

GLOBAL

SWITCHING POWER SUPPLY INDUSTRY

(Low-Voltage Embedded Power Supplies)

(DC-DC-Version)

Strategies for A Changing Market

(10/23)

Micro-Tech Consultants

**Global Switching Power Supply Industry 2023
Low-Voltage Embedded Power Supplies (DC-DC-Version)
Strategies for A Changing Market**

No part of this report may be utilized, reproduced, or transmitted in any form or by any means, electronic or mechanical, without prior written permission from Micro-Tech Consultants.

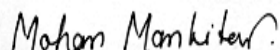
This report is intended solely for the use of client companies purchasing the report. Clients may not distribute this report to third parties or outside organizations. Its intended use is for internal purposes only.

The data collected in this report are from sources considered reliable and public. Estimates are used in case data are not available either through public domain or through interviews. No confidential information is used in the preparation of this report. Analysis, judgments, and extrapolations used to derive certain conclusions are commensurate with normal/standard industry practices.

Micro-Tech Consultants holds no responsibility for an unintentional error due to false or incorrect information but will make every possible effort to correct it.

The opinions and views expressed herein reflect the judgments of Micro-Tech Consultants and are subject to change.

All the names and trademarks are the property of their respective owners.



Mohan Mankikar
President
Micro-Tech Consultants
1686 Jessica Place
Santa Rosa, CA 95403 USA
Tel: +1-707-480-0969
Email: MicroMohan@AOL.Com
Web Site: www.MTCPower.com

CONTENTS

FOREWORD

1.0	EXECUTIVE SUMMARY: Overview.....	1-1
	AC-DC Switchers: Merchant & Captive.....	1-2
	DC-DC Converters: Merchant & Captive.....	1-2
	Merchant Power Supply Business.....	1-6
	The Power Supply Industry: Basics & Background.....	1-7
	A Global Industry	1-8
	Markets & Products.....	1-9
	The Power Supply Industry: Review of 2022.....	1-12
	Industry Trends.....	1-13
	AC-DC Switchers.....	1-16
	DC-DC Converters.....	1-18
	Distributed Power Architecture (DPA).....	1-24
	Market Segments.....	1-25
	Competitive Market Position.....	1-28
	Analysis of Worldwide Markets.....	1-32
	Americas: OEM Merchant Power Supplies.....	1-36
	EMEA: OEM Merchant Power Supplies.....	1-40
	APAC: OEM Merchant Power Supplies.....	1-44
	Rest of World: OEM Merchant Power Supplies.....	1-49
	Strategies.....	1-50
	The Power Supply Business in 2022	1-54
	The Power Supply Business Models.....	1-58
2.0	GLOBAL POWER SUPPLY INDUSTRY ANALYSIS: Overview.....	2-1
2.1	Global Power Supply Industry: An Overview.....	2-5
2.2	Summary of New Business Activity.....	2-10
3.0	GLOBAL EMBEDDED POWER SUPPLY MARKET ANALYSIS.....	3-1
	Overview (2022-2027)	
3.1	Global: DC-DC Converter Market Analysis.....	3-56
	Overview (2022-2027)	
3.1.1	LED Lighting (LED).....	3-74
3.1.2	Consumer/Retail Equipment (CON).....	3-78
3.1.3	Computer/Office Equipment (COE).....	3-82
3.1.4	Networking/Telecom Equipment (NTE).....	3-86
3.1.5	Industrial/Instrumentation Equipment (IND).....	3-90
3.1.6	Medical Equipment (MED).....	3-94
3.1.7	Transportation (TRN).....	3-98
3.1.8	Military/Aerospace Equipment (MIL).....	3-102

4.0	AMERICAS (AMER): NORTH, SOUTH & CENTRAL AMERICA EMBEDDED POWER SUPPLY MARKET ANALYSIS..... Overview (2022-2027)	4-1
4.1	AMER: DC-DC Converter Market Analysis..... (2022-2027)	4-6
4.1.1	LED Lighting (LED).....	4-11
4.1.2	Consumer/Retail Equipment (CON).....	4-12
4.1.3	Computer/Office Equipment (COE).....	4-14
4.1.4	Networking/Telecom Equipment (NTE).....	4-16
4.1.5	Industrial/Instrumentation Equipment (IND).....	4-18
4.1.6	Medical Equipment (MED).....	4-20
4.1.7	Transportation (TRN).....	4-22
4.1.8	Military/Aerospace Equipment (MIL).....	4-24
5.0	EMEA: EUROPE, MIDDLE EAST & AFRICA EMBEDDED POWER SUPPLY MARKET ANALYSIS..... Overview (2022-2027)	5-1
5.1	EMEA: DC-DC Converter Market Analysis..... (2022-2027)	5-6
5.1.1	LED Lighting (LED).....	5-11
5.1.2	Consumer/Retail Equipment (CON).....	5-12
5.1.3	Computer/Office Equipment (COE).....	5-14
5.1.4	Networking/Telecom Equipment (NTE).....	5-16
5.1.5	Industrial/Instrumentation Equipment (IND).....	5-18
5.1.6	Medical Equipment (MED).....	5-20
5.1.7	Transportation (TRN).....	5-22
5.1.8	Military/Aerospace Equipment (MIL).....	5-24
6.0	ASIA/PACIFIC (APAC): EMBEDDED POWER SUPPLY MARKET ANALYSIS..... Overview (2022-2027)	6-1
6.1	APAC: DC-DC Converter Market Analysis..... (2022-2027)	6-6
6.1.1	LED Lighting (LED).....	6-11
6.1.2	Consumer/Retail Equipment (CON).....	6-12
6.1.3	Computer/Office Equipment (COE).....	6-14
6.1.4	Networking/Telecom Equipment (NTE).....	6-16
6.1.5	Industrial/Instrumentation Equipment (IND).....	6-18
6.1.6	Medical Equipment (MED).....	6-20
6.1.7	Transportation (TRN).....	6-22
6.1.8	Military/Aerospace Equipment (MIL).....	6-24
7.0	REST OF THE WORLD (ROW): EMBEDDED POWER SUPPLY MARKET ANALYSIS..... Overview (2022-2027)	7-1
7.1	ROW: DC-DC Converter Market Analysis..... (2022-2027)	7-9
8.0	PRODUCT ANALYSIS..... Overview (2022-2027)	8-1
8.1	DC-DC Converter Trends..... (2022-2027)	8-12
9.0	COMPETITIVE ANALYSIS.....	9-1

	Overview	
9.1	AcBel Polytech Inc. (AcBel).....	9-12
9.2	Advanced Energy/Artesyn Embedded Power.....	9-15
9.3	Bel Power Products (Bel).....	9-22
9.4	Chicony Power (Chicony)	9-27
9.5	CINCON Electronics (CINCON).....	9-29
9.6	Cosel, Inc. (Cosel).....	9-32
9.7	Crane Aerospace (Eldec, Interpoint, ST Keltec)	9-37
9.8	Delta Electronics, Inc. (Delta).....	9-42
9.9	Enedo Oyj.....	9-51
9.10	ERP Power LLC.....	9-55
9.11	Flex Power.....	9-58
9.12	FRIWO AG	9-62
9.13	FSP Group (FSP).....	9-65
9.14	Lite-On Technology Corporation. (Lite-On)	9-68
9.15	MEAN WELL ENTERPRISES Co. (MEAN WELL)	9-70
9.16	MORNSUN GUANGZHOU SCIENCE & TECHNOLOGY CO. LTD. (MORNSUN)	9-74
9.17	Murata (Murata Manufacturing & Murata Power Solutions)	9-76
9.18	NetPower Technologies, Inc. (NetPower).....	9-80
9.19	Phihong Enterprises Ltd. (Phihong).....	9-82
9.20	Shenzhen Megmeet Electrical Co., Ltd. (Megmeet).....	9-85
9.21	TDK-Lambda Corporation (TDK-Lambda)	9-88
9.22	TT Electronics plc.	9-96
9.23	Vicor Corporation (Vicor).....	9-100
9.24	XP Power plc.....	9-106
10.0	APPENDIX.....	10-1
	Definitions & Explanations	
	Organization & Methodology	
11.0	Micro-Tech Consultants (MTC).....	11-1

