

Distributed Fiber Optic Sensor Market with recession Impact Analysis by Fiber Type (Single-Mode, Multimode), Scattering Process, Operating Principle (OTDR, OFDR), Application (Temperature, Acoustic, Strain), Vertical and Region - Global Forecast to 2028

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Report description:

The distributed fiber optic sensor market is projected to grow from USD 1.2 billion in 2023 to reach USD 1.9 billion by 2028; it is expected to grow at a CAGR of 9.4% during the forecast period. Distributed fiber optic sensors provide critical data in various applications and are cost-effective for monitoring physical parameter sensing at multiple points in difficult operating conditions. They enable the high accuracy of detection over long distances.

"Oil & gas vertical is expected to have largest market size in vertical during the forecast period"

The oil & gas vertical is estimated to lead the distributed fiber optic sensors market, in terms of size, during the forecast period.

Distributed sensors have applications like real-time downhole monitoring to increase operational efficiency in oil & gas.

Temperature sensing is the largest application in the oil & gas vertical, based on market size, which drives the market for the oil & gas vertical. Rising oil & gas production and transmission/distribution projects provide opportunities for sensors in upstream, midstream, & downstream processes.

"Distributed strain sensing to grow with highest CAGR during the forecast period"

Distributed fiber optic sensors can measure strain along the length of the optical fiber. Brillouin and Rayleigh are the most suitable scattering methods to measure strain. Distributed sensors, especially for the strain sensing application, are rapidly gaining prominence in the civil engineering vertical, having a major application for structural health monitoring purposes. Within the structural health monitoring application, geotechnical monitoring, dams, tunnels, roads, bridges, and historical structures are the primary areas where distributed sensing systems to measure strain are used. FBG-based sensors used for strain sensing

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application are also considered under this segment.

"OTDR is expected to have largest segment of the distributed fiber optic sensor market, by operating principle"

The OTDR-based distributed fiber optic sensors market is expected to secure the largest market share during the forecast period. Most of the companies engaged in the manufacturing of distributed fiber optic sensors produce the sensors based on the OTDR operating principle. OTDR is a robust technology and can provide accurate measurements with a high resolution. This technology has been in use since the inception of distributed fiber optic sensors.

"Asia Pacific region to grow with highest CAGR during the forecast period"

The Asia Pacific is expected to be the fastest-growing market for distributed fiber optic sensors. It includes India, China, Japan, Indonesia, and the Rest of Asia Pacific (RoAPAC). This region has become a global focal point for investments and business expansion. The Asia Pacific market shows significant growth in all sectors, including oil & gas, building & construction, and power. Technological and economic advancements in India and China are also supporting market growth. Other important factors include the growth of the oil & gas (such as greenfield projects) and power & utility verticals.

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In the process of determining and verifying the market size for several segments and subsegments gathered through secondary research, extensive primary interviews have been conducted with key officials in the distributed fiber optic sensors market.

Following is the breakup of the profiles of the primary participants for the report.

-□By Company Type: Tier 1 - 27%, Tier 2 - 35%, and Tier 3 - 38%

-□By Designation: C-level Executives - 32%, Directors - 44%, and Others - 24%

-□By Region: North America - 33%, Europe - 30%, APAC - 27%, and RoW - 10%

The report profiles key players in the global distributed fiber optic sensor market with their respective market share analysis.

Prominent players profiled in this report are Schlumberger (US), Halliburton (US), Yokogawa Electric (Japan), Weatherford International (US), Luna Innovations (US), OFS (US.), Bandweaver (UK), Omnisens (Switzerland), AP Sensing (Germany) and DarkPulse (US). The other key market players include AFL (US), Aragon Photonics (Spain), Fotech (UK), Hifi Engineering (Canada), Hawk Measurement (Australia), NKT Photonics (Denmark), Corning (US), Optromix (US), OZ Optics (Canada), Sensornet (UK), Sensuron (US), Silixa (UK), Solifos (Switzerland), VIAVI Solutions (US) and Ziebel (US).

Research Coverage:

The report defines, describes, and forecasts the distributed fiber optic sensors market based on equipment, component, service, end user industry and geography. It provides detailed information regarding factors such as drivers, restraints, opportunities, and challenges influencing the growth of the distributed fiber optic sensors market. It also analyzes competitive developments such as product launches, acquisitions, expansions, contracts, partnerships, and developments carried out by the key players to grow in the market.

Reasons to Buy This Report

The report will help leaders/new entrants in the distributed fiber optic sensors market in the following ways:

- 1.□The report segments the distributed fiber optic sensors market comprehensively and provides the closest market size estimation for all subsegments across regions.
- 2.□The report will help stakeholders understand the pulse of the market and provide them with information on key drivers, restraints, challenges, and opportunities in the distributed fiber optic sensors market.
- 3.□The report will help stakeholders understand their competitors better and gain insights to improve their position in the distributed fiber optic sensors market. The competitive landscape section describes the competitor ecosystem.
- 4.□Detailed insights on upcoming technologies, research & development activities, and new product & service launches in the distributed fiber optic sensors market
- 5.□In-depth assessment of market shares, growth strategies and product offerings of leading players like Schlumberger (US), Halliburton (US), Yokogawa Electric (Japan), Weatherford International (US), Luna Innovations (US) among others.

