

REED
ELECTRONICS
RESEARCH

THE YEARBOOK OF WORLD ELECTRONICS DATA

Components
Computers
Consumer
Control and Instrumentation
Medical and Industrial
Office Equipment
Radio Communications
Telecommunications

Volume One
WEST EUROPE

2021

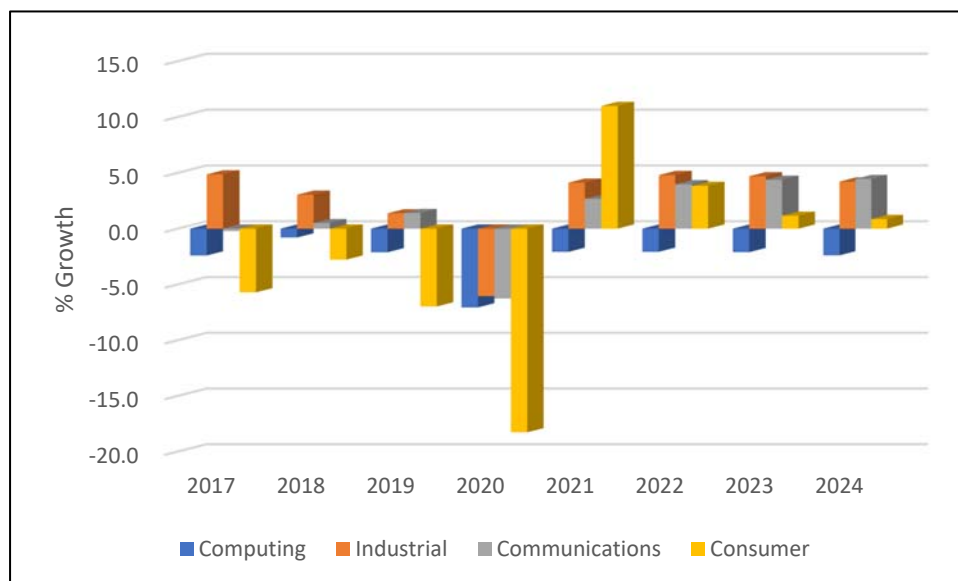
Yearbook of World Electronics Data Volume 1 2021 – An Overview of Electronics Production & Markets in Western Europe

Introduction

In providing the forecasts for the current study, which were made in May, we have assumed that the roll-out of the vaccine across Europe and globally will allow for an easing in restrictions and support a return to growth in both economic activity and the on-going the recovery in the electronics industry which began in the second half of 2020. Growth is expected to gain momentum over the course of 2021 which will continue into 2022/2023 before easing at the end of the forecast period. We believe the current shortage for certain components and materials, and in particular in the semiconductor supply chain, will weigh on demand in 2021 and potentially into the first half of 2022.

In Euro's the production of electronic equipment in Western Europe declined by 6.7% in 2020 to Euro 112.7 billion and compared to an increase of 0.7% and 1.7% in 2019 and 2018, respectively. A stronger recovery over the second half of the year resulted in a better performance than forecast in May 2020, when overall electronics equipment output was forecast to decline by 8.8%

Based on current indicators we are forecasting that growth in electronic equipment output in Western Europe will increase by 3.5% in 2021 then post growth of 4.0% in 2022 and 2023 before easing to 3.7% in 2024. The current forecast expects overall equipment production in Western Europe to surpass pre-COVID levels by the end of 2022.



Electronics Equipment Production by Country/Region 2017-2024

The industrial segment, which accounted for an estimated 60.9% of electronics equipment output in 2020, will be the main driver of growth after demand recovers from the COVID-19 led-recession. By the end of the forecast period its share of the total will account for 62.5%.

The move to re-shore production back to operations in Europe is expected to continue although it is expected that this will partly be offset as a number of larger OEMs/Electronic Manufacturing Service (EMS) utilise global operations to produce in the region of consumption. Where companies are looking to re-shore production back to Europe from Asia, companies are expected to favour lower-cost sites in CEE rather than Western Europe.

Germany accounted for 32.6% of electronics equipment output in 2020 and its overall share, despite the downturns in 2019 and 2020, is expected to edge up slightly to 32.7% over the period to 2024. France and the UK which are traditionally strong in communications will like the majority of countries also benefit from the growth in the industrial segment in the later part of the forecast.