LIST OF FIGURES/TABLES

1.0	EXECUTIVE SUMMARY.....	1-1
1.0.1	Global Consumption of OEM Switching Power Supplies (2022-2027)	1-1
1.0.2	Global Consumption of AC-DC Switchers: Merchant & Captive..... (2022-2027)	1-2
1.0.3	Global Consumption of DC-DC Converters: Merchant & Captive..... (2022-2027)	1-2
1.0.4	Percentage of Global Consumption of Switching Power Supplies..... Merchant vs. Captive (2022-2027)	1-5
1.0.5	Global Consumption of Switching Power Supplies..... Merchant & Captive (2022-2027)	1-6
1.0.6	Global Consumption of Merchant Power Supplies..... AC-DC Switchers & DC-DC Converters (2022-2027)	1-8
1.0.7	Market Growth Rates of 2022, 2023 & CAGR 2022-2027.....	1-13
1.0.8	Global Consumption of Merchant AC-DC Switchers (2022-2027)	1-19
1.0.9	Global Consumption of Merchant AC-DC Switchers..... EPS, FES & CPS (2022-2027)	1-19
1.0.10	Global Consumption of Merchant Front-End Supplies (FES) and Rectifiers (2022-2027)	1-20
1.0.11	Global Consumption of Merchant DC-DC Converters (2022-2027)	1-21
1.0.12	Global Consumption of Merchant DPA (2022-2027).....	1-24
1.0.13	Global Consumption of Merchant DPA AC-DC/DC-DC Front-End & DC-DC Converters (2022-2027)	1-24
1.0.14	Global Consumption of Merchant DPA..... AC-DC/DC-DC Front-End & DC-DC Converters (2022-2027) (BUS Converters, Isolated Converters & Non-Isolated POLs)	1-25
1.0.15	Global Consumption of Switching Power Supplies: LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	1-27
1.0.16	Global Consumption of Merchant Switching Power Supplies: LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	1-27
1.0.17	Global Sales of Top 10 Merchant OEM Power Supply Companies..... 2022 Merchant Sales: AC-DC Switchers and DC-DC Converters	1-28
1.0.18	Market Share held by Top 10 Companies (from 2003 to 2022)	1-28
1.0.19	2022 Global Sales of Top 10 Merchant OEM AC-DC Switcher Companies.....	1-29
1.0.20	2022 Global Sales of Top 10 Merchant OEM DC-DC Converter Companies.....	1-29
1.0.21	Global Sales of Top 10 Merchant Power Supply Companies..... 2022 Sales: OEM PSs + TPSs + UPSs + RE INVs + HVPSs + Other	1-30
1.0.22	Percentage of Global Switching Power Supplies in Different Geographic Regions..... Merchant Market: AC-DC Switchers & DC-DC Converters AMER vs. EMEA vs. APAC vs. ROW (2022 & 2027)	1-31
1.0.23	Global Consumption of Switching Power Supplies in Different Geographic Regions.... AC-DC Switchers & DC-DC Converters (2022-2027)	1-32

1.0.24	Global Consumption of Switching Power Supplies in Different Geographic Regions.... Merchant AC-DC Switchers & DC-DC Converters (2022-2027)	1-32
1.0.25	Global Consumption of AC-DC Switchers in Different Geographic Regions..... (2022-2027)	1-33
1.0.26	Global Consumption of Merchant AC-DC Switchers in Different Geographic Regions... (2022-2027)	1-33
1.0.27	Global Consumption of DC-DC Converters in Different Geographic Regions..... (2022-2027)	1-34
1.0.28	Global Consumption of Merchant DC-DC Converters in Different Geographic Regions. (2022-2027)	1-34
1.0.29	Americas Consumption of Switching Power Supplies..... (2022-2027)	1-36
1.0.30	Americas Consumption of Switching Power Supplies..... AC-DC Switchers & DC-DC Converters (2022-2027)	1-37
1.0.31	Americas Consumption of Switching Power Supplies..... Merchant & Captive (2022-2027)	1-37
1.0.32	Americas Consumption of Switching Power Supplies..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	1-37
1.0.33	Americas Consumption of Merchant Switching Power Supplies..... AC-DC Switchers & DC-DC Converters (2022-2027)	1-38
1.0.34	Americas Consumption of Merchant Switching Power Supplies..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	1-38
1.0.35	EMEA Consumption of Switching Power Supplies..... (2022-2027)	1-40
1.0.36	EMEA Consumption of Switching Power Supplies..... AC-DC Switchers & DC-DC Converters (2022-2027)	1-40
1.0.37	EMEA Consumption of Switching Power Supplies..... Merchant & Captive (2022-2027)	1-41
1.0.38	EMEA Consumption of Switching Power Supplies..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	1-41
1.0.39	EMEA Consumption of Merchant Switching Power Supplies..... AC-DC Switchers & DC-DC Converters (2022-2027)	1-42
1.0.40	EMEA Consumption of Merchant Switching Power Supplies..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	1-42
1.0.41	APAC Consumption of Switching Power Supplies..... (2022-2027)	1-45
1.0.42	APAC Consumption of Switching Power Supplies..... AC-DC Switchers & DC-DC Converters (2022-2027)	1-45
1.0.43	APAC Consumption of Switching Power Supplies..... Merchant & Captive (2022-2027)	1-46
1.0.44	APAC Consumption of Switching Power Supplies..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	1-46
1.0.45	APAC Consumption of Merchant Switching Power Supplies..... AC-DC Switchers & DC-DC Converters (2022-2027)	1-46
1.0.46	APAC Consumption of Merchant Switching Power Supplies..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	1-47
1.0.47	Rest of World (ROW) Consumption of Switching Power Supplies..... (2022-2027)	1-48
1.0.48	Rest of World (ROW) Consumption of Switching Power Supplies..... AC-DC Switchers & DC-DC Converters (2022-2027)	1-48
1.0.49	Rest of World (ROW) Consumption of Switching Power Supplies..... Merchant & Captive (2022-2027)	1-48

1.0.50	Financial Performance of Low-Voltage Power Supply Industry..... (2022)	1-54
1.0.51	Eight-Year Trend in Gross Margin..... (2014-2022)	1-55
1.0.52	Eight-Year Trend in SG&A Expenses..... (2014-2022)	1-55
1.0.53	Eight-Year Trend in R&D Expenses..... (2014-2022)	1-56
1.0.54	Eight-Year Trend in Operating Income..... (2014-2022)	1-56
1.0.55	Financial Model for High-Volume Custom AC-DC Switchers (2022)	1-57
1.0.56	Financial Model for Low-Volume Standard-Off-The-Shelf Power Supplies..... (2022)	1-58
1.0.57	Financial Model for High- & Low-Volume Standard & Custom Products..... AC-DC Switchers & DC-DC Converters: (2022)	1-59

2.0	POWER SUPPLY INDUSTRY ANALYSIS..... OEM+TEL+UPS+HVPS	2-1
2.1	Global Power Supply Industry: An Overview..... (2022-2027)	2-5
2.1.1	Global Consumption of Power Supplies..... OEM PSs, TPSs, UPSs & HVPSs (2022-2027)	2-5
2.1.2	Global Consumption of Power Supplies..... OEM PSs, TPSs, UPSs & HVPSs (2022-2027)	2-6
2.1.3	Global Consumption of Power Supplies of in Different Regions..... AMER, EMEA, APAC & ROW OEM PSs, TPSs, UPSs & HVPSs (2022-2027)	2-6
2.1.4	Global Consumption of OEM Power Supplies (OEM PSs) in Different Regions..... AMER, EMEA, APAC & ROW (2022-2027)	2-6
2.1.5	Global Consumption of Telecom Power Supplies (TPSs) in Different Regions..... AMER, EMEA, APAC & ROW (2022-2027)	2-6
2.1.6	Global Consumption of Uninterruptible Power Supplies (UPSs) in Different Regions.... AMER, EMEA, APAC & ROW (2022-2027)	2-7
2.1.7	Global Consumption of High Voltage Power Supplies (HVPSs) in Different Regions.... AMER, EMEA, APAC & ROW (2022-2027)	2-7
2.1.8	Global Consumption of OEM + Telecom Power Supplies..... (2022-2027)	2-7
2.1.9	Global Consumption of OEM + Telecom Power Supplies..... Merchant & Captive Consumption (2022-2027)	2-7
2.1.10	Global Consumption of OEM + High Voltage Power Supplies..... (2022-2027)	2-8
2.1.11	Global Consumption of OEM + High Voltage Power Supplies..... Merchant & Captive Consumption (2022-2027)	2-8
2.1.12	Global Sales of Top Ten Merchant Power Supply Companies..... 2022 Sales: (OEM PSs + TPSs + UPSs + HVPSs)	2-9

