.2 VALUE CHAIN ANALYSIS	87
4.3 CASE STUDIES	91
4.4 PRICING ANALYSIS	95
4.5 COMPANY COMPARITIVE ANALYSIS	97
4.5.1 MOLEX	98
4.5.2 TE CONNECTIVITY	98
4.5.3 QUECTEL WIRELESS SOLUTION	99
4.5.4 TAOGLAS	100
4.6 TECHNOLOGICAL TRENDS	101
4.7 PATENT ANALYSIS	102
?	
4.8 REGULATION COVERAGE	104
4.8.1 TAIWAN	104
4.8.2 CHINA	104
4.8.3 INDIA	105
4.8.4 U.S.	106
4.8.5 EUROPE	107
5 MARKET OVERVIEW	109
5.1 DRIVERS	111
5.1.1 GROWING CONSUMPTION OF INTERNET SERVICES	111
5.1.2 INCREASING NEEDS ACROSS DIVERSE END USER	112
5.1.3 DIGITAL TRANSFORMATION OF BUSINESS	113
5.1.4 GROWING ADOPTION OF WIRELESS BROADBAND AND OTHER TECHNOLOGIES	114
5.2 RESTRAINTS	116
5.2.1 INCREASING CONCERN ABOUT ANTENNA EFFECTS ON HEALTH, AESTHETICS AND OTHERS	116
5.2.2 HIGH COST OF INSTALLATION FOR NEXT-GENERATION ANTENNAS	117
5.3 OPPORTUNITIES	118
5.3.1 TECHNOLOGICAL ADVANCEMENT IN ANTENNAS FOR AUTOMOTIVE APPLICATION	118
5.3.2 RISING DEMAND FOR ANTENNAS FROM TRANSPORTATION INDUSTRY TO IMPROVE CONNECTIVITY	119
5.3.3 INCREASING GROWTH AND INVESTMENT IN TELECOM INDUSTRY	120
5.4 CHALLENGES	121
5.4.1 TECHNOLOGICAL CHALLENGES RESTRICT THE ADOPTION IN ORGANISATIONS	121
5.4.2 RISING CONFLICT BETWEEN TRADE AGREEMENTS	122
6 TAIWAN, CHINA, INDIA, U.S., EUROPE ANTENNA MARKET, BY COVERAGE TYPE	123
6.1 OVERVIEW	124
6.2 OMNI-DIRECTIONAL	130

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

6.3 SEMI-DIRECTIONAL	130
6.4 DIRECTIONAL	130
7 TAIWAN, CHINA, INDIA, U.S., EUROPE ANTENNA MARKET, BY TECHNOLOGY	131
7.1 OVERVIEW	132
7.2 MIMO (MULTI INPUT MULTI OUTPUT)	138
7.3 SIMO (SINGLE INPUT MULTI OUTPUT)	138
7.4 MISO (MULTI INPUT SINGLE OUTPUT)	138
7.5 SISO (SINGLE INPUT SINGLE OUTPUT)	139
?	
8 TAIWAN, CHINA, INDIA, U.S., EUROPE ANTENNA MARKET, BY TYPE	140
8.1 OVERVIEW	141
8.2 REFLECTOR ANTENNA	147
8.2.1 BY TYPE	147
8.2.1.1 CORNER REFLECTOR	148
8.2.1.2 PARABOLIC REFLECTOR	148
8.3 APERTURE ANTENNA	149
8.3.1 BY TYPE	149
8.3.1.1 WAVEGUIDE ANTENNA	150
8.3.1.2 SLOT ANTENNA	151
8.3.1.3 MICROCHIP SLOT ANTENNA	151
8.3.1.4 HORN ANTENNA	151
8.3.2 BY TYPE	152
8.3.2.1 PYRAMIDAL HORN	153
8.3.2.2 SECTORAL HORN ANTENNA	153
8.3.2.3 CONICAL HORN ANTENNA	153
8.3.2.4 OTHERS	154
8.4 WIRE ANTENNA	154
8.4.1 BY TYPE	155
8.4.1.1 HALF-WAVE DIPOLE	156
8.4.1.2 FOLDED DIPOLE ANTENNA	156
8.4.1.3 DIPOLE ANTENNA	156
8.4.1.4 OTHERS	157
8.5 LENS ANTENNA	157
8.5.1 BY TYPE	157
8.5.1.1 METAL PLATE LENS ANTENNAS	158
8.5.1.2 DI-ELECTRIC LENS	159
8.6 MICRO STRIP ANTENNA	159
8.6.1 BY TYPE	159
8.6.1.1 MICROSTRIP PATCH ANTENNA	160
8.6.1.2 MICROSTRIP DIPOLES	161
8.6.1.3 TRAVELLING ANTENNA	161
8.6.2 BY TYPE	161
8.6.2.1 HELICAL ANTENNA	162
8.6.2.2 YAGI-UDA ANTENNA	163
8.7 ARRAY ANTENNA	163
?	
9 TAIWAN, CHINA, INDIA, U.S., EUROPE ANTENNA MARKET, BY APPLICATION	164