In 2020, the production of electronic components in Western Europe amounted to Euro 38.1 billion, 25.2% of overall electronics production, output declining by an estimated 5.0% during the year. In line with the recovery in overall electronics equipment production and to help offset the current shortage in certain components output is forecast to increase by 6.2% in 2021 and by a further 5.7% in 2022.

The move to utilise foundries, which are predominantly in Asia, has negatively impacted the growth in IC output, especially for those produced using the latest process technologies. In response to the current shortage of semiconductors a number of companies have announced additional investments in their European operations. The announcement by the EU that it would be investing to ensure that Europe remains a centre for semiconductor production will also potentially benefit the region though actual timing is still unclear.

At Euro 217.7 billion in 2020 the West European market for electronic equipment and components was 3.1% lower than the Euro 224.6 billion reported in the prior year but is forecast to rebound to reach Euro 225.3 billion in 2021 as the impact of COVID-19 fades over the course of the first half of the year.

The computer segment accounted for 30.9% of the West European market in 2020 and through the surge in demand for PCs and tablets for home working, learning and gaming increased by 2.7%. The growth in PCs and tablets remained strong in the first quarter of 2021 but is expected to ease over the course of the year and then decline by around 2% annually over the later part of the forecast. Enterprise related spending is forecast to rebound in over the course of 2021/2022 and help offset the expected fall in PC sales.

The smartphone market declined in value terms by around 3% in 2020 but will rebound in 2021 and will be boosted by the introduction of 5G phones which should support growth over the forecast period. The growth in wearable devices, although expected to ease as the market matures, will also support growth in the period to 2024.

Demand in the industrial segment will continue to be strongly influenced by developments in the European and global economy. As a result of the pandemic the market for control and instrumentation declined by an estimated 8.4% but is forecast to rebound by 4.0% in 2021 and over the period to 2024 will benefit from digitalization and the growth in smart manufacturing. In contrast, medical increased by 3.5% in 2020, led by equipment used in the treatment of the pandemic which was partly offset by lower spending on non-essential equipment and is forecast to increase by 4.1% in 2021.

The electronic component market posted a decline of 0.7% in 2019 as end-demand slowed, in particular in the later part of the year and by a further 6.2% in 2020 as a result of the pandemic, in particular from customers in the automotive, commercial aviation and industrial markets. Growth of 6.3% is forecast for 2021 and a further 5.7% in 2022 as electronics equipment production rebounds.

As with production, Germany is the largest country accounting for an estimated 25.8% of the market in 2020. As a key trading partner for many European countries, Germany will play a major part in the development of the electronics market in Western Europe both in the short and medium-term.

The global shortage of components could limit the supply of end products during 2021 with orders potentially being pushed into 2022.

The Yearbook of World Electronics Data – tracking developments in the global electronics industry

With a history spanning nearly 50 years the Yearbook of World Electronics Data has provided an invaluable insight into the global trends, regional variations and the underlying state of the global electronics market for all stages of the supply chain - OEM, contract manufacturing and design, components and materials suppliers to financial /industry analysts and government and academia.

Although encompassing a range of published and bespoke products the core of RER's research programme is one of the most comprehensive statistical databases covering the global electronics industry, with the resulting analysis being published through four concise and clear demographic volumes, as a series of individual country reports, through customised solutions to meet specific client requirements and, from 2012, as a series of Excel databases providing the combination of both historical and forecasted data.

Yearbook of World Electronics Data - Volume 1 West Europe

Published since 1973 the Volume 1 of the Yearbook of World Electronics Data provides:

- A single source solution allowing you to track the electronics industry in 16 countries in Western Europe.
- 13 major product groups.
- Market and production forecasts.
- Summaries provided in US dollars and Euros.
- CD-option allows you to manipulate the data quickly and easily: produce your own subsets or summaries of the data, create your own forecasts or cut and paste the data into your own in-house reports and presentations.

Who will benefit ?

The Yearbook is essential research providing key data for all areas of the electronics industry including:

- Distributors and manufacturers of electronic components and materials.
- Suppliers of electronic production equipment.
- OEMs.
- EMS Providers.
- Government, including investment organizations.
- Financial and industry analysts.
- Academic institutes & universities tracking developments in the electronics industry.

The Yearbook of World Electronics Data

The Yearbook of World Electronics Data series presents market and production statistics for the GLOBAL electronics industry. Available in four published volumes covering 53 countries and 13 major product groups, the yearbook is used in the formulation of business and market planning, in tracking trends based on a clear understanding on how the industry has developed historically and to provide a basis for medium and long-term forecasting.

