

Micro-inverter Market by Offering, Communication Technology (Wired, Wireless), Type (Single Phase, Three Phase), Power Rating (Below 250 W, Between 250 & 500 W, Above 500 W), Connection Type, Sales Channel, Application - Global Forecast to 2029

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Report description:

The global micro-inverter market was valued at USD 4.9 billion in 2024 and is estimated to reach USD 14.5 billion by 2029, registering a CAGR of 24.1% during the forecast period. Reduced costs of solar energy systems, technical advantages over conventional inverter, and increasing energy prices. These trends are leading to the growth of the micro-inverter market.

"Single phase is expected to grow at the highest CAGR during the forecast period."

Single Phase segment is growing at the highest CAGR in the micro-inverter market. Compact and well-suited for residential and commercial applications, single-phase micro-inverters are particularly effective in electricity transmission within the residential segment. Notably, countries like the United States, Australia, and the European Union are increasingly embracing the adoption of single-phase micro-inverters. Additionally, key industry players such as Enphase Energy and Altenergy Power Systems provide a range of single-phase micro-inverter options to cater to the growing demand in the market.

"Power rating between 250 and 500 W segment is dominating the micro-inverter market."

The power rating between 250 and 500 W segment is dominating the micro-inverter market. This power range proves particularly well-suited for residential installations and small to medium-sized commercial setups. Given that many solar panels intended for residential use fall within this power rating category, micro-inverters in this segment are considered ideal for home solar systems. Moreover, they efficiently support the power outputs of moderately sized commercial installations. The diverse applications within this power rating range contribute significantly to micro-inverters' growth between 250W and 500W.

"The US is projected to dominate the North American region for the micro-inverter market."

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The US has experienced significant growth in solar installations, driven by a combination of government incentives, falling solar panel prices, and increasing environmental awareness. As solar installations expand, the demand for microinverters, especially in residential and small commercial applications, has risen. Moreover, the residential solar market in the US has seen substantial growth. Microinverters are particularly well-suited for residential installations because they offer individual panel optimization, scalability, and ease of installation benefits. These factors collectively serve as pivotal drivers for the expansion of the micro-inverter market within the country.

In-depth interviews have been conducted with chief executive officers (CEOs), Directors, and other executives from various key organizations operating in the micro-inverter marketplace.

- By Company Type: Tier 1 - 25%, Tier 2 - 30%, and Tier 3 - 45%
- By Designation: C-level Executives - 30%, Directors - 25%, and Others - 45%
- By Region: North America- 30%, Europe - 20%, Asia Pacific- 40% and RoW- 10%

Enphase Energy (US), Altenergy Power Systems (US), Hoymiles (China), Ningbo Deye Inverter Technology Co Ltd (China), Chilicon Power LLC (US), AEconversion GmbH & CO. KG (Germany), Envertech (China), ZJBENY (China), Bluesun Solar Co., Ltd. (China), and Solar Panels Plus (US), are some of the key players in the micro-inverter market.

The study includes an in-depth competitive analysis of these key players in the micro-inverter market, with their company profiles, recent developments, and key market strategies.

Research Coverage

This research report categorizes the micro-inverter market by offerings (Hardware, Software & Services), by communication technology (Wired, Wireless), by type (Single Phase, Three Phase), by Power Rating (Below 250 W, Between 250 and 500 W, and Above 500 W) by connection type (Stand-alone, Grid-tied), by sales channel (Direct, Indirect), by application (Residential, Commercial, and PV Power Plant) and by region (North America, Europe, Asia Pacific, and RoW). The report's scope covers detailed information regarding the major factors, such as drivers, restraints, challenges, and opportunities, influencing the growth of the micro-inverter market. A detailed analysis of the key industry players has been done to provide insights into their business overview, solutions, and services; key strategies; Contracts, partnerships, agreements, new product & service launches, mergers and acquisitions; and recent developments associated with the micro-inverter market. This report covers the competitive analysis of upcoming startups in the micro-inverter market ecosystem.

Reasons to buy this report

The report will help the market leaders/new entrants with information on the closest approximations of the revenue numbers for the overall micro-inverter market and the subsegments. This report will help stakeholders understand the competitive landscape and gain more insights to position their businesses better and plan suitable go-to-market strategies. The report also helps stakeholders understand the pulse of the market and provides them with information on key market drivers, restraints, challenges, and opportunities.

The report provides insights on the following pointers:

- Analysis of key drivers (Increasing investments in solar energy, Technical advantages over conventional solar inverters, Increasing energy Prices contributing towards installations of solar panels, Rising energy demand is fueling the growth of microinverters), restraints (Limited Power Handling Capacity, High installations and maintenance costs), opportunities (Government incentives and policies for renewable energy, Corporate sustainability initiatives by businesses), and challenges (Complexity during the installations, Safety risks associated with high DC voltages) influencing the growth of the micro-inverter

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market

- Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product & service launches in the micro-inverter market
- Market Development: Comprehensive information about lucrative markets - the report analyses the micro-inverter market across varied regions.
- Market Diversification: Exhaustive information about new products & services, untapped geographies, recent developments, and investments in the micro-inverter market
- Competitive Assessment: In-depth assessment of market shares, growth strategies and service offerings of leading players like Enphase Energy (US), Altenergy Power Systems (US), Hoymiles (China), Ningbo Deye Inverter Technology Co Ltd (China), Chilicon Power LLC (US), AEconversion GmbH & CO. KG (Germany), Envertech (China), ZJBENY (China), Bluesun Solar Co., Ltd. (China), and Solar Panels Plus (US) among others in the micro-inverter market.