Table of Contents:

1□INTRODUCTION□29

Scotts International. EU Vat number: PL 6772247784

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1.1	STUDY OBJECTIVES	29
1.2	MARKET DEFINITION	29
1.2.1	INCLUSIONS AND EXCLUSIONS	30
1.3	STUDY SCOPE	31
1.3.1	MARKETS COVERED	31
1.3.2	REGIONAL SCOPE	31
1.3.3	YEARS CONSIDERED	32
1.4	CURRENCY	32
1.5	STAKEHOLDERS	32
1.6	SUMMARY OF CHANGES	33
1.7	LIMITATIONS	33
1.8	RECESSION IMPACT	34
2	RESEARCH METHODOLOGY	35
2.1	RESEARCH DATA	35
FIGURE 1	PROCESS FLOW: DISTRIBUTED FIBER OPTIC SENSORS MARKET SIZE ESTIMATION	35
FIGURE 2	DISTRIBUTED FIBER OPTIC SENSORS MARKET: RESEARCH DESIGN	36
2.1.1	SECONDARY AND PRIMARY RESEARCH	37
2.1.2	SECONDARY DATA	38
2.1.2.1	Secondary sources	38
2.1.2.2	List of key secondary sources	38
2.1.3	PRIMARY DATA	39
2.1.3.1	Primary sources	39
2.1.3.2	Key industry insights	39
2.1.3.3	Primary interviews with experts	40
2.1.3.4	List of key primary respondents	40
2.1.3.5	Breakdown of primaries	40
2.2	MARKET SIZE ESTIMATION	41
2.2.1	BOTTOM-UP APPROACH	41
2.2.1.1	Approach to derive market size using bottom-up analysis	41
FIGURE 3	DISTRIBUTED FIBER OPTIC SENSORS MARKET: BOTTOM-UP APPROACH	41
2.2.2	TOP-DOWN APPROACH	42
2.2.2.1	Approach to derive market size using top-down analysis	42
FIGURE 4	DISTRIBUTED FIBER OPTIC SENSORS MARKET: TOP-DOWN APPROACH	42
2.3	DATA TRIANGULATION	43
FIGURE 5	DATA TRIANGULATION	43
?		
2.4	RESEARCH ASSUMPTIONS	44
TABLE 1	ASSUMPTIONS FOR RESEARCH STUDY	44
2.5	RECESSION IMPACT ANALYSIS PARAMETERS	44
2.6	RISK ASSESSMENT	45
3	EXECUTIVE SUMMARY	46
3.1	RECESSION IMPACT	46
FIGURE 6	RECESSION IMPACT: GDP GROWTH PROJECTION FOR MAJOR ECONOMIES	47
FIGURE 7	RECESSION IMPACT ON DISTRIBUTED FIBER OPTIC SENSOR MARKET, 2019-2028 (USD MILLION)	47
FIGURE 8	MULTIMODE SEGMENT TO SECURE LARGEST MARKET SHARE FROM 2023 TO 2028	48
FIGURE 9	TEMPERATURE SENSING TO DOMINATE DURING FORECAST PERIOD	49
FIGURE 10	INFRASTRUCTURE VERTICAL TO RECORD HIGHEST CAGR FROM 2023 TO 2028	49

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FIGURE 11 NORTH AMERICA HELD LARGEST MARKET IN DISTRIBUTED FIBER OPTIC SENSOR MARKET IN 2022 50

4 PREMIUM INSIGHTS 51

4.1 ATTRACTIVE OPPORTUNITIES FOR PLAYERS IN DISTRIBUTED FIBER OPTIC SENSORS MARKET 51

FIGURE 12 INCREASING DEMAND FROM OIL & GAS AND INFRASTRUCTURE VERTICALS TO DRIVE MARKET 51

4.2 DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY FIBER TYPE 52

FIGURE 13 MULTIMODE SENSORS EXPECTED TO LEAD DISTRIBUTED FIBER OPTIC SENSORS MARKET THROUGH 2028 52

4.3 DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION 52

FIGURE 14 TEMPERATURE SENSING PROJECTED LEAD MARKET DURING FORECAST PERIOD 52

4.4 DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL 53

FIGURE 15 INFRASTRUCTURE VERTICAL TO RECORD MAXIMUM GROWTH RATE DURING FORECAST PERIOD 53

4.5 DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY COUNTRY 53

FIGURE 16 MARKET IN INDIA PROJECTED TO EXHIBIT HIGHEST CAGR DURING FORECAST PERIOD 53

5 MARKET OVERVIEW 54

5.1 INTRODUCTION 54

5.2 MARKET DYNAMICS 54

FIGURE 17 DISTRIBUTED FIBER OPTIC SENSORS MARKET: DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES 54

5.2.1 DRIVERS 55

5.2.1.1 Rising applications in oil & gas vertical 55

5.2.1.2 Surging demand from infrastructure vertical 55

5.2.1.3 Reliability of distributed fiber optic sensors in challenging environments 55

FIGURE 18 DISTRIBUTED FIBER OPTIC SENSORS MARKET: DRIVERS AND THEIR IMPACT 56

5.2.2 RESTRAINTS 56

5.2.2.1 Technical issues in installation 56

FIGURE 19 DISTRIBUTED FIBER OPTIC SENSORS MARKET: RESTRAINT AND ITS IMPACT 56

5.2.3 OPPORTUNITIES 57

5.2.3.1 Growing demand for data-based analysis 57

5.2.3.2 High potential in offshore industry 57

5.2.3.3 Stringent statutory regulations regarding leak detection 57

FIGURE 20 DISTRIBUTED FIBER OPTIC SENSORS MARKET: OPPORTUNITIES AND THEIR IMPACT 58

5.2.4 CHALLENGES 58

5.2.4.1 High cost of distributed fiber optic sensor systems 58

FIGURE 21 DISTRIBUTED FIBER OPTIC SENSORS MARKET: CHALLENGE AND ITS IMPACT 58

5.3 VALUE CHAIN ANALYSIS 59

FIGURE 22 VALUE CHAIN ANALYSIS OF DISTRIBUTED FIBER OPTIC SENSORS ECOSYSTEM 59

5.4 CASE STUDIES 61

5.4.1 AP SENSING UTILIZED ITS DISTRIBUTED ACOUSTIC SYSTEM FOR CABLE FAULT DETECTION 61

5.4.2 DEUTSCHE BAHN UTILIZED DISTRIBUTED ACOUSTIC SENSING UNIT TO MONITOR CABLE THEFT 61

5.4.3 PUBLIC WORKS AUTHORITY OF QATAR UTILIZED LINEAR HEAT DETECTION SYSTEMS EQUIPPED WITH DTS AND DAS FOR MONITORING PURPOSES 61