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

9.1 OVERVIEW	165
9.2 CELLULAR SYSTEMS	171
9.2.1 BY TYPE	171
9.2.1.1 ROUTER	172
9.2.1.2 SMART METER	173
9.2.1.3 AUTOMOTIVE	173
9.2.1.4 OTHERS	173
9.3 GNSS/GPS	174
9.3.1 BY TYPE	174
9.3.1.1 ROUTER	175
9.3.1.2 SMART METER	176
9.3.1.3 AUTOMOTIVE	176
9.3.1.4 OTHERS	176
9.4 RADAR	177
9.4.1 BY TYPE	177
9.4.1.1 ROUTER	178
9.4.1.2 SMART METER	179
9.4.1.3 AUTOMOTIVE	179
9.4.1.4 OTHERS	179
9.5 WIFI/BLEETOOTH SYSTEMS	180
9.5.1 BY TYPE	180
9.5.1.1 ROUTER	181
9.5.1.2 SMART METER	182
9.5.1.3 AUTOMOTIVE	182
9.5.1.4 OTHERS	182
9.6 WIMAX	183
9.6.1 BY TYPE	183
9.6.1.1 ROUTER	184
9.6.1.2 SMART METER	185
9.6.1.3 AUTOMOTIVE	185
9.6.1.4 OTHERS	185
9.7 OTHERS	186
?	
10 TAIWAN, CHINA, INDIA, U.S., EUROPE ANTENNA MARKET, BY END-USER	187
10.1 OVERVIEW	188
10.2 NETWORKING/ COMMUNICATIONS	193
10.2.1 STAMPED METAL ANTENNA	195
10.2.2 CHIP ANTENNA	195
10.2.3 PCB ANTENNA	196
10.2.4 FPC ANTENNA	196
10.2.5 LASER DIRECT STRUCTURING (LDS) ANTENNA	196
10.3 CONSUMER ELECTRONICS	197
10.3.1 STAMPED METAL ANTENNA	198
10.3.2 CHIP ANTENNA	199
10.3.3 PCB ANTENNA	199
10.3.4 FPC ANTENNA	199
10.3.5 LASER DIRECT STRUCTURING (LDS) ANTENNA	200

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

10.4 MILITARY/DEFENSE	200
10.4.1 STAMPED METAL ANTENNA	202
10.4.2 CHIP ANTENNA	202
10.4.3 PCB ANTENNA	203
10.4.4 FPC ANTENNA	203
10.4.5 LASER DIRECT STRUCTURING (LDS) ANTENNA	203
10.5 AUTOMOTIVE	204
10.5.1 STAMPED METAL ANTENNA	205
10.5.2 CHIP ANTENNA	206
10.5.3 PCB ANTENNA	206
10.5.4 FPC ANTENNA	206
10.5.5 LASER DIRECT STRUCTURING (LDS) ANTENNA	207
10.6 INDUSTRIAL	207
10.6.1 STAMPED METAL ANTENNA	209
10.6.2 CHIP ANTENNA	209
10.6.3 PCB ANTENNA	210
10.6.4 FPC ANTENNA	210
10.6.5 LASER DIRECT STRUCTURING (LDS) ANTENNA	210
10.7 MEDICAL	211
10.7.1 STAMPED METAL ANTENNA	212
10.7.2 CHIP ANTENNA	213
10.7.3 PCB ANTENNA	213
10.7.4 FPC ANTENNA	213
10.7.5 LASER DIRECT STRUCTURING (LDS) ANTENNA	214
?	
10.8 IOT	214
10.8.1 STAMPED METAL ANTENNA	216
10.8.2 CHIP ANTENNA	216
10.8.3 PCB ANTENNA	217
10.8.4 FPC ANTENNA	217
10.8.5 LASER DIRECT STRUCTURING (LDS) ANTENNA	217
10.9 5G	218
10.9.1 STAMPED METAL ANTENNA	219
10.9.2 CHIP ANTENNA	220
10.9.3 PCB ANTENNA	220
10.9.4 FPC ANTENNA	220
10.9.5 LASER DIRECT STRUCTURING (LDS) ANTENNA	221
10.10 OTHERS	221
11 TAIWAN, CHINA, INDIA, US, EUROPE ANTENNA MARKET, BY ANTENNA TYPE	222
11.1 OVERVIEW	223
11.2 STAMPED METAL ANTENNA	229
11.2.1 POLARIZATION	229
11.2.1.1 LINEAR	230
11.2.1.2 CIRCULAR	231
11.2.1.3 RHCP	231
11.2.2 MOUNTING TYPE	231
11.2.2.1 SURFACE MOUNT	233