53 country coverage, 13 major product groups

... comparable **country by country** and **product by product**.

Methodology

The Yearbooks highlight market trends and opportunities and offer corroborative evidence for individual research. Each new edition is fully revised and updated. Trade statistics are analyzed in detail, with over 500 separate categories being employed. Production statistics are collected from Government and Manufacturer's Association

sources where these are available. Extensive use is also made of research reports, company reports, news items and work by other consultants to supplement and cross check the official and semi-official sources.

Markets are forecast in real terms for the next five years, with production forecast for the next two years, using constant exchange rates and excluding inflation. These are based on our extensive knowledge of the historical performance of each product, the general economic outlook and the major growth influencing factors.

2021 Series

Volume 1 2021 West Europe

Synopsis: Economic Overview; Electronics Market Overview; Imports 2018-2019; Exports 2018-2019; Production Data 2018-2021; Market Data 2018-2024

16 country coverage

Austria; Belgium; Denmark; Finland; France; Germany; Greece; Ireland; Italy; Netherlands; Norway; Portugal; Spain; Sweden; Switzerland; UK

Publication Data: May 2021

Volume 2 2021 America, Japan, Asia Pacific

Synopsis: Economic Overview; Electronics Market Overview; Imports 2018-2019; Exports 2018-2019; Production Data 2018-2021; Market Data 2018-2024

19 country coverage

Australia; Brazil; Canada; China, Hong Kong; India; Indonesia; Israel; Japan; Malaysia; Mexico, Philippines; Singapore; South Africa; South Korea; Taiwan Thailand; Vietnam, USA

Publication Data: July 2021

Volume 3 2021 East Europe & World Summary

Synopsis: Economic Overview; Electronics Market Overview; Imports 2018-2019; Exports 2018-2019; Production Data 2018-2021; Market Data 2018-2024

53 Country World Summary covering production data 2018-2021 and market data for 2018-2024

13 country coverage

Bulgaria; Croatia; Czech Republic; Estonia; Hungary; Lithuania; Poland; Romania; Russia; Slovakia; Slovenia; Turkey, Ukraine

Publication Data: September 2021

For each country production and market data is supplied for the following product groups:

- Computers
- Consumer – Video; Audio; Personal
- Control & Instrumentation
- Medical & Industrial
- Office Equipment
- Radio Communications
- Telecommunications
- Components – Passive Components; Semiconductors; Other Components

Related Products & Services



European Electronics Production 2000-2024

As part of its program of research covering developments in the European electronics industry RER has released a new statistical database providing a medium-term outlook for electronics production in Europe. Covering the period 2000-2023 the research allows you to track developments both geographically and by major product group.

The database is provided as an Excel spreadsheet providing production data for 13 product groups and 29 countries split by Western Europe and Central and Eastern Europe. In addition, a PDF document provides a European overview as well as allowing the user to quickly reference data for individual countries.

Global Electronics Production & Markets

Launched in 2012, Global Electronics Production & Markets provides top line analysis on the global electronics industry for the period 1995 to 2024 for markets and 1995-2021 for production. Through two Excel databases you can quickly analyze the structure of the global industry and how it has changed both geographically, through RER's unique coverage of 53 countries, and by thirteen major product groups. The database will be fully updated in September 2021.

Country Reports

Drawing on data from its core statistical database RER provides a quick, reliable and cost-effective assessment of the electronics industry for an individual country. For a full listing please visit www.rer.co.uk

Custom Research

Building on the flexibility of the two databases and the Yearbook series we can quickly search data by product or country/region to provide solutions tailored to your specific needs or budgets. Ideal for input into internal presentations/ documents the data is supplied via email.

European Electronic Markets Forecast

Market data is only one part of the equation when analyzing the European electronics industry. Updated monthly, *European Electronic Markets Forecast* (EEMF) enables you to track with minimum time and cost, the key issues and opportunities impacting the European electronics industry. From originally researched articles to the latest company developments and market analysis EEMF is your virtual "Research Analyst" utilizing over 35 years of industry and market research experience to provide you both in hardcopy and electronic formats not only reliable but objective analysis and news on the European and global electronics industry.