5.4.4 SCHLUMBERGER SHOWCASED WELLWATCHER BRITEBLUE HT DTS FIBER SENSOR FOR MONITORING STEAM FLOOD OPERATING TEMPERATURE IN CANADA 61

5.4.5 SCHLUMBERGER SHOWCASED HDVS DISTRIBUTED ACOUSTIC SENSING SYSTEM FOR BOREHOLE SEISMIC SURVEY IN BELGIUM 61

5.5 PRICING ANALYSIS 62

5.5.1 AVERAGE SELLING PRICE (ASP) ANALYSIS, BY APPLICATION 62

FIGURE 23 AVERAGE SELLING PRICE ANALYSIS, 2020-2026 (USD THOUSANDS) 62

5.6 TECHNOLOGY ANALYSIS 63

- 5.6.1 QUASI-DISTRIBUTED SENSING 63
- 5.6.2 DISTRIBUTED SENSING 63
- 5.6.3 INTERFEROMETRY 63
- 5.7 TECHNOLOGY TRENDS 64
- 5.7.1 MINIATURIZATION OF DISTRIBUTED FIBER OPTIC SENSING CABLES AND SENSORS 64
- 5.8 PORTER'S FIVE FORCES ANALYSIS 64
- TABLE 2 DISTRIBUTED FIBER OPTIC SENSORS MARKET: PORTER'S FIVE FORCES ANALYSIS 64
- FIGURE 24 PORTER'S FIVE FORCES ANALYSIS: DISTRIBUTED FIBER OPTIC SENSORS MARKET 65
- 5.8.1 INTENSITY OF COMPETITIVE RIVALRY 65
- 5.8.2 THREAT OF NEW ENTRANTS 65
- 5.8.3 THREAT OF SUBSTITUTES 66
- 5.8.4 BARGAINING POWER OF SUPPLIERS 66
- 5.8.5 BARGAINING POWER OF BUYERS 66
- 5.9 ECOSYSTEM MAP 67
- FIGURE 25 DISTRIBUTED FIBER OPTIC SENSORS MARKET: ECOSYSTEM 67
- FIGURE 26 DISTRIBUTED FIBER OPTIC SENSORS MARKET: PLAYER ECOSYSTEM 67
- 5.9.1 MATERIAL AND COMPONENT PROVIDERS 68
- 5.9.2 SENSOR MANUFACTURERS 68
- 5.9.3 END USERS 68
- 5.10 DISTRIBUTED FIBER OPTIC SENSORS MARKET: SUPPLY CHAIN ANALYSIS 68
- 5.11 PATENT ANALYSIS 69
- FIGURE 27 NUMBER OF PATENTS RELATED TO DISTRIBUTED FIBER OPTIC SENSORS GRANTED DURING 2012-2022 69
- TABLE 3 TOP 20 PATENT OWNERS IN US, 2012-2022 70
- FIGURE 28 TOP 10 COMPANIES WITH HIGHEST NUMBER OF PATENT APPLICATIONS, 2012-2022 71
- 5.11.1 LIST OF MAJOR PATENTS 71
- 5.12 TRADE DATA 76
- 5.12.1 IMPORT DATA 76
- FIGURE 29 IMPORT DATA FOR HS CODE 9001, BY COUNTRY, 2018-2021 (USD THOUSANDS) 76
- TABLE 4 IMPORT DATA FOR HS CODE 9001, BY COUNTRY, 2018-2021 (USD THOUSAND) 77
- 5.12.2 EXPORT DATA 77
- FIGURE 30 EXPORT DATA FOR HS CODE 9001, BY COUNTRY, 2018-2021 (USD THOUSANDS) 77
- TABLE 5 EXPORT DATA FOR HS CODE 9001, BY COUNTRY, 2018-2021 (USD THOUSANDS) 78
- 5.12.3 TARIFF ANALYSIS 78
- TABLE 6 CHINA: TARIFF FOR OPTICAL FIBRE, BUNDLE, AND CABLE EXPORTED, 2021 (USD) 79
- TABLE 7 JAPAN: TARIFF FOR OPTICAL FIBRE, BUNDLE, AND CABLE EXPORTED, 2021 (USD) 79
- TABLE 8 UK: TARIFF FOR OPTICAL FIBRE, BUNDLE, AND CABLE EXPORTED, 2021 (USD) 79
- 5.13 GOVERNMENT STANDARDS RELATED TO FIBER OPTIC SENSORS 80
- 5.13.1 STANDARDS 80
- 5.13.2 US 80
- 5.13.2.1 ASTM F3079-14 80
- 5.13.2.2 ASTM E1653-94 80
- 5.13.2.3 ISA TR12.21.01 80
- 5.13.3 CANADA 80
- 5.13.3.1 CSA C22.2 NO 232 80
- 5.13.4 EUROPE 80
- 5.13.4.1 IEC 61757-1:2012 80
- 5.13.4.2 IEC 61757-1-1:2016 81

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5.13.4.3 IEC 61757-3-1: (IEC 86C/1267/CD:2014) (Germany) 81

5.13.4.4 IEC 60794-3-70 81

5.13.4.5 UL 61010-1 81

5.14 TRENDS/DISRUPTIONS IMPACTING CUSTOMERS' BUSINESSES (YC-YCC SHIFT) 82

FIGURE 31 TRENDS/DISRUPTIONS IMPACTING CUSTOMERS' BUSINESSES 82

5.15 KEY STAKEHOLDERS AND BUYING CRITERIA 82

5.15.1 KEY STAKEHOLDERS IN BUYING PROCESS 82

FIGURE 32 INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS FOR TOP THREE VERTICAL 82