Table of Contents:

1□INTRODUCTION□	28
1.1□STUDY OBJECTIVES□	28
1.2□MARKET DEFINITION□	29
1.3□INCLUSIONS AND EXCLUSIONS□	29
1.4□STUDY SCOPE□	30
1.4.1□MARKETS COVERED□	30
FIGURE 1□MICRO-INVERTER MARKET SEGMENTATION□	30
1.4.2□REGIONAL SCOPE□	30
1.4.3□YEARS CONSIDERED□	31
1.5□CURRENCY CONSIDERED□	31
1.6□STAKEHOLDERS□	31
1.7□SUMMARY OF CHANGES□	32
1.8□IMPACT OF RECESSION□	32
2□RESEARCH METHODOLOGY□	33
2.1□RESEARCH DATA□	33
FIGURE 2□MICRO-INVERTER MARKET: RESEARCH DESIGN□	34
2.1.1□SECONDARY DATA□	34
2.1.1.1□List of key secondary sources□	35
2.1.1.2□Key data from secondary sources□	35
2.1.2□PRIMARY DATA□	35
2.1.2.1□Intended participants in primary interviews□	36
2.1.2.2□Key data from primary sources□	36
2.1.2.3□Key industry insights□	37
2.1.2.4□Breakdown of primaries□	37
2.2□FACTOR ANALYSIS□	38
FIGURE 3□MICRO-INVERTER MARKET: REVENUE GENERATED BY COMPANIES FROM SALES OF MICRO-INVERTER PRODUCTS□	38
2.3□MARKET SIZE ESTIMATION METHODOLOGY□	39
2.3.1□BOTTOM-UP APPROACH□	39
2.3.1.1□Approach to arrive at market size using bottom-up analysis (demand side)□	39
FIGURE 4□MARKET SIZE ESTIMATION METHODOLOGY: BOTTOM-UP APPROACH□	40
2.3.2□TOP-DOWN APPROACH□	40
2.3.2.1□Approach to arrive at market size using top-down analysis (supply side)□	40
FIGURE 5□MARKET SIZE ESTIMATION METHODOLOGY: TOP-DOWN APPROACH□	41
2.4□DATA TRIANGULATION□	41

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FIGURE 6	MICRO-INVERTER MARKET: DATA TRIANGULATION	42
2.5	RESEARCH ASSUMPTIONS	43
TABLE 1	MICRO-INVERTER MARKET: RESEARCH ASSUMPTIONS	43
2.6	RESEARCH LIMITATIONS	43
2.7	PARAMETERS CONSIDERED TO ANALYZE RECESSION IMPACT ON MICRO-INVERTER MARKET	44
2.8	RISK ASSESSMENT	44
3	EXECUTIVE SUMMARY	45
FIGURE 7	SINGLE-PHASE MICRO-INVERTERS TO ACCOUNT FOR LARGER MARKET SHARE IN 2024	46
FIGURE 8	MICRO-INVERTERS WITH POWER RATINGS BETWEEN 250 AND 500 W TO RECORD HIGHEST CAGR DURING FORECAST PERIOD	46
FIGURE 9	RESIDENTIAL APPLICATIONS TO EXHIBIT HIGHEST CAGR IN MICRO-INVERTER MARKET FROM 2024 TO 2029	47
FIGURE 10	ASIA PACIFIC TO BE FASTEST-GROWING MARKET FOR MICRO-INVERTERS DURING FORECAST PERIOD	47
4	PREMIUM INSIGHTS	49
4.1	ATTRACTIVE OPPORTUNITIES FOR PLAYERS IN MICRO-INVERTER MARKET	49
FIGURE 11	GOVERNMENT SUBSIDIES AND INCENTIVES FOR RENEWABLE ENERGY TO FUEL DEMAND FOR MICRO-INVERTERS IN COMING YEARS	49
4.2	MICRO-INVERTER MARKET, BY CONNECTION TYPE	49
FIGURE 12	GRID-TIED SEGMENT TO EXHIBIT FASTER GROWTH RATE IN MICRO-INVERTER MARKET DURING FORECAST PERIOD	49
4.3	MICRO-INVERTER MARKET, BY COMMUNICATION TECHNOLOGY	50
FIGURE 13	WIRED SEGMENT DOMINATED MICRO-INVERTER MARKET IN 2023	50
4.4	MICRO-INVERTER MARKET, BY APPLICATION AND REGION	50
FIGURE 14	RESIDENTIAL SEGMENT AND NORTH AMERICA TO BE LARGEST MARKET SHAREHOLDERS IN 2029	50
4.5	MICRO-INVERTER MARKET, BY REGION	51
FIGURE 15	INDIA TO REGISTER HIGHEST CAGR IN GLOBAL MICRO-INVERTER MARKET BETWEEN 2024 AND 2029	51
5	MARKET OVERVIEW	52
5.1	INTRODUCTION	52
5.2	MARKET DYNAMICS	52
FIGURE 16	MICRO-INVERTER MARKET: DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES	52
5.2.1	DRIVERS	53
5.2.1.1	Escalating influx of investments in solar energy	53
5.2.1.2	Rising preference for technologically advanced solar inverters over conventional ones	53
5.2.1.3	Increasing solar panel installations due to surge in energy prices	54
5.2.1.4	Rising energy demand	54
FIGURE 17	MICRO-INVERTER MARKET: IMPACT ANALYSIS OF DRIVERS	55
5.2.2	RESTRAINTS	55
5.2.2.1	Complex micro-inverter installation process	55
5.2.2.2	Safety concerns for high DC voltages in micro-inverters	56
FIGURE 18	MICRO-INVERTER MARKET: IMPACT ANALYSIS OF RESTRAINTS	56
5.2.3	OPPORTUNITIES	56
5.2.3.1	Government incentives and policies encouraging adoption of renewable energy	56
5.2.3.2	Corporate sustainability initiatives by businesses	57
FIGURE 19	MICRO-INVERTER MARKET: IMPACT ANALYSIS OF OPPORTUNITIES	57
5.2.4	CHALLENGES	58
5.2.4.1	Limited power handling capacity of micro-inverters	58
FIGURE 20	MICRO-INVERTER MARKET: IMPACT ANALYSIS OF CHALLENGES	58
5.3	SUPPLY CHAIN ANALYSIS	59
FIGURE 21	SUPPLY CHAIN ANALYSIS: MICRO-INVERTER MARKET	59