3.0	GLOBAL (WW): OEM POWER SUPPLY MARKET ANALYSIS OVERVIEW (2022-2027)	3-1
3.0.1	Market Share of Top 10 Power Supply Companies.....	3-4
3.0.2	Market Share of Top 7 Taiwan-based Companies.....	3-5
3.0.3	Global Consumption of Switching Power Supplies..... AC-DC Switchers & DC-DC Converters (2022-2027)	3-10
3.0.4	Global Consumption of Switching Power Supplies..... AC-DC Switchers & DC-DC Converters (2022-2027)	3-10
3.0.5	Global Consumption of Switching Power Supplies..... Merchant & Captive (2022-2027)	3-11
3.0.6	Global Consumption of Switching Power Supplies..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	3-12
3.0.7	Global Consumption of Switching Power Supplies..... STD, MSD & CST (2022-2027)	3-23
3.0.8	Global Consumption of Merchant Switching Power Supplies..... (2022-2027)	3-24
3.0.9	Global Consumption of Merchant Switching Power Supplies..... AC-DC Switchers & DC-DC Converters (2022-2027)	3-25
3.0.10	Global Consumption of Merchant Switching Power Supplies..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	3-25
3.0.11	Global Consumption of Merchant Switching Power Supplies..... STD, MSD & CST (2022-2027)	3-25
3.0.12	Global Sales: Top 10 Merchant OEM Power Supply Companies..... 2022 Sales: AC-DC Switchers & DC-DC Converters	3-26
3.0.13	Global Consumption of Switching Power Supplies in Different Geographic Regions AC-DC Switchers & DC-DC Converters (2022-2027)	3-29
3.0.14	Global Consumption of Switching Power Supplies in Different Geographic Regions Merchant AC-DC Switchers & DC-DC Converters (2022-2027)	3-29
3.0.15	Global Consumption of AC-DC Switchers in Different Geographic Regions..... (2022-2027)	3-29
3.0.16	Global Consumption of Merchant AC-DC Switchers in Different Geographic Regions... (2022-2027)	3-30
3.0.17	Global Consumption of DC-DC Converters in Different Geographic Regions..... (2022-2027)	3-30
3.0.18	Global Consumption of Merchant DC-DC Converters in Different Geographic Regions. (2022-2027)	3-30
3.0.19	CON Categories & Their Merchant Power Product Requirements.....	3-33
3.0.20	Global Consumption of Merchant Power Supplies..... CON Applications: AC-DC Switchers & DC-DC Converters (2022-2027)	3-34
3.0.21	COE Categories & Their Merchant Power Product Requirements.....	3-40
3.0.22	Global Consumption of Merchant Power Supplies..... COE Applications: AC-DC Switchers & DC-DC Converters (2022-2027)	3-40
3.0.23	NTE Categories & Their Merchant Power Product Requirements.....	3-44
3.0.24	Global Consumption of Merchant Power Supplies..... NTE Applications: AC-DC Switchers & DC-DC Converters (2022-2027)	3-45
3.0.25	IND Categories & Their Merchant Power Product Requirements.....	3-47
3.0.26	Global Consumption of Merchant Power Supplies..... IND Applications: AC-DC Switchers & DC-DC Converters (2022-2027)	3-48
3.0.27	TRN Categories & Their Merchant Power Product Requirements.....	3-53
3.0.28	Global Consumption of Merchant Power Supplies..... TRN Applications: AC-DC Switchers & DC-DC Converters (2022-2027)	3-53
3.0.29	Global Consumption of Power Supplies..... MIL Market: AC-DC Switchers & DC-DC Converters (2022-2027) Full MIL & COTS/Quasi MIL	3-55

3.1	Global: DC-DC Converters Market Analysis.....	3-56
3.1.1	Global Consumption of DC-DC Converters.....	3-59
3.1.2	Global Consumption of DC-DC Converters..... Merchant & Captive (2022-2027)	3-59
3.1.3	Global Consumption of DC-DC Converters..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	3-60
3.1.4	Global Consumption of DC-DC Converters..... STD, MSD & CST (2022-2027)	3-60
3.1.5	Global Consumption of DC-DC Converters..... Low, Low-Med, Med, Med-High & High Power (2022-2027)	3-61
3.1.6	Global Consumption of Merchant DC-DC Converters..... (2022-2027)	3-61
3.1.7	Global Consumption of Merchant DC-DC Converters..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	3-62
3.1.8	Global Consumption of Merchant DC-DC Converters..... STD, MSD & CST (2022-2027)	3-62
3.1.9	Global Consumption of Merchant DC-DC Converters..... Low, Low-Med, Med, Med-High & High Power (2022-2027)	3-63
3.1.10	Global Consumption of Merchant DC-DC Converters..... Board Mounted Converters & Box Type Converters (2022-2027)	3-63
3.1.11	Global Consumption of Merchant DC-DC Converters..... VRMs, Isolated Converters & Non-Isolated Converters (2022-2027)	3-64
3.1.12	Global Consumption of Merchant DPA..... (2022-2027)	3-64
3.1.13	Global Consumption of Merchant DPA..... AC-DC/DC-DC Front-End & Board Mounted DC-DC Converters (2022-2027)	3-65
3.1.14	Global Consumption of Merchant DPA..... AC-DC/DC-DC Front-End & Board Mounted DC-DC Converters BUS Converters, Isolated Converters & Non-Isolated Converters-POLs (2022-2027)	3-65
3.1.15	Global Consumption of Merchant Isolated DC-DC Converters..... Input Voltage (2022 vs. 2027)	3-66
3.1.16	Global Consumption of Merchant Isolated DC-DC Converters..... Output Voltage (2022 vs. 2027)	3-67
3.1.17	Global Consumption of Merchant Isolated DC-DC Converters..... Output Current (2022 vs. 2027)	3-68
3.1.18	Global Consumption of Merchant Isolated DC-DC Converters..... Packages (2022 vs. 2027)	3-69
3.1.19	Global Consumption of Merchant Non-Isolated DC-DC Converters..... Input Voltage (2022 vs. 2027)	3-70
3.1.20	Global Consumption of Merchant Non-Isolated DC-DC Converters..... Output Voltage (2022 vs. 2027)	3-71
3.1.21	Global Consumption of Merchant Non-Isolated DC-DC Converters..... Output Current (2022 vs. 2027)	3-72
3.1.22	Global Sales of Top 10 DC-DC Converter Companies 2022 Merchant OEM DC-DC Converters Sales	3-73