TABLE 9 INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS FOR TOP THREE END-USER INDUSTRIES 83

5.15.2 BUYING CRITERIA 83

FIGURE 33 KEY BUYING CRITERIA OF TOP THREE VERTICAL 83

TABLE 10 KEY BUYING CRITERIA OF TOP THREE VERTICAL 83

5.16 KEY CONFERENCES AND EVENTS 84

TABLE 11 DISTRIBUTED FIBER OPTIC SENSORS MARKET: DETAILED LIST OF CONFERENCES AND EVENTS, 2023-2024 84

6 DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY FIBER TYPE 85

6.1 INTRODUCTION 86

FIGURE 34 MULTIMODE SENSORS TO HOLD LARGER SHARE OF MARKET BETWEEN 2023 AND 2028 86

TABLE 12 DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY FIBER TYPE, 2019-2022 (USD MILLION) 86

TABLE 13 DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY FIBER TYPE, 2023-2028 (USD MILLION) 86

6.2 MULTIMODE FIBERS 87

6.2.1 DEMAND FOR HIGHER ACCURACY AND PRECISION 87

FIGURE 35 ASIA PACIFIC TO SHOW HIGHEST GROWTH IN MULTIMODE SENSORS MARKET 87

TABLE 14 MULTIMODE: DISTRIBUTED FIBER OPTIC SENSORS MARKET , BY REGION, 2019-2022 (USD MILLION) 88

TABLE 15 MULTIMODE: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2023-2028 (USD MILLION) 88

6.3 SINGLE-MODE FIBERS 88

6.3.1 RISING NEED FOR LONG-DISTANCE MONITORING 88

TABLE 16 SINGLE-MODE: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2019-2022 (USD MILLION) 89

TABLE 17 SINGLE-MODE: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2023-2028 (USD MILLION) 89

7 DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY OPERATING PRINCIPLE 90

7.1 INTRODUCTION 91

FIGURE 36 OTDR-BASED SENSORS TO ACCOUNT FOR LARGER MARKET SHARE DURING FORECAST PERIOD 91

TABLE 18 DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY OPERATING PRINCIPLE, 2019-2022 (USD MILLION) 91

TABLE 19 DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY OPERATING PRINCIPLE, 2023-2028 (USD MILLION) 92

7.2 OPTICAL TIME DOMAIN REFLECTOMETRY 92

7.2.1 ACCURACY AND ROBUSTNESS IN MEASUREMENT OF TEMPERATURE, STRAIN, AND ACOUSTICS 92

TABLE 20 OTDR: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2019-2022 (USD MILLION) 93

TABLE 21 OTDR: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2023-2028 (USD MILLION) 93

7.3 OPTICAL FREQUENCY DOMAIN REFLECTOMETRY 93

7.3.1 INCREASED ADOPTION OWING TO GROWING DEMAND FOR LOW-COST TECHNOLOGY 93

TABLE 22 OFDR: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2019-2022 (USD MILLION) 94

TABLE 23 OFDR: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2023-2028 (USD MILLION) 94

8 DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY SCATTERING TYPE 95

8.1 INTRODUCTION 96

FIGURE 37 RAYLEIGH SCATTERING EFFECT AND BRAGG GRATING METHOD TO RECORD HIGHEST CAGR DURING FORECAST PERIOD 96

TABLE 24 DISTRIBUTED FIBER OPTIC SENSOR MARKET, BY SCATTERING METHOD, 2019-2022 (USD MILLION) 96

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TABLE 25 □ DISTRIBUTED FIBER OPTIC SENSOR MARKET, BY SCATTERING METHOD, 2023-2028 (USD MILLION) □ 97

8.2 □ RAYLEIGH SCATTERING EFFECT □ 98

8.2.1 □ CAPABILITY TO MEASURE ALL TYPES OF PHYSICAL PARAMETERS □ 98

8.3 □ RAMAN SCATTERING EFFECT □ 98

8.3.1 □ RISING DEMAND FOR TEMPERATURE SENSING IN OIL & GAS VERTICAL □ 98

8.4 □ BRILLOUIN SCATTERING EFFECT □ 98

8.4.1 □ STRUCTURAL HEALTH MONITORING TO BOOST ADOPTION OF BRILLOUIN SCATTERING EFFECT □ 98

8.5 □ FIBER BRAGG GRATING □ 98

8.5.1 □ PRIMARILY USED IN INFRASTRUCTURE, INDUSTRIAL, AND OIL & GAS VERTICALS □ 98

?

9 □ DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION □ 99

9.1 □ INTRODUCTION □ 100

FIGURE 38 □ TEMPERATURE SENSING APPLICATION EXPECTED TO HOLD LARGEST MARKET SIZE DURING FORECAST PERIOD □ 100

TABLE 26 □ DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2019-2022 (USD MILLION) □ 100

TABLE 27 □ DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2023-2028 (USD MILLION) □ 101

TABLE 28 □ DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2020-2022 (THOUSAND UNITS) □ 102

TABLE 29 □ DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2023-2028 (THOUSAND UNITS) □ 102

9.2 □ TEMPERATURE SENSING □ 102

9.2.1 □ PRIMARILY USED IN OIL & GAS VERTICAL □ 102

FIGURE 39 □ OIL & GAS VERTICAL EXPECTED TO BE LARGEST MARKET DURING FORECAST PERIOD □ 103

TABLE 30 □ TEMPERATURE SENSING: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL, 2019-2022 (USD MILLION) □ 103

TABLE 31 □ TEMPERATURE SENSING: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL, 2023-2028 (USD MILLION) □ 104