5.4	ECOSYSTEM ANALYSIS	60
	FIGURE 22	MICRO-INVERTER MARKET: ECOSYSTEM
	TABLE 2	ROLE OF PARTICIPANTS IN MICRO-INVERTER ECOSYSTEM
5.5	PRICING ANALYSIS	61
5.5.1	PRICING ANALYSIS OF MICRO-INVERTERS OFFERED BY KEY PLAYERS	61
	FIGURE 23	AVERAGE SELLING PRICE OF MICRO-INVERTERS OFFERED BY KEY PLAYERS, BY CONNECTION TYPE
	TABLE 3	AVERAGE SELLING PRICE OF MICRO-INVERTERS PROVIDED BY KEY PLAYERS, BY CONNECTION TYPE (USD)
5.5.2	REGION-WISE AVERAGE SELLING PRICE TREND	62
	FIGURE 24	AVERAGE SELLING PRICE OF MICRO-INVERTERS, BY REGION, 2018-2022 (USD)
5.6	TRENDS/DISRUPTIONS IMPACTING CUSTOMER BUSINESS	62
	FIGURE 25	TRANSITION TO RENEWABLE ENERGY TO HAVE POSITIVE IMPACT ON ECOSYSTEM
5.7	TECHNOLOGY ANALYSIS	63
5.7.1	SMART GRID	63
5.7.2	INTERNET OF THINGS (IOT)	64
5.7.3	POWER OPTIMIZERS	64
5.8	PORTER'S FIVE FORCES ANALYSIS	64
	FIGURE 26	PORTER'S FIVE FORCES MODEL FOR MICRO-INVERTER MARKET
	TABLE 4	MICRO-INVERTER MARKET: PORTER'S FIVE FORCES ANALYSIS
5.9	KEY STAKEHOLDERS AND BUYING CRITERIA	67
5.9.1	KEY STAKEHOLDERS IN BUYING PROCESS	67
	FIGURE 27	INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS FOR KEY APPLICATIONS
	TABLE 5	INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS FOR MAJOR APPLICATIONS (%)
5.9.2	BUYING CRITERIA	67
	FIGURE 28	KEY BUYING CRITERIA FOR KEY APPLICATIONS
	TABLE 6	KEY BUYING CRITERIA FOR MAJOR APPLICATIONS
5.10	CASE STUDY ANALYSIS	68
5.10.1	VINE FRESH PRODUCE LTD. INSTALLED MICRO-INVERTERS BY ENPHASE ENERGY TO POWER ROOFTOP SOLAR SYSTEMS	68
5.10.2	PHARMACARE LIMITED DEPLOYED MICRO-INVERTERS FROM HOYMILES IN SOLAR POWER INSTALLATION PROJECT	68
5.10.3	HALEAKALA SOLAR IN HAWAII INSTALLED ENPHASE ENERGY'S MICRO-INVERTERS THAT REMAIN FUNCTIONAL IN HARSH ENVIRONMENTAL CONDITIONS	69
5.10.4	CONVERGENCE ENERGY CHOSE ENPHASE ENERGY'S MICRO-INVERTERS FOR ROOFTOP INSTALLATIONS TO MEET ENERGY DEMAND	69
5.10.5	PIVOT ENERGY INSTALLED ENPHASE ENERGY'S MICRO-INVERTERS IN BUSCH STADIUM TO REDUCE ENERGY CONSUMPTION	69
5.10.6	PIVOT ENERGY INSTALLED ENPHASE ENERGY'S MICRO-INVERTERS IN BUSCH STADIUM TO REDUCE ENERGY CONSUMPTION	70
5.11	TRADE ANALYSIS	70
5.11.1	IMPORT SCENARIO	70
	FIGURE 29	IMPORT VALUES FOR KEY COUNTRIES, 2018-2022 (USD MILLION)
5.11.2	EXPORT SCENARIO	71
	FIGURE 30	EXPORT VALUES FOR KEY COUNTRIES, 2018-2022 (USD MILLION)
5.12	PATENT ANALYSIS	71
	FIGURE 31	MICRO-INVERTER MARKET: PATENTS APPLIED AND GRANTED, 2013-2023
	TABLE 7	LIST OF KEY PATENTS IN MICRO-INVERTER MARKET
5.13	KEY CONFERENCES AND EVENTS, 2024-2025	73
	TABLE 8	MICRO-INVERTER MARKET: LIST OF CONFERENCES AND EVENTS
5.13.1	TARIFF ANALYSIS	74

TABLE 9	MFN TARIFF FOR HS CODE 8504-COMPLIANT PRODUCTS EXPORTED BY JAPAN	74
TABLE 10	MFN TARIFF FOR HS CODE 8504-COMPLIANT PRODUCTS EXPORTED BY CHINA	74
5.14	REGULATORY LANDSCAPE AND STANDARDS	75
5.14.1	REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS	75
TABLE 11	NORTH AMERICA: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS	75
TABLE 12	EUROPE: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS	76
TABLE 13	ASIA PACIFIC: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS	76
TABLE 14	ROW: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES AND OTHER ORGANIZATIONS	77
5.14.2	SAFETY STANDARDS	77
TABLE 15	SAFETY STANDARDS RELATED TO MICRO-INVERTER PRODUCTS	77
6	KEY FEATURES OF MICRO-INVERTERS	78
6.1	INTRODUCTION	78
6.2	FAST SHUTDOWN IN EMERGENCY	78
6.3	PANEL-LEVEL MONITORING	78
6.4	SCALABILITY	79
6.5	MULTIPLE-ANGLE INSTALLATION	79
7	MICRO-INVERTER MARKET, BY OFFERING	80
7.1	INTRODUCTION	81
FIGURE 32	MICRO-INVERTER MARKET, BY OFFERING	81
FIGURE 33	HARDWARE SEGMENT TO CAPTURE LARGER SHARE OF MICRO-INVERTER MARKET IN 2029	81
TABLE 16	MICRO-INVERTER MARKET, BY OFFERING, 2020-2023 (USD MILLION)	82
TABLE 17	MICRO-INVERTER MARKET, BY OFFERING, 2024-2029 (USD MILLION)	82
7.2	HARDWARE	82
7.2.1	TECHNOLOGICAL ADVANCEMENTS IN HARDWARE COMPONENTS TO ACCELERATE SEGMENTAL GROWTH	82
7.3	SOFTWARE & SERVICES	83
7.3.1	RIISING ADOPTION OF SMART TECHNOLOGIES IN SOLAR INDUSTRY TO FUEL SEGMENTAL GROWTH	83
8	MICRO-INVERTER MARKET, BY COMMUNICATION TECHNOLOGY	84
8.1	INTRODUCTION	85
FIGURE 34	MICRO-INVERTER MARKET, BY COMMUNICATION TECHNOLOGY	85
FIGURE 35	WIRED TECHNOLOGY-BASED MICRO-INVERTERS TO ACCOUNT FOR LARGER MARKET SHARE IN 2029	85
TABLE 18	MICRO-INVERTER MARKET, BY COMMUNICATION TECHNOLOGY, 2020-2023 (USD MILLION)	86
TABLE 19	MICRO-INVERTER MARKET, BY COMMUNICATION TECHNOLOGY, 2024-2029 (USD MILLION)	86
8.2	WIRED	87
8.2.1	NEED FOR ROBUST AND SECURE COMMUNICATION INFRASTRUCTURE TO FUEL SEGMENTAL GROWTH	87
TABLE 20	WIRED: MICRO-INVERTER MARKET, BY APPLICATION, 2020-2023 (USD MILLION)	87
TABLE 21	WIRED: MICRO-INVERTER MARKET, BY APPLICATION, 2024-2029 (USD MILLION)	87
8.3	WIRELESS	88
8.3.1	REQUIREMENT FOR REMOTE AND REAL-TIME DATA ACCESS TO ACCELERATE SEGMENTAL GROWTH	88
TABLE 22	WIRELESS: MICRO-INVERTER MARKET, BY APPLICATION, 2020-2023 (USD MILLION)	88
TABLE 23	WIRELESS: MICRO-INVERTER MARKET, BY APPLICATION, 2024-2029 (USD MILLION)	88
9	MICRO-INVERTER MARKET, BY TYPE	89
9.1	INTRODUCTION	90
FIGURE 36	MICRO-INVERTER MARKET, BY TYPE	90
FIGURE 37	SINGLE-PHASE MICRO-INVERTERS TO LEAD MARKET THROUGHOUT FORECAST PERIOD	90
TABLE 24	MICRO-INVERTER MARKET, BY TYPE, 2020-2023 (USD MILLION)	91
TABLE 25	MICRO-INVERTER MARKET, BY TYPE, 2024-2029 (USD MILLION)	91
TABLE 26	MICRO-INVERTER MARKET, BY TYPE, 2020-2023 (MILLION UNITS)	91