3.1.1	Global: DC-DC Converters Market Analysis..... LED: Lighting	3-74
3.1.1.1	Global Consumption of DC-DC Converters..... LED: Lighting	3-74
3.1.1.2	Global Consumption of DC-DC Converters..... LED: Merchant & Captive (2022-2027)	3-75
3.1.1.3	Global Consumption of DC-DC Converters..... LED: STD, MSD & CST (2022-2027)	3-75
3.1.1.4	Global Consumption of DC-DC Converters..... LED: Low, Low-Med, Med, Med-High & High Power (2022-2027)	3-75
3.1.1.5	Global Consumption of Merchant DC-DC Converters..... LED: Lighting	3-76
3.1.1.6	Global Consumption of Merchant DC-DC Converters..... LED: STD, MSD & CST (2022-2027)	3-76
3.1.1.7	Global Consumption of Merchant DC-DC Converters..... LED: Low, Low-Med, Med, Med-High & High Power (2022-2027)	3-77
3.1.2	Global: DC-DC Converters Market Analysis..... CON: Consumer/Retail Equipment	3-78
3.1.2.1	Global Consumption of DC-DC Converters..... CON: Consumer/Retail Equipment	3-78
3.1.2.2	Global Consumption of DC-DC Converters..... CON: Merchant & Captive (2022-2027)	3-79
3.1.2.3	Global Consumption of DC-DC Converters..... CON: STD, MSD & CST (2022-2027)	3-79
3.1.2.4	Global Consumption of DC-DC Converters..... CON: Low, Low-Med, Med, Med-High & High Power (2022-2027)	3-79
3.1.2.5	Global Consumption of Merchant DC-DC Converters..... CON: Consumer/Retail Equipment	3-80
3.1.2.6	Global Consumption of Merchant DC-DC Converters..... CON: STD, MSD & CST (2022-2027)	3-80
3.1.2.7	Global Consumption of Merchant DC-DC Converters..... CON: Low, Low-Med, Med, Med-High & High Power (2022-2027)	3-81

3.1.3	Global: DC-DC Converters Market Analysis..... COE: Computer/Office Equipment	3-82
3.1.3.1	Global Consumption of DC-DC Converters..... COE: Computer/Office Equipment	3-82
3.1.3.2	Global Consumption of DC-DC Converters..... COE: Merchant & Captive (2022-2027)	3-83
3.1.3.3	Global Consumption of DC-DC Converters..... COE: STD, MSD & CST (2022-2027)	3-83
3.1.3.4	Global Consumption of DC-DC Converters..... COE: Low, Low-Med, Med, Med-High & High Power (2022-2027)	3-83
3.1.3.5	Global Consumption of Merchant DC-DC Converters..... COE: Computer/Office Equipment	3-84
3.1.3.6	Global Consumption of Merchant DC-DC Converters..... COE: STD, MSD & CST (2022-2027)	3-84
3.1.3.7	Global Consumption of Merchant DC-DC Converters..... COE: Low, Low-Med, Med, Med-High & High Power (2022-2027)	3-85
3.1.3.8	Global Consumption of Merchant DC-DC Converters..... COE Applications	3-85
3.1.4	Global: DC-DC Converters Market Analysis..... NTE: Networking/Telecom Equipment	3-86
3.1.4.1	Global Consumption of DC-DC Converters..... NTE: Networking/Telecom Equipment	3-86
3.1.4.2	Global Consumption of DC-DC Converters..... NTE: Merchant & Captive (2022-2027)	3-87
3.1.4.3	Global Consumption of DC-DC Converters..... NTE: STD, MSD & CST (2022-2027)	3-87
3.1.4.4	Global Consumption of DC-DC Converters..... NTE: Low, Low-Med, Med, Med-High & High Power (2022-2027)	3-87
3.1.4.5	Global Consumption of Merchant DC-DC Converters..... NTE: Networking/Telecom Equipment	3-88
3.1.4.6	Global Consumption of Merchant DC-DC Converters..... NTE: STD, MSD & CST (2022-2027)	3-88
3.1.4.7	Global Consumption of Merchant DC-DC Converters..... NTE: Low, Low-Med, Med, Med-High & High Power (2022-2027)	3-89
3.1.4.8	Global Consumption of Merchant DC-DC Converters..... NTE Applications	3-89

3.1.5	Global: DC-DC Converter Market Analysis..... IND: Industrial/Instrumentation Equipment	3-90
3.1.5.1	Global Consumption of DC-DC Converters..... IND: Industrial/Instrumentation Equipment	3-90
3.1.5.2	Global Consumption of DC-DC Converters..... IND: Merchant & Captive (2022-2027)	3-91
3.1.5.3	Global Consumption of DC-DC Converters..... IND: STD, MSD & CST (2022-2027)	3-91
3.1.5.4	Global Consumption of DC-DC Converters..... IND: Low, Low-Med, Med, Med-High & High Power (2022-2027)	3-91
3.1.5.5	Global Consumption of Merchant DC-DC Converters..... IND: Industrial/Instrumentation Equipment	3-92
3.1.5.6	Global Consumption of Merchant DC-DC Converters..... IND: STD, MSD & CST (2022-2027)	3-92
3.1.5.7	Global Consumption of Merchant DC-DC Converters..... IND: Low, Low-Med, Med, Med-High & High Power (2022-2027)	3-93
3.1.6	Global: DC-DC Converter Market Analysis..... MED: Medical Equipment	3-94
3.1.6.1	Global Consumption of DC-DC Converters..... MED: Medical Equipment	3-94
3.1.6.2	Global Consumption of DC-DC Converters..... MED: Merchant & Captive (2022-2027)	3-95
3.1.6.3	Global Consumption of DC-DC Converters..... MED: STD, MSD & CST (2022-2027)	3-95
3.1.6.4	Global Consumption of DC-DC Converters..... MED: Low, Low-Med, Med, Med-High & High Power (2022-2027)	3-95
3.1.6.5	Global Consumption of Merchant DC-DC Converters..... MED: Medical Equipment	3-96
3.1.6.6	Global Consumption of Merchant DC-DC Converters..... MED: STD, MSD & CST (2022-2027)	3-96
3.1.6.7	Global Consumption of Merchant DC-DC Converters..... MED: Low, Low-Med, Med, Med-High & High Power (2022-2027)	3-97

3.1.7	Global: DC-DC Converter Market Analysis..... TRN: Transportation	3-98
3.1.7.1	Global Consumption of DC-DC Converters..... TRN: Transportation	3-98
3.1.7.2	Global Consumption of DC-DC Converters..... TRN: Merchant & Captive (2022-2027)	3-99
3.1.7.3	Global Consumption of DC-DC Converters..... TRN: STD, MSD & CST (2022-2027)	3-99
3.1.7.4	Global Consumption of DC-DC Converters..... TRN: Low, Low-Med, Med, Med-High & High Power (2022-2027)	3-99
3.1.7.5	Global Consumption of Merchant DC-DC Converters..... TRN: Transportation	3-100
3.1.7.6	Global Consumption of Merchant DC-DC Converters..... TRN: STD, MSD & CST (2022-2027)	3-100
3.1.7.7	Global Consumption of Merchant DC-DC Converters..... TRN: Low, Low-Med, Med, Med-High & High Power (2022-2027)	3-100
3.1.7.8	Global Consumption of Merchant DC-DC Converters..... TRN Applications	3-101
3.1.8	Global: DC-DC Converter Market Analysis..... MIL: Military/Aerospace Equipment	3-102
3.1.8.1	Global Consumption of DC-DC Converters..... MIL: Military/Aerospace Equipment	3-102
3.1.8.2	Global Consumption of DC-DC Converters..... MIL: Merchant & Captive (2022-2027)	3-103
3.1.8.3	Global Consumption of DC-DC Converters..... MIL: STD, MSD & CST (2022-2027)	3-103
3.1.8.4	Global Consumption of DC-DC Converters..... MIL: Low, Low-Med, Med, Med-High & High Power (2022-2027)	3-103
3.1.8.5	Global Consumption of Merchant DC-DC Converters..... MIL: Military/Aerospace Equipment	3-104
3.1.8.6	Global Consumption of Merchant DC-DC Converters..... MIL: STD, MSD & CST (2022-2027)	3-104
3.1.8.7	Global Consumption of Merchant DC-DC Converters..... MIL: Low, Low-Med, Med, Med-High & High Power (2022-2027)	3-105
3.1.8.8	Global Consumption of Merchant DC-DC Converters..... MIL Market: Full MIL and COTS/Quasi MIL	3-105