FIGURE 40 □ ASIA PACIFIC EXPECTED TO RECORD HIGHEST CAGR DURING FORECAST PERIOD □ 104

TABLE 32 □ TEMPERATURE SENSING: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2019-2022 (USD MILLION) □ 104

TABLE 33 □ TEMPERATURE SENSING: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2023-2028 (USD MILLION) □ 105

9.3 □ ACOUSTIC SENSING □ 105

9.3.1 □ HIGH DEMAND FOR MONITORING AND SURVEILLANCE OF PIPELINE SYSTEMS □ 105

TABLE 34 □ ACOUSTIC SENSING: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL, 2019-2022 (USD MILLION) □ 106

TABLE 35 □ ACOUSTIC SENSING: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL, 2023-2028 (USD MILLION) □ 106

TABLE 36 □ ACOUSTIC SENSING: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2019-2022 (USD MILLION) □ 106

TABLE 37 □ ACOUSTIC SENSING: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2023-2028 (USD MILLION) □ 107

9.4 □ STRAIN SENSING □ 107

9.4.1 □ RISING INFRASTRUCTURAL DEVELOPMENT IN VARIOUS REGIONS □ 107

TABLE 38 □ STRAIN SENSING: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL, 2019-2022 (USD MILLION) □ 107

TABLE 39 □ STRAIN SENSING: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL, 2023-2028 (USD MILLION) □ 108

TABLE 40 □ STRAIN SENSING: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2019-2022 (USD MILLION) □ 108

TABLE 41 □ STRAIN SENSING: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2023-2028 (USD MILLION) □ 109

?

10 □ DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL □ 110

10.1 □ INTRODUCTION □ 111

FIGURE 41 □ DISTRIBUTED FIBER OPTIC SENSORS MARKET FOR OIL & GAS VERTICAL TO HOLD LARGEST SHARE TILL 2028 □ 111

TABLE 42 □ DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL, 2019-2022 (USD MILLION) □ 111

TABLE 43 □ DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL, 2023-2028 (USD MILLION) □ 112

10.2 □ OIL & GAS □ 112

10.2.1 □ GROWING DEMAND FOR LEAK DETECTION, DOWNHOLE MONITORING, AND REAL-TIME MEASUREMENT APPLICATIONS □ 112

TABLE 44 □ OIL & GAS: DISTRIBUTED FIBER OPTIC SENSORS MARKET FOR, BY APPLICATION, 2019-2022 (USD MILLION) □ 113

TABLE 45 □ OIL & GAS: DISTRIBUTED FIBER OPTIC SENSORS MARKET FOR, BY APPLICATION, 2023-2028 (USD MILLION) □ 113

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FIGURE 42 ASIA PACIFIC OIL & GAS VERTICAL TO GROW AT HIGHEST CAGR THROUGH 2028 113

TABLE 46 OIL & GAS: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2019-2022 (USD MILLION) 114

TABLE 47 OIL & GAS: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2023-2028 (USD MILLION) 114

10.3 POWER & UTILITY 115

10.3.1 RISING NEED FOR POWER CABLE MONITORING 115

TABLE 48 POWER & UTILITY: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2019-2022 (USD MILLION) 115

TABLE 49 POWER & UTILITY: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2023-2028 (USD MILLION) 115

TABLE 50 POWER & UTILITY: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2019-2022 (USD MILLION) 116

TABLE 51 POWER & UTILITY: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2023-2028 (USD MILLION) 116

10.4 SAFETY & SECURITY 116

10.4.1 RISING NEED TO PROTECT CRITICAL INFRASTRUCTURE AND BORDERS 116

TABLE 52 SAFETY & SECURITY: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2019-2022 (USD MILLION) 117

TABLE 53 SAFETY & SECURITY: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2023-2028 (USD MILLION) 117

FIGURE 43 ASIA PACIFIC TO HOLD LARGEST SHARE OF DISTRIBUTED FIBER OPTIC SENSORS MARKET FOR SAFETY & SECURITY 117

TABLE 54 SAFETY & SECURITY: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2019-2022 (USD MILLION) 118

TABLE 55 SAFETY & SECURITY: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2023-2028 (USD MILLION) 118

10.5 INDUSTRIAL 118

10.5.1 RISING PROMINENCE OF INDUSTRIAL PROCESS MONITORING 118

TABLE 56 INDUSTRIAL: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2019-2022 (USD MILLION) 119

TABLE 57 INDUSTRIAL: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2023-2028 (USD MILLION) 119

TABLE 58 INDUSTRIAL: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2019-2022 (USD MILLION) 119

TABLE 59 INDUSTRIAL: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2023-2028 (USD MILLION) 120

10.6 INFRASTRUCTURE 120

10.6.1 INCREASING STRUCTURAL HEALTH MONITORING-BASED APPLICATIONS 120

TABLE 60 INFRASTRUCTURE: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2019-2022 (USD MILLION) 120

TABLE 61 INFRASTRUCTURE: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2023-2028 (USD MILLION) 121

FIGURE 44 ASIA PACIFIC TO DOMINATE DISTRIBUTED FIBER OPTIC SENSORS MARKET FOR INFRASTRUCTURE VERTICAL TILL 2028 121

TABLE 62 INFRASTRUCTURE: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2019-2022 (USD MILLION) 121

TABLE 63 INFRASTRUCTURE: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2023-2028 (USD MILLION) 122

10.7 TELECOMMUNICATION 122

10.7.1 INCREASING DEMAND FOR RELIABLE AND SECURE COMMUNICATION NETWORKS 122

TABLE 64 TELECOMMUNICATION: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2019-2022 (USD MILLION) 122

TABLE 65 TELECOMMUNICATION: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2023-2028 (USD MILLION) 123

TABLE 66 TELECOMMUNICATION: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2019-2022 (USD MILLION) 123