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TABLE 27	MICRO-INVERTER MARKET, BY TYPE, 2024-2029 (MILLION UNITS)	91
9.2	SINGLE-PHASE	92
9.2.1	ELEVATING DEMAND FROM RESIDENTIAL APPLICATIONS TO DRIVE MARKET	92
TABLE 28	SINGLE-PHASE: MICRO-INVERTER MARKET, BY APPLICATION, 2020-2023 (USD MILLION)	92
TABLE 29	SINGLE-PHASE: MICRO-INVERTER MARKET, BY APPLICATION, 2024-2029 (USD MILLION)	92
9.3	THREE-PHASE	93
9.3.1	RIISING ADOPTION IN PV POWER PLANTS AND COMMERCIAL APPLICATIONS TO FUEL MARKET GROWTH	93
TABLE 30	THREE-PHASE: MICRO-INVERTER MARKET, BY APPLICATION, 2020-2023 (USD MILLION)	93
TABLE 31	THREE PHASE: MICRO-INVERTER MARKET, BY APPLICATION, 2024-2029 (USD MILLION)	93
10	MICRO-INVERTER MARKET, BY POWER RATING	94
10.1	INTRODUCTION	95
FIGURE 38	MICRO-INVERTER MARKET, BY POWER RATING	95
FIGURE 39	MICRO-INVERTERS WITH POWER RATINGS BETWEEN 250 AND 500 W TO LEAD MARKET FROM 2024 TO 2029	95
TABLE 32	MICRO-INVERTER MARKET, BY POWER RATING, 2020-2023 (USD MILLION)	95
TABLE 33	MICRO-INVERTER MARKET, BY POWER RATING, 2024-2029 (USD MILLION)	96
10.2	BELOW 250 W	96
10.2.1	GROWING USE IN SMALL-SCALE RESIDENTIAL APPLICATIONS TO DRIVE MARKET	96
TABLE 34	BELOW 250 W: MICRO-INVERTER MARKET, BY APPLICATION, 2020-2023 (USD MILLION)	96
TABLE 35	BELOW 250 W: MICRO-INVERTER MARKET, BY APPLICATION, 2024-2029 (USD MILLION)	97
10.3	BETWEEN 250 AND 500 W	97
10.3.1	INCREASING INSTALLATION OF LARGER GROUND-MOUNTED SOLAR PANELS TO FUEL SEGMENTAL GROWTH	97
TABLE 36	BETWEEN 250 AND 500 W: MICRO-INVERTER MARKET, BY APPLICATION, 2020-2023 (USD MILLION)	97
TABLE 37	BETWEEN 250 AND 500 W: MICRO-INVERTER MARKET, BY APPLICATION, 2024-2029 (USD MILLION)	97
10.4	ABOVE 500 W	98
10.4.1	RIISING DEMAND FROM PV POWER PLANTS AND LARGE INDUSTRIES TO DRIVE MARKET	98
TABLE 38	ABOVE 500 W: MICRO-INVERTER MARKET, BY APPLICATION, 2020-2023 (USD MILLION)	98
TABLE 39	ABOVE 500 W: MICRO-INVERTER MARKET, BY APPLICATION, 2024-2029 (USD MILLION)	98
11	MICRO-INVERTER MARKET, BY CONNECTION TYPE	99
11.1	INTRODUCTION	100
FIGURE 40	MICRO-INVERTER MARKET, BY CONNECTION TYPE	100
FIGURE 41	GRID-TIED MICRO-INVERTERS TO DOMINATE MARKET THROUGHOUT FORECAST PERIOD	100
TABLE 40	MICRO-INVERTER MARKET, BY CONNECTION TYPE, 2020-2023 (USD MILLION)	101
TABLE 41	MICRO-INVERTER MARKET, BY CONNECTION TYPE, 2024-2029 (USD MILLION)	101
11.2	STANDALONE	101
11.2.1	RIISING UTILIZATION OF MICRO-INVERTERS IN REMOTE AREAS TO BOOST SEGMENTAL GROWTH	101
TABLE 42	STANDALONE: MICRO-INVERTER MARKET, BY APPLICATION, 2020-2023 (USD MILLION)	101
TABLE 43	STANDALONE: MICRO-INVERTER MARKET, BY APPLICATION, 2024-2029 (USD MILLION)	102
11.3	GRID-TIED	102
11.3.1	SIGNIFICANT FOCUS ON MAXIMIZING ENERGY HARVESTING TO BOOST DEMAND	102
TABLE 44	GRID-TIED: MICRO-INVERTER MARKET, BY APPLICATION, 2020-2023 (USD MILLION)	102
TABLE 45	GRID-TIED: MICRO-INVERTER MARKET, BY APPLICATION, 2024-2029 (USD MILLION)	102
12	MICRO-INVERTER MARKET, BY SALES CHANNEL	103
12.1	INTRODUCTION	104
FIGURE 42	MICRO-INVERTER MARKET, BY SALES CHANNEL	104
FIGURE 43	INDIRECT SALES CHANNELS TO COMMAND MICRO-INVERTER MARKET THROUGHOUT FORECAST PERIOD	104
TABLE 46	MICRO-INVERTER MARKET, BY SALES CHANNEL, 2020-2023 (USD MILLION)	104
TABLE 47	MICRO-INVERTER MARKET, BY SALES CHANNEL, 2024-2029 (USD MILLION)	105