4.0	AMERICAS (AMER) MARKET ANALYSIS..... OVERVIEW	4-1
4.0.1	Americas Consumption of Switching Power Supplies.....	4-2
4.0.2	Americas Consumption of Switching Power Supplies..... AC-DC Switchers & DC-DC Converters (2022-2027)	4-3
4.0.3	Americas Consumption of Switching Power Supplies..... Merchant & Captive (2022-2027)	4-3
4.0.4	Americas Consumption of Switching Power Supplies..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	4-3
4.0.5	Americas Consumption of Switching Power Supplies..... STD, MSD & CST (2022-2027)	4-4
4.0.6	Americas Consumption of Merchant Switching Power Supplies.....	4-4
4.0.7	Americas Consumption of Merchant Switching Power Supplies..... AC-DC Switchers & DC-DC Converters (2022-2027)	4-5
4.0.8	Americas Consumption of Merchant Switching Power Supplies..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	4-5
4.0.9	Americas Consumption of Merchant Switching Power Supplies..... STD, MSD & CST (2022-2027)	4-5
4.1	Americas: DC-DC Converter Market Analysis.....	4-6
4.1.1	Americas Consumption of DC-DC Converters.....	4-6
4.1.2	Americas Consumption of DC-DC Converters..... Merchant & Captive (2022-2027)	4-6
4.1.3	Americas Consumption of DC-DC Converters..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	4-7
4.1.4	Americas Consumption of DC-DC Converters..... STD, MSD & CST (2022-2027)	4-7
4.1.5	Americas Consumption of DC-DC Converters..... Low, Low-Med, Med, Med-High & High Power (2022-2027)	4-8
4.1.6	Americas Consumption of Merchant DC-DC Converters..... (2022-2027)	4-8
4.1.7	Americas Consumption of Merchant DC-DC Converters..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	4-9
4.1.8	Americas Consumption of Merchant DC-DC Converters..... STD, MSD & CST (2022-2027)	4-9
4.1.9	Americas Consumption of Merchant DC-DC Converters..... Low, Low-Med, Med, Med-High & High Power (2022-2027)	4-10
4.1.1	Americas: DC-DC Converter Market Analysis..... LED: Lighting	4-11
4.1.1.1	Americas Consumption of DC-DC Converters..... LED: Merchant & Captive (2022-2027)	4-11

4.1.2	Americas: DC-DC Converter Market Analysis..... CON: Consumer/Retail Equipment	4-12
4.1.2.1	Americas Consumption of DC-DC Converters..... CON: Merchant & Captive (2022-2027)	4-12
4.1.2.2	Americas Consumption of DC-DC Converters..... CON: STD, MSD & CST (2022-2027)	4-12
4.1.2.3	Americas Consumption of DC-DC Converters..... CON: Low, Low-Med, Med, Med-High & High Power (2022-2027)	4-12
4.1.2.4	Americas Consumption of Merchant DC-DC Converters..... CON: STD, MSD & CST (2022-2027)	4-13
4.1.2.5	Americas Consumption of Merchant DC-DC Converters..... CON: Low, Low-Med, Med, Med-High & High Power (2022-2027)	4-13
4.1.3	Americas: DC-DC Converter Market Analysis..... COE: Computer/Office Equipment	4-14
4.1.3.1	Americas Consumption of DC-DC Converters..... COE: Merchant & Captive (2022-2027)	4-14
4.1.3.2	Americas Consumption of DC-DC Converters..... COE: STD, MSD & CST (2022-2027)	4-14
4.1.3.3	Americas Consumption of DC-DC Converters..... COE: Low, Low-Med, Med, Med-High & High Power (2022-2027)	4-14
4.1.3.4	Americas Consumption of Merchant DC-DC Converters..... COE: STD, MSD & CST (2022-2027)	4-15
4.1.3.5	Americas Consumption of Merchant DC-DC Converters..... COE: Low, Low-Med, Med, Med-High & High Power (2022-2027)	4-15
4.1.4	Americas: DC-DC Converters Market Analysis..... NTE: Networking/Telecom Equipment	4-16
4.1.4.1	Americas Consumption of DC-DC Converters..... NTE: Merchant & Captive (2022-2027)	4-16
4.1.4.2	Americas Consumption of DC-DC Converters..... NTE: STD, MSD & CST (2022-2027)	4-16
4.1.4.3	Americas Consumption of DC-DC Converters..... NTE: Low, Low-Med, Med, Med-High & High Power (2022-2027)	4-16
4.1.4.4	Americas Consumption of Merchant DC-DC Converters..... NTE: STD, MSD & CST (2022-2027)	4-17
4.1.4.5	Americas Consumption of Merchant DC-DC Converters..... NTE: Low, Low-Med, Med, Med-High & High Power (2022-2027)	4-17
4.1.5	Americas: DC-DC Converters Market Analysis..... IND: Industrial/Instrumentation Equipment	4-18
4.1.5.1	Americas Consumption of DC-DC Converters..... IND: Merchant & Captive (2022-2027)	4-18
4.1.5.2	Americas Consumption of DC-DC Converters..... IND: STD, MSD & CST (2022-2027)	4-18
4.1.5.3	Americas Consumption of DC-DC Converters..... IND: Low, Low-Med, Med, Med-High & High Power (2022-2027)	4-18
4.1.5.4	Americas Consumption of Merchant DC-DC Converters..... IND: STD, MSD & CST (2022-2027)	4-19
4.1.5.5	Americas Consumption of Merchant DC-DC Converters..... IND: Low, Low-Med, Med, Med-High & High Power (2022-2027)	4-19

4.1.6	Americas: DC-DC Converters Market Analysis..... MED: Medical Equipment	4-20
4.1.6.1	Americas Consumption of DC-DC Converters..... MED: Merchant & Captive (2022-2027)	4-20
4.1.6.2	Americas Consumption of DC-DC Converters..... MED: STD, MSD & CST (2022-2027)	4-20
4.1.6.3	Americas Consumption of DC-DC Converters..... MED: Low, Low-Med, Med, Med-High & High Power (2022-2027)	4-20
4.1.6.4	Americas Consumption of Merchant DC-DC Converters..... MED: STD, MSD & CST (2022-2027)	4-21
4.1.6.5	Americas Consumption of Merchant DC-DC Converters..... MED: Low, Low-Med, Med, Med-High & High Power (2022-2027)	4-21
4.1.7	Americas: DC-DC Converters Market Analysis..... TRN: Transportation	4-22
4.1.7.1	Americas Consumption of DC-DC Converters..... TRN: Merchant & Captive (2022-2027)	4-22
4.1.7.2	Americas Consumption of DC-DC Converters..... TRN: STD, MSD & CST (2022-2027)	4-22
4.1.7.3	Americas Consumption of DC-DC Converters..... TRN: Low, Low-Med, Med, Med-High & High Power (2022-2027)	4-22
4.1.7.4	Americas Consumption of Merchant DC-DC Converters..... TRN: STD, MSD & CST (2022-2027)	4-23
4.1.7.5	Americas Consumption of Merchant DC-DC Converters..... TRN: Low, Low-Med, Med, Med-High & High Power (2022-2027)	4-23
4.1.8	Americas: DC-DC Converters Market Analysis..... MIL: Military/Aerospace Equipment	4-24
4.1.8.1	Americas Consumption of DC-DC Converters..... MIL: Merchant & Captive (2022-2027)	4-24
4.1.8.2	Americas Consumption of DC-DC Converters..... MIL: STD, MSD & CST (2022-2027)	4-24
4.1.8.3	Americas Consumption of DC-DC Converters..... MIL: Low, Low-Med, Med, Med-High & High Power (2022-2027)	4-24
4.1.8.4	Americas Consumption of Merchant DC-DC Converters..... MIL: STD, MSD & CST (2022-2027)	4-25
4.1.8.5	Americas Consumption of Merchant DC-DC Converters..... MIL: Low, Low-Med, Med, Med-High & High Power (2022-2027)	4-25