TABLE 67 TELECOMMUNICATION: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2023-2028 (USD MILLION) 123

11 DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION 124

11.1 INTRODUCTION 125

FIGURE 45 GEOGRAPHIC SNAPSHOT: DISTRIBUTED FIBER OPTIC SENSORS MARKET, 2023-2028 125

FIGURE 46 NORTH AMERICA TO DOMINATE DISTRIBUTED FIBER OPTIC SENSORS MARKET OVER FORECAST PERIOD 126

TABLE 68 DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2019-2022 (USD MILLION) 126

TABLE 69 DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2023-2028 (USD MILLION) 126

11.2 NORTH AMERICA 128

FIGURE 47 NORTH AMERICA: DISTRIBUTED FIBER OPTIC SENSORS MARKET SNAPSHOT 128

TABLE 70 NORTH AMERICA: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY COUNTRY, 2019-2022 (USD MILLION) 128

TABLE 71 NORTH AMERICA: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY COUNTRY, 2023-2028 (USD MILLION) 129

TABLE 72 NORTH AMERICA: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY FIBER TYPE, 2019-2022 (USD MILLION) 129

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TABLE 73 NORTH AMERICA: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY FIBER TYPE, 2023-2028 (USD MILLION) 129

TABLE 74 NORTH AMERICA: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2019-2022 (USD MILLION) 129

TABLE 75 NORTH AMERICA: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2023-2028 (USD MILLION) 130

TABLE 76 NORTH AMERICA: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL, 2019-2022 (USD MILLION) 130

TABLE 77 NORTH AMERICA: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL, 2023-2028 (USD MILLION) 130

TABLE 78 NORTH AMERICA: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY OPERATING PRINCIPLE, 2019-2022 (USD MILLION) 131

TABLE 79 NORTH AMERICA: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY OPERATING PRINCIPLE, 2023-2028 (USD MILLION) 131

11.2.1 US 131

11.2.1.1 Rising investments in pipelines, industrial automation, and innovation 131

11.2.2 CANADA 132

11.2.2.1 Increasing adoption of safety measures and standards 132

11.2.3 MEXICO 132

11.2.3.1 Ongoing developments in oil & gas and safety & security verticals 132

11.3 MIDDLE EAST 133

FIGURE 48 SAUDI ARABIA TO HOLD LARGEST SHARE OF MARKET IN MIDDLE EAST 133

TABLE 80 MIDDLE EAST: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY COUNTRY, 2019-2022 (USD MILLION) 133

TABLE 81 MIDDLE EAST: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY COUNTRY, 2023-2028 (USD MILLION) 134

TABLE 82 MIDDLE EAST: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY FIBER TYPE, 2019-2022 (USD MILLION) 134

TABLE 83 MIDDLE EAST: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY FIBER TYPE, 2023-2028 (USD MILLION) 134

TABLE 84 MIDDLE EAST: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2019-2022 (USD MILLION) 135

TABLE 85 MIDDLE EAST: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2023-2028 (USD MILLION) 135

TABLE 86 MIDDLE EAST: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL, 2019-2022 (USD MILLION) 135

TABLE 87 MIDDLE EAST: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL, 2023-2028 (USD MILLION) 136

TABLE 88 MIDDLE EAST: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY OPERATING PRINCIPLE, 2019-2022 (USD MILLION) 136

TABLE 89 MIDDLE EAST: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY OPERATING PRINCIPLE, 2023-2028 (USD MILLION) 136

11.3.1 SAUDI ARABIA 137

11.3.1.1 Rising oil & gas production projects 137

11.3.2 IRAQ 137

11.3.2.1 Upcoming oil & gas-related projects 137

11.3.3 IRAN 137

11.3.3.1 Government focus on supporting oil & gas sector growth 137

11.3.4 REST OF MIDDLE EAST 137

11.4 EUROPE 138

FIGURE 49 EUROPE: DISTRIBUTED FIBER OPTIC SENSORS MARKET SNAPSHOT 138

TABLE 90 EUROPE: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY COUNTRY/REGION, 2019-2022 (USD MILLION) 139

TABLE 91 EUROPE: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY COUNTRY/REGION, 2023-2028 (USD MILLION) 139

TABLE 92 EUROPE: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY FIBER TYPE, 2019-2022 (USD MILLION) 139

TABLE 93 EUROPE: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY FIBER TYPE, 2023-2028 (USD MILLION) 140

TABLE 94 EUROPE: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2019-2022 (USD MILLION) 140

TABLE 95 EUROPE: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2023-2028 (USD MILLION) 140

TABLE 96 EUROPE: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL, 2019-2022 (USD MILLION) 141

TABLE 97 EUROPE: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL, 2023-2028 (USD MILLION) 141