12.2□DIRECT□105

12.2.1□GROWING TREND OF E-COMMERCE AND DIGITALIZATION TO PROPEL SEGMENTAL GROWTH□105

TABLE 48□DIRECT: MICRO-INVERTER MARKET, BY APPLICATION, 2020-2023 (USD MILLION)□105

TABLE 49□DIRECT: MICRO-INVERTER MARKET, BY APPLICATION, 2024-2029 (USD MILLION)□106

12.3□INDIRECT□106

12.3.1□STRONG DISTRIBUTION NETWORK OF MICRO-INVERTER MANUFACTURERS TO FUEL SEGMENTAL GROWTH□106

TABLE 50□INDIRECT: MICRO-INVERTER MARKET, BY APPLICATION, 2020-2023 (USD MILLION)□106

TABLE 51□INDIRECT: MICRO-INVERTER MARKET, BY APPLICATION, 2024-2029 (USD MILLION)□106

13□MICRO-INVERTER MARKET, BY APPLICATION□107

13.1□INTRODUCTION□108

FIGURE 44□MICRO-INVERTER MARKET, BY APPLICATION□108

FIGURE 45□RESIDENTIAL SEGMENT TO DOMINATE MICRO-INVERTER MARKET THROUGHOUT FORECAST PERIOD□108

TABLE 52□MICRO-INVERTER MARKET, BY APPLICATION, 2020-2023 (USD MILLION)□109

TABLE 53□MICRO-INVERTER MARKET, BY APPLICATION, 2024-2029 (USD MILLION)□109

13.2□RESIDENTIAL□109

13.2.1□INCREASING INSTALLATION AND AFFORDABILITY OF SOLAR SYSTEMS TO BOOST DEMAND FOR MICRO-INVERTERS□109

TABLE 54□RESIDENTIAL: MICRO-INVERTER MARKET, BY TYPE, 2020-2023 (USD MILLION)□110

TABLE 55□RESIDENTIAL: MICRO-INVERTER MARKET, BY TYPE, 2024-2029 (USD MILLION)□110

TABLE 56□RESIDENTIAL: MICRO-INVERTER MARKET, BY CONNECTION TYPE, 2020-2023 (USD MILLION)□110

TABLE 57□RESIDENTIAL: MICRO-INVERTER MARKET, BY CONNECTION TYPE, 2024-2029 (USD MILLION)□110

TABLE 58□RESIDENTIAL: MICRO-INVERTER MARKET, BY POWER RATING, 2020-2023 (USD MILLION)□111

TABLE 59□RESIDENTIAL: MICRO-INVERTER MARKET, BY POWER RATING, 2024-2029 (USD MILLION)□111

TABLE 60□RESIDENTIAL: MICRO-INVERTER MARKET, BY COMMUNICATION TECHNOLOGY, 2020-2023 (USD MILLION)□111

TABLE 61□RESIDENTIAL: MICRO-INVERTER MARKET, BY COMMUNICATION TECHNOLOGY, 2024-2029 (USD MILLION)□112

TABLE 62□RESIDENTIAL: MICRO-INVERTER MARKET, BY SALES CHANNEL, 2020-2023 (USD MILLION)□112

TABLE 63□RESIDENTIAL: MICRO-INVERTER MARKET, BY SALES CHANNEL, 2024-2029 (USD MILLION)□112

TABLE 64□RESIDENTIAL: MICRO-INVERTER MARKET, BY REGION, 2020-2023 (USD MILLION)□112

TABLE 65□RESIDENTIAL: MICRO-INVERTER MARKET, BY REGION, 2024-2029 (USD MILLION)□113

13.3□COMMERCIAL□113

13.3.1□GROWING FOCUS ON ENVIRONMENTAL SUSTAINABILITY TO DRIVE MARKET□113

TABLE 66□COMMERCIAL: MICRO-INVERTER MARKET, BY TYPE, 2020-2023 (USD MILLION)□113

TABLE 67□COMMERCIAL: MICRO-INVERTER MARKET, BY TYPE, 2024-2029 (USD MILLION)□113

TABLE 68□COMMERCIAL: MICRO-INVERTER MARKET, BY CONNECTION TYPE, 2020-2023 (USD MILLION)□114

TABLE 69□COMMERCIAL: MICRO-INVERTER MARKET, BY CONNECTION TYPE, 2024-2029 (USD MILLION)□114

TABLE 70□COMMERCIAL: MICRO-INVERTER MARKET, BY POWER RATING, 2020-2023 (USD MILLION)□114

TABLE 71□COMMERCIAL: MICRO-INVERTER MARKET, BY POWER RATING, 2024-2029 (USD MILLION)□114

TABLE 72□COMMERCIAL: MICRO-INVERTER MARKET, BY COMMUNICATION TECHNOLOGY, 2020-2023 (USD MILLION)□115

TABLE 73□COMMERCIAL: MICRO-INVERTER MARKET, BY COMMUNICATION TECHNOLOGY, 2024-2029 (USD MILLION)□115

TABLE 74□COMMERCIAL: MICRO-INVERTER MARKET, BY SALES CHANNEL, 2020-2023 (USD MILLION)□115

TABLE 75□COMMERCIAL: MICRO-INVERTER MARKET, BY SALES CHANNEL, 2024-2029 (USD MILLION)□115

TABLE 76□COMMERCIAL: MICRO-INVERTER MARKET, BY REGION, 2020-2023 (USD MILLION)□116

TABLE 77□COMMERCIAL: MICRO-INVERTER MARKET, BY REGION, 2024-2029 (USD MILLION)□116

13.4□PV POWER PLANTS□116

13.4.1□INCREASING INVESTMENTS IN PV POWER PLANTS TO FUEL MARKET GROWTH□116