5.0	EMEA MARKET ANALYSIS..... OVERVIEW	5-1
5.0.1	EMEA Consumption of Switching Power Supplies.....	5-2
5.0.2	EMEA Consumption of Switching Power Supplies..... AC-DC Switchers & DC-DC Converters (2022-2027)	5-2
5.0.3	EMEA Consumption of Switching Power Supplies..... Merchant & Captive (2022-2027)	5-3
5.0.4	EMEA Consumption of Switching Power Supplies..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	5-3
5.0.5	EMEA Consumption of Switching Power Supplies..... STD, MSD & CST (2022-2027)	5-3
5.0.6	EMEA Consumption of Merchant Switching Power Supplies.....	5-4
5.0.7	EMEA Consumption of Merchant Switching Power Supplies..... AC-DC Switchers & DC-DC Converters (2022-2027)	5-4
5.0.8	EMEA Consumption of Merchant Switching Power Supplies..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	5-5
5.0.9	EMEA Consumption of Merchant Switching Power Supplies..... STD, MSD & CST (2022-2027)	5-5

5.1	EMEA: DC-DC Converter Market Analysis.....	5-6
5.1.1	EMEA Consumption of DC-DC Converters.....	5-6
5.1.2	EMEA Consumption of DC-DC Converters..... Merchant & Captive (2022-2027)	5-6
5.1.3	EMEA Consumption of DC-DC Converters..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	5-7
5.1.4	EMEA Consumption of DC-DC Converters..... STD, MSD & CST (2022-2027)	5-7
5.1.5	EMEA Consumption of DC-DC Converters..... Low, Low-Med, Med, Med-High & High Power (2022-2027)	5-8
5.1.6	EMEA Consumption of Merchant DC-DC Converters..... (2022-2027)	5-8
5.1.7	EMEA Consumption of Merchant DC-DC Converters..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	5-9
5.1.8	EMEA Consumption of Merchant DC-DC Converters..... STD, MSD & CST (2022-2027)	5-9
5.1.9	EMEA Consumption of Merchant DC-DC Converters..... Low, Low-Med, Med, Med-High & High Power (2022-2027)	5-10
5.1.1	EMEA: DC-DC Converter Market Analysis..... LED: Lighting	5-11
5.1.1.1	EMEA Consumption of DC-DC Converters..... LED: Merchant & Captive (2022-2027)	5-11

5.1.2	EMEA: DC-DC Converter Market Analysis..... CON: Consumer/Retail Equipment	5-12
5.1.2.1	EMEA Consumption of DC-DC Converters..... CON: Merchant & Captive (2022-2027)	5-12
5.1.2.2	EMEA Consumption of DC-DC Converters..... CON: STD, MSD & CST (2022-2027)	5-12
5.1.2.3	EMEA Consumption of DC-DC Converters..... CON: Low, Low-Med, Med, Med-High & High Power (2022-2027)	5-12
5.1.2.4	EMEA Consumption of Merchant DC-DC Converters..... CON: STD, MSD & CST (2022-2027)	5-13
5.1.2.5	EMEA Consumption of Merchant DC-DC Converters..... CON: Low, Low-Med, Med, Med-High & High Power (2022-2027)	5-13
5.1.3	EMEA: DC-DC Converter Market Analysis..... COE: Computer/Office Equipment	5-14
5.1.3.1	EMEA Consumption of DC-DC Converters..... COE: Merchant & Captive (2022-2027)	5-14
5.1.3.2	EMEA Consumption of DC-DC Converters..... COE: STD, MSD & CST (2022-2027)	5-14
5.1.3.3	EMEA Consumption of DC-DC Converters..... COE: Low, Low-Med, Med, Med-High & High Power (2022-2027)	5-14
5.1.3.4	EMEA Consumption of Merchant DC-DC Converters..... COE: STD, MSD & CST (2022-2027)	5-15
5.1.3.5	EMEA Consumption of Merchant DC-DC Converters..... COE: Low, Low-Med, Med, Med-High & High Power (2022-2027)	5-15
5.1.4	EMEA: DC-DC Converters Market Analysis..... NTE: Networking/Telecom Equipment	5-16
5.1.4.1	EMEA Consumption of DC-DC Converters..... NTE: Merchant & Captive (2022-2027)	5-16
5.1.4.2	EMEA Consumption of DC-DC Converters..... NTE: STD, MSD & CST (2022-2027)	5-16
5.1.4.3	EMEA Consumption of DC-DC Converters..... NTE: Low, Low-Med, Med, Med-High & High Power (2022-2027)	5-16
5.1.4.4	EMEA Consumption of Merchant DC-DC Converters..... NTE: STD, MSD & CST (2022-2027)	5-17
5.1.4.5	EMEA Consumption of Merchant DC-DC Converters..... NTE: Low, Low-Med, Med, Med-High & High Power (2022-2027)	5-17
5.1.5	EMEA: DC-DC Converters Market Analysis..... IND: Industrial/Instrumentation Equipment	5-18
5.1.5.1	EMEA Consumption of DC-DC Converters..... IND: Merchant & Captive (2022-2027)	5-18
5.1.5.2	EMEA Consumption of DC-DC Converters..... IND: STD, MSD & CST (2022-2027)	5-18
5.1.5.3	EMEA Consumption of DC-DC Converters..... IND: Low, Low-Med, Med, Med-High & High Power (2022-2027)	5-18
5.1.5.4	EMEA Consumption of Merchant DC-DC Converters..... IND: STD, MSD & CST (2022-2027)	5-19
5.1.5.5	EMEA Consumption of Merchant DC-DC Converters..... IND: Low, Low-Med, Med, Med-High & High Power (2022-2027)	5-19

5.1.6	EMEA: DC-DC Converters Market Analysis..... MED: Medical Equipment	5-20
5.1.6.1	EMEA Consumption of DC-DC Converters..... MED: Merchant & Captive (2022-2027)	5-20
5.1.6.2	EMEA Consumption of DC-DC Converters..... MED: STD, MSD & CST (2022-2027)	5-20
5.1.6.3	EMEA Consumption of DC-DC Converters..... MED: Low, Low-Med, Med, Med-High & High Power (2022-2027)	5-20
5.1.6.4	EMEA Consumption of Merchant DC-DC Converters..... MED: STD, MSD & CST (2022-2027)	5-21
5.1.6.5	EMEA Consumption of Merchant DC-DC Converters..... MED: Low, Low-Med, Med, Med-High & High Power (2022-2027)	5-21
5.1.7	EMEA: DC-DC Converters Market Analysis..... TRN: Transportation	5-22
5.1.7.1	EMEA Consumption of DC-DC Converters..... TRN: Merchant & Captive (2022-2027)	5-22
5.1.7.2	EMEA Consumption of DC-DC Converters..... TRN: STD, MSD & CST (2022-2027)	5-22
5.1.7.3	EMEA Consumption of DC-DC Converters..... TRN: Low, Low-Med, Med, Med-High & High Power (2022-2027)	5-22
5.1.7.4	EMEA Consumption of Merchant DC-DC Converters..... TRN: STD, MSD & CST (2022-2027)	5-23
5.1.7.5	EMEA Consumption of Merchant DC-DC Converters..... TRN: Low, Low-Med, Med, Med-High & High Power (2022-2027)	5-23
5.1.8	EMEA: DC-DC Converters Market Analysis..... MIL: Military/Aerospace Equipment	5-24
5.1.8.1	EMEA Consumption of DC-DC Converters..... MIL: Merchant & Captive (2022-2027)	5-24
5.1.8.2	EMEA Consumption of DC-DC Converters..... MIL: STD, MSD & CST (2022-2027)	5-24
5.1.8.3	EMEA Consumption of DC-DC Converters..... MIL: Low, Low-Med, Med, Med-High & High Power (2022-2027)	5-24
5.1.8.4	EMEA Consumption of Merchant DC-DC Converters..... MIL: STD, MSD & CST (2022-2027)	5-25
5.1.8.5	EMEA Consumption of Merchant DC-DC Converters..... MIL: Low, Low-Med, Med, Med-High & High Power (2022-2027)	5-25