TABLE 98 EUROPE: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY OPERATING PRINCIPLE, 2019-2022 (USD MILLION) 141

TABLE 99 EUROPE: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY OPERATING PRINCIPLE, 2023-2028 (USD MILLION) 142

11.4.1 RUSSIA 142

11.4.1.1 Russia to dominate European sensors market 142

11.4.2 SCANDINAVIA 142

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11.4.2.1	Increasing penetration of renewable energy in Scandinavian countries	142
11.4.3	GERMANY	142
11.4.3.1	Rising infrastructural development	142
11.4.4	UK	143
11.4.4.1	Vast network of power transmission and significant focus on oil & gas	143
11.4.5	REST OF EUROPE	143
11.5	ASIA PACIFIC	144
FIGURE 50	ASIA PACIFIC: DISTRIBUTED FIBER OPTIC SENSORS MARKET SNAPSHOT	144
TABLE 100	ASIA PACIFIC: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY COUNTRY, 2019-2022 (USD MILLION)	145
TABLE 101	ASIA PACIFIC: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY COUNTRY, 2023-2028 (USD MILLION)	145
TABLE 102	ASIA PACIFIC: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY FIBER TYPE, 2019-2022 (USD MILLION)	145
TABLE 103	ASIA PACIFIC: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY FIBER TYPE, 2023-2028 (USD MILLION)	146
TABLE 104	ASIA PACIFIC: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2019-2022 (USD MILLION)	146
TABLE 105	ASIA PACIFIC: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2023-2028 (USD MILLION)	146
TABLE 106	ASIA PACIFIC: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL, 2019-2022 (USD MILLION)	147
TABLE 107	ASIA PACIFIC: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL, 2023-2028 (USD MILLION)	147
TABLE 108	ASIA PACIFIC: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY OPERATING PRINCIPLE, 2019-2022 (USD MILLION)	147
TABLE 109	ASIA PACIFIC: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY OPERATING PRINCIPLE, 2023-2028 (USD MILLION)	148
11.5.1	CHINA	148
11.5.1.1	China to command largest share of Asia Pacific market	148
11.5.2	INDIA	148
11.5.2.1	Government support for oil & gas and infrastructure sectors	148
11.5.3	INDONESIA	149
11.5.3.1	Ongoing oil & gas exploration activities	149
11.5.4	JAPAN	149
11.5.4.1	Increasing demand from energy sector	149
11.5.5	REST OF ASIA PACIFIC	149
11.6	REST OF THE WORLD	150
TABLE 110	ROW: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2019-2022 (USD MILLION)	150
TABLE 111	ROW: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY REGION, 2023-2028 (USD MILLION)	150
TABLE 112	SOUTH AMERICA AND CENTRAL AMERICA: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY COUNTRY, 2019-2022 (USD MILLION)	150
TABLE 113	SOUTH AMERICA AND CENTRAL AMERICA: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY COUNTRY, 2023-2028 (USD MILLION)	151
TABLE 114	ROW: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY FIBER TYPE, 2019-2022 (USD MILLION)	151
TABLE 115	ROW: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY FIBER TYPE, 2023-2028 (USD MILLION)	151
TABLE 116	ROW: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2019-2022 (USD MILLION)	152
TABLE 117	ROW: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY APPLICATION, 2023-2028 (USD MILLION)	152
TABLE 118	ROW: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL, 2019-2022 (USD MILLION)	152
TABLE 119	ROW: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY VERTICAL, 2023-2028 (USD MILLION)	153
TABLE 120	ROW: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY OPERATING PRINCIPLE, 2019-2022 (USD MILLION)	153
TABLE 121	ROW: DISTRIBUTED FIBER OPTIC SENSORS MARKET, BY OPERATING PRINCIPLE, 2023-2028 (USD MILLION)	153
11.6.1	AFRICA	154
11.6.1.1	Government initiatives to enhance industrial sector	154
11.6.2	SOUTH AMERICA AND CENTRAL AMERICA	154
11.6.2.1	Brazil	154
11.6.2.1.1	High government expenditure on infrastructure	154

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11.6.2.2	Argentina	154
11.6.2.2.1	Growing industrial and safety & security verticals	154
11.6.2.3	Venezuela	155
11.6.2.3.1	Need to ensure safe production and transportation of petrochemical products	155
11.6.2.4	Rest of South and Central America	155
12	COMPETITIVE LANDSCAPE	156
12.1	OVERVIEW	156
12.2	KEY PLAYER STRATEGIES	156
TABLE 122	OVERVIEW OF STRATEGIES DEPLOYED BY KEY DISTRIBUTED FIBER OPTIC SENSORS MANUFACTURERS	156
12.3	MARKET SHARE ANALYSIS	157
FIGURE 51	DISTRIBUTED FIBER OPTIC SENSORS MARKET SHARE ANALYSIS, 2022	157
TABLE 123	DEGREE OF COMPETITION, 2022	157
TABLE 124	DISTRIBUTED FIBER OPTIC SENSORS MARKET: RANKING ANALYSIS	158
12.4	FIVE-YEAR COMPANY REVENUE ANALYSIS	158
FIGURE 52	FIVE-YEAR REVENUE ANALYSIS OF TOP FIVE PLAYERS (USD MILLION)	158
12.5	COMPANY EVALUATION QUADRANT	159
12.5.1	STARS	159
12.5.2	EMERGING LEADERS	159
12.5.3	PERVASIVE PLAYERS	159
12.5.4	PARTICIPANTS	160
FIGURE 53	DISTRIBUTED FIBER OPTIC SENSORS MARKET: COMPANY EVALUATION QUADRANT, 2022	160
12.5.5	COMPETITIVE BENCHMARKING	161
TABLE 125	OVERALL COMPANY FOOTPRINT	161
TABLE 126	COMPANY APPLICATION FOOTPRINT	162
TABLE 127	COMPANY VERTICAL FOOTPRINT	163
TABLE 128	COMPANY REGION FOOTPRINT	164
TABLE 129	DISTRIBUTED FIBER OPTIC SENSORS MARKET: LIST OF KEY STARTUPS/SMES	165
12.6	STARTUP/SME EVALUATION QUADRANT	166
12.6.1	PROGRESSIVE COMPANIES	166
12.6.2	RESPONSIVE COMPANIES	166
12.6.3	DYNAMIC COMPANIES	166
12.6.4	STARTING BLOCKS	166
FIGURE 54	DISTRIBUTED FIBER OPTIC SENSORS MARKET: STARTUP/SME EVALUATION MATRIX, 2022	167
12.7	COMPETITIVE SCENARIO AND TRENDS	168
12.7.1	PRODUCT LAUNCHES	168
TABLE 130	DISTRIBUTED FIBER OPTIC SENSORS MARKET: PRODUCT LAUNCHES, JANUARY 2019-MARCH 2023	168
12.7.2	DEALS	169
TABLE 131	DISTRIBUTED FIBER OPTIC SENSORS MARKET: DEALS, JANUARY 2019-MARCH 2023	169
13	COMPANY PROFILES	171
(Business Overview, Products Offered, Recent Developments, and MnM View (Key strengths/Right to Win, Strategic Choices Made, and Weaknesses and Competitive Threats))*		
13.1	KEY COMPANIES	171
13.1.1	SCHLUMBERGER	171
TABLE 132	SCHLUMBERGER : BUSINESS OVERVIEW	171