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

11.2.2.2 ADHESIVE MOUNT	233
11.2.2.3 CONNECTOR MOUNT	234
11.2.2.4 MAGNETIC MOUNT	234
11.2.2.5 SCREW MOUNT	234
11.2.2.6 THROUGH HOLE	235
11.3 CHIP ANTENNA	235
11.3.1 TYPE	235
11.3.1.1 CERAMIC CHIP ANTENNA	236
11.3.1.2 DIELECTRIC ANTENNA	237
11.4 PCB ANTENNA	237
11.5 FPC ANTENNA	237
11.6 LASER DIRECT STRUCTURING (LDS) ANTENNA	238
?	
12 TAIWAN, CHINA, INDIA, U.S., EUROPE ANTENNA MARKET, BY PLACEMENT	239
12.1 OVERVIEW	240
12.2 EXTERNAL	246
12.3 INTERNAL	246
13 TAIWAN, CHINA, INDIA, U.S., EUROPE ANTENNA MARKET, BY FREQUENCY RANGE	247
13.1 OVERVIEW	248
13.2 VERY HIGH FREQUENCY	254
13.3 ULTRA-HIGH FREQUENCY	254
13.4 HIGH FREQUENCY	254
14 TAIWAN, CHINA, INDIA, U.S., EUROPE ANTENNA MARKET, BY COUNTRY	255
14.1 EUROPE	255
14.1.1 GERMANY	258
14.1.2 U.K.	266
14.1.3 FRANCE	274
14.1.4 ITALY	282
14.1.5 SPAIN	290
14.1.6 RUSSIA	298
14.1.7 SWITZERLAND	306
14.1.8 NETHERLAND	314
14.1.9 BELGIUM	322
14.1.10 TURKEY	330
14.1.11 NORWAY	338
14.1.12 FINLAND	346
14.1.13 DENMARK	354
14.1.14 SWEDEN	362
14.1.15 POLAND	370
14.1.16 REST OF EUROPE	378
15 TAIWAN, CHINA, INDIA, U.S., EUROPE ANTENNA MARKET: COMPANY LANDSCAPE	379
15.1 COMPANY SHARE ANALYSIS: U.S.	379
15.2 COMPANY SHARE ANALYSIS: CHINA	380
15.3 COMPANY SHARE ANALYSIS: TAIWAN	381
15.4 COMPANY SHARE ANALYSIS: INDIA	382
15.5 COMPANY SHARE ANALYSIS: EUROPE	383

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

?

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Taiwan, China, India, U.S., Europe Antenna Market - Industry Trends and Forecast to 2031

Market Report | 2024-02-01 | 460 pages | Data Bridge Market Research

To place an Order with Scotts International:

- ☐ - Print this form
- ☐ - Complete the relevant blank fields and sign
- ☐ - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	\$3500.00
	Corporate Users License	\$4200.00
		VAT
		Total

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

☐ ** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*		Phone*	
First Name*		Last Name*	
Job title*			
Company Name*		EU Vat / Tax ID / NIP number*	
Address*		City*	
Zip Code*		Country*	
		Date	2025-05-10
		Signature	

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com