6.0	APAC MARKET ANALYSIS..... OVERVIEW	6-1
6.0.1	APAC Consumption of Switching Power Supplies.....	6-2
6.0.2	APAC Consumption of Switching Power Supplies..... AC-DC Switchers & DC-DC Converters (2022-2027)	6-3
6.0.3	APAC Consumption of Switching Power Supplies..... Merchant & Captive (2022-2027)	6-3
6.0.4	APAC Consumption of Switching Power Supplies..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	6-3
6.0.5	APAC Consumption of Switching Power Supplies..... STD, MSD & CST (2022-2027)	6-4
6.0.6	APAC Consumption of Merchant Switching Power Supplies.....	6-4
6.0.7	APAC Consumption of Merchant Switching Power Supplies..... AC-DC Switchers & DC-DC Converters (2022-2027)	6-5
6.0.8	APAC Consumption of Merchant Switching Power Supplies..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	6-5
6.0.9	APAC Consumption of Merchant Switching Power Supplies..... STD, MSD & CST (2022-2027)	6-5
6.1	APAC: DC-DC Converter Market Analysis.....	6-6
6.1.1	APAC Consumption of DC-DC Converters.....	6-6
6.1.2	APAC Consumption of DC-DC Converters..... Merchant & Captive (2022-2027)	6-6
6.1.3	APAC Consumption of DC-DC Converters..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	6-7
6.1.4	APAC Consumption of DC-DC Converters..... STD, MSD & CST (2022-2027)	6-7
6.1.5	APAC Consumption of DC-DC Converters..... Low, Low-Med, Med, Med-High & High Power (2022-2027)	6-7
6.1.6	APAC Consumption of Merchant DC-DC Converters..... (2022-2027)	6-8
6.1.7	APAC Consumption of Merchant DC-DC Converters..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	6-8
6.1.8	APAC Consumption of Merchant DC-DC Converters..... STD, MSD & CST (2022-2027)	6-9
6.1.9	APAC Consumption of Merchant DC-DC Converters..... Low, Low-Med, Med, Med-High & High Power (2022-2027)	6-10
6.1.1	APAC: DC-DC Converter Market Analysis..... LED: Lighting	6-11
6.1.1.1	APAC Consumption of DC-DC Converters..... LED: Merchant & Captive (2022-2027)	6-11

6.1.2	APAC: DC-DC Converter Market Analysis..... CON: Consumer/Retail Equipment	6-12
6.1.2.1	APAC Consumption of DC-DC Converters..... CON: Merchant & Captive (2022-2027)	6-12
6.1.2.2	APAC Consumption of DC-DC Converters..... CON: STD, MSD & CST (2022-2027)	6-12
6.1.2.3	APAC Consumption of DC-DC Converters..... CON: Low, Low-Med, Med, Med-High & High Power (2022-2027)	6-12
6.1.2.4	APAC Consumption of Merchant DC-DC Converters..... CON: STD, MSD & CST (2022-2027)	6-13
6.1.2.5	APAC Consumption of Merchant DC-DC Converters..... CON: Low, Low-Med, Med, Med-High & High Power (2022-2027)	6-13
6.1.3	APAC: DC-DC Converter Market Analysis..... COE: Computer/Office Equipment	6-14
6.1.3.1	APAC Consumption of DC-DC Converters..... COE: Merchant & Captive (2022-2027)	6-14
6.1.3.2	APAC Consumption of DC-DC Converters..... COE: STD, MSD & CST (2022-2027)	6-14
6.1.3.3	APAC Consumption of DC-DC Converters..... COE: Low, Low-Med, Med, Med-High & High Power (2022-2027)	6-14
6.1.3.4	APAC Consumption of Merchant DC-DC Converters..... COE: STD, MSD & CST (2022-2027)	6-15
6.1.3.5	APAC Consumption of Merchant DC-DC Converters..... COE: Low, Low-Med, Med, Med-High & High Power (2022-2027)	6-15
6.1.4	APAC: DC-DC Converters Market Analysis..... NTE: Networking/Telecom Equipment	6-16
6.1.4.1	APAC Consumption of DC-DC Converters..... NTE: Merchant & Captive (2022-2027)	6-16
6.1.4.2	APAC Consumption of DC-DC Converters..... NTE: STD, MSD & CST (2022-2027)	6-16
6.1.4.3	APAC Consumption of DC-DC Converters..... NTE: Low, Low-Med, Med, Med-High & High Power (2022-2027)	6-16
6.1.4.4	APAC Consumption of Merchant DC-DC Converters..... NTE: STD, MSD & CST (2022-2027)	6-17
6.1.4.5	APAC Consumption of Merchant DC-DC Converters..... NTE: Low, Low-Med, Med, Med-High & High Power (2022-2027)	6-17
6.1.5	APAC: DC-DC Converters Market Analysis..... IND: Industrial/Instrumentation Equipment	6-18
6.1.5.1	APAC Consumption of DC-DC Converters..... IND: Merchant & Captive (2022-2027)	6-18
6.1.5.2	APAC Consumption of DC-DC Converters..... IND: STD, MSD & CST (2022-2027)	6-18
6.1.5.3	APAC Consumption of DC-DC Converters..... IND: Low, Low-Med, Med, Med-High & High Power (2022-2027)	6-18
6.1.5.4	APAC Consumption of Merchant DC-DC Converters..... IND: STD, MSD & CST (2022-2027)	6-19
6.1.5.5	APAC Consumption of Merchant DC-DC Converters..... IND: Low, Low-Med, Med, Med-High & High Power (2022-2027)	6-19

6.1.6	APAC: DC-DC Converters Market Analysis..... MED: Medical Equipment	6-20
6.1.6.1	APAC Consumption of DC-DC Converters..... MED: Merchant & Captive (2022-2027)	6-20
6.1.6.2	APAC Consumption of DC-DC Converters..... MED: STD, MSD & CST (2022-2027)	6-20
6.1.6.3	APAC Consumption of DC-DC Converters..... MED: Low, Low-Med, Med, Med-High & High Power (2022-2027)	6-20
6.1.6.4	APAC Consumption of Merchant DC-DC Converters..... MED: STD, MSD & CST (2022-2027)	6-21
6.1.6.5	APAC Consumption of Merchant DC-DC Converters..... MED: Low, Low-Med, Med, Med-High & High Power (2022-2027)	6-21
6.1.7	APAC: DC-DC Converters Market Analysis..... TRN: Transportation	6-22
6.1.7.1	APAC Consumption of DC-DC Converters..... TRN: Merchant & Captive (2022-2027)	6-22
6.1.7.2	APAC Consumption of DC-DC Converters..... TRN: STD, MSD & CST (2022-2027)	6-22
6.1.7.3	APAC Consumption of DC-DC Converters..... TRN: Low, Low-Med, Med, Med-High & High Power (2022-2027)	6-22
6.1.7.4	APAC Consumption of Merchant DC-DC Converters..... TRN: STD, MSD & CST (2022-2027)	6-23
6.1.7.5	APAC Consumption of Merchant DC-DC Converters..... TRN: Low, Low-Med, Med, Med-High & High Power (2022-2027)	6-23
6.1.8	APAC: DC-DC Converters Market Analysis..... MIL: Military/Aerospace Equipment	6-24
6.1.8.1	APAC Consumption of DC-DC Converters..... MIL: Merchant & Captive (2022-2027)	6-24
6.1.8.2	APAC Consumption of DC-DC Converters..... MIL: STD, MSD & CST (2022-2027)	6-24
6.1.8.3	APAC Consumption of DC-DC Converters..... MIL: Low, Low-Med, Med, Med-High & High Power (2022-2027)	6-24
6.1.8.4	APAC Consumption of Merchant DC-DC Converters..... MIL: STD, MSD & CST (2022-2027)	6-25
6.1.8.5	APAC Consumption of Merchant DC-DC Converters..... MIL: Low, Low-Med, Med, Med-High & High Power (2022-2027)	6-25