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FIGURE 55	SCHLUMBERGER: COMPANY SNAPSHOT	172
TABLE 133	SCHLUMBERGER: PRODUCTS OFFERED	172
TABLE 134	SCHLUMBERGER : PRODUCT LAUNCHES	173
TABLE 135	SCHLUMBERGER: DEALS	174
TABLE 136	SCHLUMBERGER: OTHERS	176
13.1.2	HALLIBURTON	178
TABLE 137	HALLIBURTON: BUSINESS OVERVIEW	178
FIGURE 56	HALLIBURTON: COMPANY SNAPSHOT	179
TABLE 138	HALLIBURTON: PRODUCTS OFFERED	179
TABLE 139	HALLIBURTON: PRODUCT LAUNCHES	180
TABLE 140	HALLIBURTON: DEALS	181
TABLE 141	HALLIBURTON: OTHERS	181
13.1.3	YOKOGAWA ELECTRIC	183
TABLE 142	YOKOGAWA ELECTRIC: BUSINESS OVERVIEW	183
FIGURE 57	YOKOGAWA ELECTRIC: COMPANY SNAPSHOT	184
TABLE 143	YOKOGAWA ELECTRIC: PRODUCTS OFFERED	184
TABLE 144	YOKOGAWA ELECTRIC: PRODUCT LAUNCHES	185
TABLE 145	YOKOGAWA ELECTRIC: DEALS	187
TABLE 146	YOKOGAWA ELECTRIC: OTHERS	188
13.1.4	WEATHERFORD INTERNATIONAL	189
TABLE 147	WEATHERFORD INTERNATIONAL: BUSINESS OVERVIEW	189
FIGURE 58	WEATHERFORD INTERNATIONAL: COMPANY SNAPSHOT	190
TABLE 148	WEATHERFORD INTERNATIONAL: PRODUCTS OFFERED	190
TABLE 149	WEATHERFORD INTERNATIONAL: PRODUCT LAUNCHES	191
TABLE 150	WEATHERFORD INTERNATIONAL: DEALS	191
13.1.5	LUNA INNOVATIONS	193
TABLE 151	LUNA INNOVATIONS: BUSINESS OVERVIEW	193
FIGURE 59	LUNA INNOVATIONS: COMPANY SNAPSHOT	194
TABLE 152	LUNA INNOVATIONS: PRODUCTS OFFERED	194
TABLE 153	LUNA INNOVATIONS: PRODUCT LAUNCHES	196
TABLE 154	LUNA INNOVATIONS: DEALS	197
TABLE 155	LUNA INNOVATIONS: OTHERS	198
?		
13.1.6	OFS	200
TABLE 156	OFS: BUSINESS OVERVIEW	200
TABLE 157	OFS: PRODUCTS OFFERED	200
TABLE 158	OFS: PRODUCT LAUNCHES	201
TABLE 159	OFS: DEALS	202
TABLE 160	OFS: OTHERS	203
13.1.7	BANDWEAVER	204
TABLE 161	BANDWEAVER: BUSINESS OVERVIEW	204
TABLE 162	BANDWEAVER: PRODUCTS OFFERED	204
TABLE 163	BANDWEAVER: DEALS	205
13.1.8	OMNISENS	207
TABLE 164	OMNISENS: BUSINESS OVERVIEW	207
TABLE 165	OMNISENS: PRODUCTS OFFERED	207
TABLE 166	OMNISENS: DEALS	209

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13.1.9 AP SENSING 210
TABLE 167 AP SENSING: BUSINESS OVERVIEW 210
TABLE 168 AP SENSING: PRODUCTS OFFERED 210
TABLE 169 AP SENSING: PRODUCT LAUNCHES 211
TABLE 170 AP SENSING: OTHERS 211

13.1.10 DARKPULSE 213
TABLE 171 DARKPULSE: BUSINESS OVERVIEW 213
TABLE 172 DARKPULSE: PRODUCTS OFFERED 213
TABLE 173 DARKPULSE: DEALS 214
TABLE 174 DARKPULSE: OTHERS 215

13.2 OTHER KEY PLAYERS 216

13.2.1 AFL 216

13.2.2 ARAGON PHOTONICS LABS 217

13.2.3 CORNING 218

13.2.4 FOTECH 219

13.2.5 HIFI ENGINEERING 220

13.2.6 HAWK MEASUREMENT 221

13.2.7 NKT PHOTONICS 222

13.2.8 OPTROMIX 223

13.2.9 OZ OPTICS 224

13.2.10 SENSORNET 225

13.2.11 SENSURON 226

13.2.12 SILIXA 227

13.2.13 SOLIFOS 227

13.2.14 VIAVI SOLUTIONS 228

13.2.15 ZIEBEL 228

*Details on Business Overview, Products Offered, Recent Developments, and MnM View (Key strengths/Right to Win, Strategic Choices Made, and Weaknesses and Competitive Threats) might not be captured in case of unlisted companies.

14 APPENDIX 229

14.1 DISCUSSION GUIDE 229

14.2 KNOWLEDGESTORE: MARKETSandMARKETS' SUBSCRIPTION PORTAL 232

14.3 CUSTOMIZATION OPTIONS 234

14.4 RELATED REPORTS 234

14.5 AUTHOR DETAILS 235

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