TABLE 78□PV POWER PLANTS: MICRO-INVERTER MARKET, BY TYPE, 2020-2023 (USD MILLION)□117

TABLE 79□PV POWER PLANTS: MICRO-INVERTER MARKET, BY TYPE, 2024-2029 (USD MILLION)□117

TABLE 80□PV POWER PLANTS: MICRO-INVERTER MARKET, BY CONNECTION TYPE, 2020-2023 (USD MILLION)□117

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TABLE 81	PV POWER PLANTS: MICRO-INVERTER MARKET, BY CONNECTION TYPE, 2024-2029 (USD MILLION)	117
TABLE 82	PV POWER PLANTS: MICRO-INVERTER MARKET, BY POWER RATING, 2020-2023 (USD MILLION)	118
TABLE 83	PV POWER PLANTS: MICRO-INVERTER MARKET, BY POWER RATING, 2024-2029 (USD MILLION)	118
TABLE 84	PV POWER PLANTS: MICRO-INVERTER MARKET, BY COMMUNICATION TECHNOLOGY, 2020-2023 (USD MILLION)	118
TABLE 85	PV POWER PLANTS: MICRO-INVERTER MARKET, BY COMMUNICATION TECHNOLOGY, 2024-2029 (USD MILLION)	118
TABLE 86	PV POWER PLANTS: MICRO-INVERTER MARKET, BY SALES CHANNEL, 2020-2023 (USD MILLION)	119
TABLE 87	PV POWER PLANTS: MICRO-INVERTER MARKET, BY SALES CHANNEL, 2024-2029 (USD MILLION)	119
TABLE 88	PV POWER PLANTS: MICRO-INVERTER MARKET, BY REGION, 2020-2023 (USD MILLION)	119
TABLE 89	PV POWER PLANTS: MICRO-INVERTER MARKET, BY REGION, 2024-2029 (USD MILLION)	119
14	MICRO-INVERTER MARKET, BY REGION	120
14.1	INTRODUCTION	121
FIGURE 46	REGIONAL SPLIT OF MICRO-INVERTER MARKET	121
FIGURE 47	ASIA PACIFIC TO REGISTER HIGHEST CAGR IN MICRO-INVERTER MARKET FROM 2024 TO 2029	121
TABLE 90	MICRO-INVERTER MARKET, BY REGION, 2020-2023 (USD MILLION)	122
TABLE 91	MICRO-INVERTER MARKET, BY REGION, 2024-2029 (USD MILLION)	122
14.2	NORTH AMERICA	123
FIGURE 48	NORTH AMERICA: MICRO-INVERTER MARKET SNAPSHOT	123
TABLE 92	NORTH AMERICA: MICRO-INVERTER MARKET, BY APPLICATION, 2020-2023 (USD MILLION)	124
TABLE 93	NORTH AMERICA: MICRO-INVERTER MARKET, BY APPLICATION, 2024-2029 (USD MILLION)	124
TABLE 94	NORTH AMERICA: MICRO-INVERTER MARKET, BY COUNTRY, 2020-2023 (USD MILLION)	124
TABLE 95	NORTH AMERICA: MICRO-INVERTER MARKET, BY COUNTRY, 2024-2029 (USD MILLION)	124
14.2.1	NORTH AMERICA: RECESSION IMPACT	125
14.2.2	US	125
14.2.2.1	Increasing solar installations to fuel demand for micro-inverters	125
14.2.3	CANADA	126
14.2.3.1	Government incentives for solar installations to drive market	126
14.2.4	MEXICO	126
14.2.4.1	Rapid transition toward clean energy to accelerate market growth	126
14.3	EUROPE	127
FIGURE 49	EUROPE: MICRO-INVERTER MARKET SNAPSHOT	127
TABLE 96	EUROPE: MICRO-INVERTER MARKET, BY APPLICATION, 2020-2023 (USD MILLION)	128
TABLE 97	EUROPE: MICRO-INVERTER MARKET, BY APPLICATION, 2024-2029 (USD MILLION)	128
TABLE 98	EUROPE: MICRO-INVERTER MARKET, BY COUNTRY, 2020-2023 (USD MILLION)	128
TABLE 99	EUROPE: MICRO-INVERTER MARKET, BY COUNTRY, 2024-2029 (USD MILLION)	129
14.3.1	EUROPE: RECESSION IMPACT	129
14.3.2	GERMANY	130
14.3.2.1	Strong focus on solar PV expansion to boost requirement for micro-inverters	130
14.3.3	UK	130
14.3.3.1	Government investments in innovative energy technologies to foster market growth	130
14.3.4	NETHERLANDS	130
14.3.4.1	High utilization of solar panels in residential and commercial applications to support market growth	130
14.3.5	FRANCE	131
14.3.5.1	Renewable energy initiatives to contribute to market growth	131
14.3.6	REST OF EUROPE	131
14.4	ASIA PACIFIC	132
FIGURE 50	ASIA PACIFIC: MICRO-INVERTER MARKET SNAPSHOT	132
TABLE 100	ASIA PACIFIC: MICRO-INVERTER MARKET, BY APPLICATION, 2020-2023 (USD MILLION)	133