7.0	ROW (REST OF THE WORLD) MARKET ANALYSIS..... OVERVIEW	7-1
7.0.1	ROW Consumption of Switching Power Supplies.....	7-1
7.0.2	ROW Consumption of Switching Power Supplies..... AC-DC Switchers & DC-DC Converters (2022-2027)	7-1
7.0.3	ROW Consumption of Switching Power Supplies..... Merchant & Captive (2022-2027)	7-1
7.0.4	ROW Consumption of Switching Power Supplies..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	7-2
7.0.5	ROW Consumption of Switching Power Supplies..... STD, MSD & CST (2022-2027)	7-2
7.0.6	ROW Consumption of Merchant Switching Power Supplies.....	7-3
7.0.7	ROW Consumption of Merchant Switching Power Supplies..... AC-DC Switchers & DC-DC Converters (2022-2027)	7-3
7.0.8	ROW Consumption of Merchant Switching Power Supplies..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	7-4
7.0.9	ROW Consumption of Merchant Switching Power Supplies..... STD, MSD & CST (2022-2027)	7-4
7.1	ROW: DC-DC Converter Market Analysis.....	7-9
7.1.1	ROW Consumption of DC-DC Converters.....	7-9
7.1.2	ROW Consumption of DC-DC Converters..... Merchant & Captive (2022-2027)	7-9
7.1.3	ROW Consumption of DC-DC Converters..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	7-9
7.1.4	ROW Consumption of DC-DC Converters..... STD, MSD & CST (2022-2027)	7-10
7.1.5	ROW Consumption of DC-DC Converters..... Low, Low-Med, Med, Med-High & High Power (2022-2027)	7-10
7.1.6	ROW Consumption of Merchant DC-DC Converters..... (2022-2027)	7-11
7.1.7	ROW Consumption of Merchant DC-DC Converters..... LED, CON, COE, NTE, IND, MED, TRN & MIL (2022-2027)	7-11
7.1.8	ROW Consumption of Merchant DC-DC Converters..... STD, MSD & CST (2022-2027)	7-12
7.1.9	ROW Consumption of Merchant DC-DC Converters..... Low, Low-Med, Med, Med-High & High Power (2022-2027)	7-12
8.0	PRODUCT ANALYSIS OVERVIEW	8-1
8.1	DC-DC Converter Trends	8-12
8.1.1	Pricing Trends in DC-DC Converters..... Dollars/Watt	8-12
8.1.2	Pricing Trends in DC-DC Converters Dollars/Amp	8-12
8.1.3	DC-DC Converters: Output Voltage Trend	8-13

9.0	COMPETITIVE ANALYSIS OVERVIEW	9-1
9.0.1	Market Share Held by Top 10 Power Supply Companies	9-3
9.0.2	Global Sales of Top 10 Power Supply Companies 2022 Sales: Merchant OEM Power Supplies	9-7
9.0.3	Market Share of Top 7 Taiwan-based Power Supply Companies	9-8
9.0.4	Global Sales: Top 10 DC-DC Converter Companies 2022 Sales: Merchant DC-DC Converters	9-9
9.0.5	Global Merchant Switching Power Supply Companies 2022 Sales: AC-DC Switchers & DC-DC Converters	9-10

FOREWORD

This Global Switching Power Supply Industry 2023 Report provides a comprehensive analysis and forecast, based on these changed dynamics within the electronic equipment and the power supply industry. The forecast is based on analyzing data from hundreds of major OEMs and interviews from select companies. The future remains uncertain.

Market analysis of battery chargers for electric vehicles has been excluded from this report as MTC concluded that it is a different industry than the Global Switching Power Supply Industry as defined in the report. As a result, data compilation and aggregation between two industries became difficult. Any inconvenience due to this change is regretted.

The analysis is provided at the “Global Level” because regional-level business transactions are indeterminate. The power supply business has become global, especially for multinational power supply manufacturers (PSMs) and their OEM customers. For example, power supply manufacturers can be designing power supplies in one region, like the Americas, manufacturing them in another region like the APAC and selling them in a third region like EMEA. This dynamic business transaction has blurred the market determination between different regions. In addition, the power supply industry also consists of many small companies that manufacture and sell their products in their “native or local regions.” For them, the regional markets are more important than the global markets. So the report provides information on both types of markets for both types of companies.

Power supplies are a unique commodity with multiple user/marketing/sales parameters. So the power supply data can be organized in many different combinations of different parameters. This report has organized this data in the following manner:

- **Products: DC-DC (exclude battery chargers for EVs)**
- **Regions: Americas, EMEA, APAC & Rest of World**
- **Markets: LED, CON, COE, NTE, IND, MED, TRN & MIL**
- **Applications: CON: Cell Phones....; COE: Servers...; NTE: Routers... etc.**
- **Output Power: 0-50W...**
- **Product Types: Standard, modified-standard & custom**
- **Output Voltages: 1.2VDC; 2.5VDC; 3.3VDC; 5.0VDC; 12VDC; 24VDC; 28VDC; 48VDC...**
- **Output Current: DC-DC: 5A; 10A; 20A; 30A; 40A; 50A...**
- **Product Design/Packaging: DC-DC: Isolated; non-isolated; VRMs...**
- **Packaging: AC-DC: 3x5; 5x7; 1U; 2U...**
- **Packaging: DC-DC: HB; QB; 1/8th B; SIP...**

With all these combinations, it is impossible to provide market size and trends for all possible applications and all possible product categories. Micro-Tech Consultants (MTC) has provided data and analysis for the most commonly used and most significant categories. It has provided in-depth information about the Global Switching Power Supply Industry along with market statistics in major geographic regions:

- **Americas (AMER)**
- **Europe, Middle East & Africa (EMEA)**
- **Asia Pacific (APAC)**
- **Rest of World (ROW category is created to reconcile market numbers, not as a market segment)**

The report also includes:

- **An analysis of various markets: LEDs, consumer, information technology (IT) consisting of computers and networking and telecommunications, industrial/instrumentation, medical, transportation sector and Military/Aerospace equipment in different geographic regions**
- **An analysis of emerging trends related to new architectures: DPA—Distributed Power Architecture: using isolated DC-DC converters and IBA—Intermediate Bus Architecture—using non-isolated converters**
- **Emerging Trends In: Global changes, power architectures and related products, product models business models and strategic trends**

This report is the culmination of more than 40 years of market research in the low-voltage OEM embedded power supply industry and is organized in the following chapters:

Chapter 1.0: Executive Summary - summarizes the entire report in a concise manner. It provides an overview with specific important industry highlights, trends, and strategies.

Chapter 2.0: Global Power Supply Industry Analysis - provides an analysis of the Global Power Supply Industry, which includes OEM power supplies, telecom power systems (energy systems), uninterruptible power supplies (UPSs) and high-voltage power supplies (HVPS).

Chapter 3.0: Global OEM Power Supply Market Analysis - presents detailed information about global markets and power products, what the important and emerging markets are, and what products will be suitable for these markets—their trends and characteristics. It also includes specific product applications.

Chapter 4.0: Americas (AMER): OEM Power Supply Market Analysis - provides an analysis of DC-DC converters in the Americas market.

Chapter 5.0: EMEA: Europe, Middle East & Africa: OEM Power Supply Market Analysis - provides an analysis of DC-DC converters in the EMEA market.

Chapter 6.0: APAC: Asia/Pacific: OEM Power Supply Market Analysis - provides an analysis of DC-DC converters in the APAC market.

Chapter 7.0: Rest of World (ROW): OEM Power Supply Market Analysis - provides an analysis of the AC-DC switchers and DC-DC converters in the Rest of World (ROW) market. The sales numbers associated with this region are related to sampling error. They are not to be used for strategic planning.

Chapter 8.0: Product Analysis - provides an in-depth analysis of marketable product parameters and evolving standards in the industry.

Chapter 9.0: Competitive Analysis - analyzes major power supply companies.

Chapter 10.0: Appendix: Definitions and Explanations – provides information and explanations about various definitions used to prepare this report. It also includes an explanation of geographic regions. Organization and Methodology – provides information about report's organization and the methodology.

Chapter 11.0: Micro-Tech Consultants (MTC) - provides background information on Micro-Tech Consultants.