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TABLE 101	ASIA PACIFIC: MICRO-INVERTER MARKET, BY APPLICATION, 2024-2029 (USD MILLION)	133
TABLE 102	ASIA PACIFIC: MICRO-INVERTER MARKET, BY COUNTRY, 2020-2023 (USD MILLION)	133
TABLE 103	ASIA PACIFIC: MICRO-INVERTER MARKET, BY COUNTRY, 2024-2029 (USD MILLION)	134
14.4.1	ASIA PACIFIC: RECESSION IMPACT	134
14.4.2	CHINA	135
14.4.2.1	Increasing rooftop solar PV installations to stimulate market growth	135
14.4.3	JAPAN	135
14.4.3.1	Enforcement of policies and initiatives encouraging solar energy utilization to drive market	135
14.4.4	INDIA	135
14.4.4.1	Government schemes and programs to increase solar power generation to boost demand for micro-inverters	135
14.4.5	AUSTRALIA	136
14.4.5.1	Heightened rooftop solar power installation to drive market	136
14.4.6	REST OF ASIA PACIFIC	136
14.5	REST OF THE WORLD (ROW)	136
TABLE 104	ROW: MICRO-INVERTER MARKET, BY APPLICATION, 2020-2023 (USD MILLION)	136
TABLE 105	ROW: MICRO-INVERTER MARKET, BY APPLICATION, 2024-2029 (USD MILLION)	137
TABLE 106	ROW: MICRO-INVERTER MARKET, BY REGION, 2020-2023 (USD MILLION)	137
TABLE 107	ROW: MICRO-INVERTER MARKET, BY REGION, 2024-2029 (USD MILLION)	137
14.5.1	ROW: RECESSION IMPACT	138
14.5.2	SOUTH AMERICA	138
14.5.2.1	Increasing number of solar projects to support market growth	138
14.5.3	MIDDLE EAST	138
14.5.3.1	Rising number of PV projects to accelerate demand for micro-inverters	138
15	COMPETITIVE LANDSCAPE	139
15.1	OVERVIEW	139
15.2	KEY PLAYER STRATEGIES/RIGHT TO WIN	139
TABLE 108	OVERVIEW OF STRATEGIES DEPLOYED BY KEY MICRO-INVERTER MANUFACTURERS	139
15.2.1	PRODUCT PORTFOLIO	140
15.2.2	REGIONAL FOCUS	140
15.2.3	SOLUTION OFFERINGS	140
15.2.4	ORGANIC/INORGANIC STRATEGIES	140
15.3	REVENUE ANALYSIS OF TOP COMPANIES	140
FIGURE 51	FIVE-YEAR REVENUE ANALYSIS OF TOP PLAYERS IN MICRO-INVERTER MARKET, 2018-2022	140
15.4	MARKET SHARE ANALYSIS	141
TABLE 109	DEGREE OF COMPETITION IN MICRO-INVERTER MARKET, 2023	141
FIGURE 52	MARKET SHARE ANALYSIS OF KEY PLAYERS, 2023	141
15.5	EVALUATION MATRIX FOR KEY PLAYERS	143
15.5.1	STARS	143
15.5.2	EMERGING LEADERS	143
15.5.3	PERVASIVE PLAYERS	143
15.5.4	PARTICIPANTS	143
FIGURE 53	EVALUATION MATRIX FOR KEY COMPANIES, 2023	144
15.5.5	MICRO-INVERTER MARKET: COMPANY FOOTPRINT	145
TABLE 110	OVERALL FOOTPRINT (17 COMPANIES)	145
TABLE 111	TYPE FOOTPRINT (17 COMPANIES)	146
TABLE 112	APPLICATION FOOTPRINT (17 COMPANIES)	147
TABLE 113	REGION FOOTPRINT (17 COMPANIES)	148

15.6	EVALUATION MATRIX FOR STARTUPS/SMALL AND MEDIUM-SIZED ENTERPRISES	149
15.6.1	PROGRESSIVE COMPANIES	149
15.6.2	RESPONSIVE COMPANIES	149
15.6.3	DYNAMIC COMPANIES	149
15.6.4	STARTING BLOCKS	149
FIGURE 54	EVALUATION MATRIX FOR STARTUPS/SMALL AND MEDIUM-SIZED ENTERPRISES, 2023	150
15.6.5	COMPETITIVE BENCHMARKING OF KEY STARTUPS/SMES	151
TABLE 114	MICRO-INVERTER MARKET: LIST OF KEY STARTUPS/SMES	151
TABLE 115	MICRO-INVERTER MARKET: COMPETITIVE BENCHMARKING OF KEY STARTUPS/SMES (8 COMPANIES)	152
15.7	COMPETITIVE SCENARIO	152
15.7.1	PRODUCT LAUNCHES	152
TABLE 116	MICRO-INVERTER MARKET: PRODUCT LAUNCHES, 2020?2023	152
15.7.2	DEALS	153
TABLE 117	MICRO-INVERTER MARKET: DEALS, 2020-2023	153
16	COMPANY PROFILES	155
16.1	KEY PLAYERS	155
(Business Overview, Products/Solutions/Services Offered, Recent Developments, MnM view (Key strengths/Right to win, Strategic choices made, Weakness/competitive threats)*		
16.1.1	ENPHASE ENERGY	155
TABLE 118	ENPHASE ENERGY: COMPANY OVERVIEW	155
FIGURE 55	ENPHASE ENERGY: COMPANY SNAPSHOT	155
TABLE 119	ENPHASE ENERGY: PRODUCTS OFFERED	156
TABLE 120	ENPHASE ENERGY: PRODUCT LAUNCHES	156
TABLE 121	ENPHASE ENERGY: DEALS	157
16.1.2	ALTENERGY POWER SYSTEM INC.	159
TABLE 122	ALTENERGY POWER SYSTEM INC.: COMPANY OVERVIEW	159
TABLE 123	ALTENERGY POWER SYSTEM INC.: PRODUCTS OFFERED	159
TABLE 124	ALTENERGY POWER SYSTEM INC.: PRODUCT LAUNCHES	160
16.1.3	HOYMILES	161
TABLE 125	HOYMILES: COMPANY OVERVIEW	161
FIGURE 56	HOYMILES: COMPANY SNAPSHOT	162
TABLE 126	HOYMILES: PRODUCTS OFFERED	162
TABLE 127	HOYMILES: PRODUCT LAUNCHES	163
16.1.4	NINGBO DEYE INVERTER TECHNOLOGY CO., LTD.	164
TABLE 128	NINGBO DEYE INVERTER TECHNOLOGY CO., LTD.: COMPANY OVERVIEW	164
TABLE 129	NINGBO DEYE INVERTER TECHNOLOGY CO., LTD.: PRODUCTS OFFERED	164
16.1.5	CHILICON POWER, LLC.	166
TABLE 130	CHILICON POWER, LLC.: COMPANY OVERVIEW	166
TABLE 131	CHILICON POWER, LLC.: PRODUCTS OFFERED	166
16.1.6	AECONVERSION GMBH & CO. KG.	168
TABLE 132	AECONVERSION GMBH & CO. KG.: COMPANY OVERVIEW	168
TABLE 133	AECONVERSION GMBH & CO. KG.: PRODUCTS OFFERED	168
16.1.7	ENVERTECH	169
TABLE 134	ENVERTECH: COMPANY OVERVIEW	169
TABLE 135	ENVERTECH: PRODUCTS OFFERED	169
16.1.8	ZJBENY	170
TABLE 136	ZJBENY: COMPANY OVERVIEW	170

TABLE 137	ZJBENY: PRODUCTS OFFERED	170
16.1.9	BLUESUN SOLAR CO., LTD	171
TABLE 138	BLUESUN SOLAR CO., LTD: COMPANY OVERVIEW	171
TABLE 139	BLUESUN SOLAR CO., LTD: PRODUCTS OFFERED	171
16.1.10	SOLAR PANELS PLUS	172
TABLE 140	SOLAR PANELS PLUS: COMPANY OVERVIEW	172
TABLE 141	SOLAR PANELS PLUS: PRODUCTS OFFERED	172
16.2	OTHER KEY PLAYERS	173
16.2.1	NORTHERN ELECTRIC POWER TECHNOLOGY INC.	173
TABLE 142	NORTHERN ELECTRIC POWER TECHNOLOGY INC.: COMPANY OVERVIEW	173
16.2.2	SPARQ SYSTEMS	174
TABLE 143	SPARQ SYSTEMS: COMPANY OVERVIEW	174
16.2.3	U R ENERGY	175
TABLE 144	U R ENERGY: COMPANY OVERVIEW	175
16.2.4	LEADSOLAR ENERGY	176
TABLE 145	LEADSOLAR ENERGY: COMPANY OVERVIEW	176
16.2.5	GRACE RENEWABLE ENERGY	177
TABLE 146	GRACE RENEWABLE ENERGY: COMPANY OVERVIEW	177
16.2.6	ZHEJIANG SANDI ELECTRIC CO., LTD	178
TABLE 147	ZHEJIANG SANDI ELECTRIC CO., LTD: COMPANY OVERVIEW	178
16.2.7	SUNROVER POWER CO., LTD	179
TABLE 148	SUNROVER POWER CO., LTD: COMPANY OVERVIEW	179
16.2.8	YOTTA ENERGY	180
TABLE 149	YOTTA ENERGY: COMPANY OVERVIEW	180
16.2.9	CRYSTAL SOLAR ENERGY	181
TABLE 150	CRYSTAL SOLAR ENERGY: COMPANY OVERVIEW	181
16.2.10	HUAYU(NINGBO)NEW ENERGY TECHNOLOGIES CO., LTD.	182
TABLE 151	HUAYU(NINGBO)NEW ENERGY TECHNOLOGIES CO., LTD.: COMPANY OVERVIEW	182
16.2.11	CHISAGEESS	183
TABLE 152	CHISAGEESS: COMPANY OVERVIEW	183
16.2.12	TSUNESS CO., LTD.	184
TABLE 153	TSUNESS CO., LTD.: COMPANY OVERVIEW	184
16.2.13	SHENZHEN WOCOR POWERAY TECHNOLOGY CO., LTD.	185
TABLE 154	SHENZHEN WOCOR POWERAY TECHNOLOGY CO., LTD.: COMPANY OVERVIEW	185
16.2.14	NINGBO AUSTA SOLAR TECH CO., LTD.	186
TABLE 155	NINGBO AUSTA SOLAR TECH CO., LTD.: COMPANY OVERVIEW	186
16.2.15	SUNSIGHTS ENERGY LLP	187
TABLE 156	SUNSIGHTS ENERGY LLP: COMPANY OVERVIEW	187
Details on Business Overview, Products/Solutions/Services Offered, Recent Developments, MnM view (Key strengths/Right to win, Strategic choices made, Weakness/competitive threats) might not be captured in case of unlisted companies.		
17	ADJACENT MARKET	188
17.1	INTRODUCTION	188
17.2	PHOTOVOLTAIC MARKET, BY APPLICATION	188
TABLE 157	PHOTOVOLTAIC MARKET, BY APPLICATION, 2019-2022 (USD BILLION)	188
TABLE 158	PHOTOVOLTAIC MARKET, BY APPLICATION, 2023-2028 (USD BILLION)	189
17.3	RESIDENTIAL	189
17.3.1	GOVERNMENT INCENTIVES ENCOURAGING ADOPTION OF PV SYSTEMS TO ACCELERATE SEGMENTAL GROWTH	189

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TABLE 159	RESIDENTIAL: PHOTOVOLTAIC MARKET, BY COMPONENT, 2019-2022 (USD BILLION)	190
TABLE 160	RESIDENTIAL: PHOTOVOLTAIC MARKET, BY COMPONENT, 2023-2028 (USD BILLION)	190
TABLE 161	RESIDENTIAL: PHOTOVOLTAIC MARKET, BY REGION, 2019-2022 (USD BILLION)	191
TABLE 162	RESIDENTIAL: PHOTOVOLTAIC MARKET, BY REGION, 2023-2028 (USD BILLION)	191
17.4	COMMERCIAL AND INDUSTRIAL	191
17.4.1	COMMERCIAL BUILDINGS, BANKS, EDUCATIONAL INSTITUTIONS, ENTERPRISES, AND HOSPITALS TO CONTRIBUTE TO SEGMENTAL GROWTH	191
TABLE 163	COMMERCIAL AND INDUSTRIAL: PHOTOVOLTAIC MARKET, BY COMPONENT, 2019-2022 (USD BILLION)	193
TABLE 164	COMMERCIAL AND INDUSTRIAL: PHOTOVOLTAIC MARKET, BY COMPONENT, 2023-2028 (USD BILLION)	193
TABLE 165	COMMERCIAL AND INDUSTRIAL: PHOTOVOLTAIC MARKET, BY REGION, 2019-2022 (USD BILLION)	194
TABLE 166	COMMERCIAL AND INDUSTRIAL: PHOTOVOLTAIC MARKET, BY REGION, 2023-2028 (USD BILLION)	194
17.5	UTILITY	194
17.5.1	RIISING FOCUS ON BUILDING ECOLOGICALLY SAFE POWER PLANTS TO BOOST DEMAND FOR PV SYSTEMS	194
TABLE 167	UTILITY: PHOTOVOLTAIC MARKET, BY COMPONENT, 2019-2022 (USD BILLION)	195
TABLE 168	UTILITY: PHOTOVOLTAIC MARKET, BY COMPONENT, 2023-2028 (USD BILLION)	196
TABLE 169	UTILITY: PHOTOVOLTAIC MARKET, BY REGION, 2019-2022 (USD BILLION)	196
TABLE 170	UTILITY: PHOTOVOLTAIC MARKET, BY REGION, 2023-2028 (USD BILLION)	196
18	APPENDIX	197
18.1	INSIGHTS FROM INDUSTRY EXPERTS	197
18.2	DISCUSSION GUIDE	197
18.3	KNOWLEDGESTORE: MARKETSandMARKETS' SUBSCRIPTION PORTAL	201
18.4	CUSTOMIZATION OPTIONS	203
18.5	RELATED REPORTS	203
18.6	AUTHOR DETAILS	204

Micro-inverter Market by Offering, Communication Technology (Wired, Wireless), Type (Single Phase, Three Phase), Power Rating (Below 250 W, Between 250 & 500 W, Above 500 W), Connection Type, Sales Channel, Application - Global Forecast to 2029

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