Summary of Contents

Market Analysis: Up-to-the-minute analysis of the key sectors of the European and Global electronics industry

Industry News: The latest industry and company news split by:

- Finance
- Mergers & Acquisitions
- Automotive

- Electronic Manufacturing Services/PCB
- Production
- Semiconductors
- Renewable Energy/CleanTech

Asia Pacific Electronics: A monthly summary of key company developments within the region.

For additional information on the above publications or Reed Electronics Research's complete range of research products please contact or visit www.rer.co.uk

Andrew Fletcher, Research Manager
andrew.fletcher@rer.co.uk

Reed Electronics Research
Boston House
Grove Technology Park
Wantage, Oxon OX12 9FF
United Kingdom
Tel: +44 (0) 1235 227310
Fax: +44 (0) 1235 420515
website: www.rer.co.uk

Yearbook of World Electronics Data Volume 1 2021

Contents

1 INTRODUCTION	15
2 SUMMARY DATA	17
2.1 Economic Overview	17
2.2 Electronics Overview	18
2.3 Imports 2018-2019	25
2.4 Exports 2018-2019	26
2.5 Consolidated Summary of Production 2018	27
2.6 Consolidated Summary of Production 2019	27
2.7 Consolidated Summary of Production 2020	28
2.8 Consolidated Summary of Production 2021	28
2.9 Summary of EDP Production	29
2.10 Summary of Control & Instrumentation Production	30
2.11 Summary of Medical & Industrial Production	31
2.12 Summary of Communications & Radar Production	32
2.13 Summary of Telecommunications Production	33
2.14 Summary of Consumer Production	34
2.15 Summary of Components Production	35
2.16 Summary of Active Component Production	36
2.17 Summary of Passive Component Production	36
2.18 Summary of Other Component Production	36
2.19 West Europe Total Production	37
2.20 Consolidated Summary of Markets 2018	40
2.21 Consolidated Summary of Markets 2019	40
2.22 Consolidated Summary of Markets 2020	41
2.23 Consolidated Summary of Markets 2021	41
2.24 Consolidated Summary of Markets 2022	42
2.25 Consolidated Summary of Markets 2023	42
2.26 Consolidated Summary of Markets 2024	43
2.27 Summary of EDP Markets	44
2.28 Summary of Control & Instrumentation Markets	45
2.29 Summary of Medical & Industrial Markets	46
2.30 Summary of Communications & Radar Markets	47
2.31 Summary of Telecommunications Markets	48
2.32 Summary of Consumer Markets	49
2.33 Summary of Components Markets	50
2.34 Summary of Active Component Markets	51
2.35 Summary of Passive Component Markets	51
2.36 Summary of Other Component Markets	51
2.37 West Europe Total Markets	52
3 COUNTRY DATA	55
3.1 AUSTRIA	55
3.1.1 Economic Outlook	55
3.1.2 Electronics Industry Overview	56
3.1.3 Austria Production	59
Computing 2018-2021	59
Office Equipment 2018-2021	59
Control & Instrumentation 2018-2021	59
Medical & Industrial 2018-2021	59
Communications & Radar 2018-2021	60

Telecommunications 2018-2021	60
Consumer 2018-2021	60
Video 2018-2021	60
Audio 2018-2021	60
Personal 2018-2021	60
Components 2018-2021	60
Active 2018-2021	60
Passive 2018-2021	61
Other 2018-2021	61
3.1.4 Austria Markets	63
Computing 2018-2024	63
Office Equipment 2018-2024	63
Control & Instrumentation 2018-2024	63
Medical & Industrial 2018-2024	63
Communications & Radar 2018-2024	64
Telecommunications 2018-2024	64
Consumer 2018-2024	64
Video 2018-2024	64
Audio 2018-2024	64
Personal 2018-2024	65
Components 2018-2024	65
Active 2018-2024	65
Passive 2018-2024	65
Other 2018-2024	66
3.2 BELGIUM	67
3.2.1 Economic Outlook	67
3.2.2 Electronics Industry Overview	68
3.2.3 Belgium Production	71
Computing 2018-2021	71
Office Equipment 2018-2021	71
Control & Instrumentation 2018-2021	71
Medical & Industrial 2018-2021	72
Communications & Radar 2018-2021	72
Telecommunications 2018-2021	72
Consumer 2018-2021	72
Video 2018-2021	72
Audio 2018-2021	72
Personal 2018-2021	73
Components 2018-2021	73
Active 2018-2021	73
Passive 2018-2021	73
Other 2018-2021	74
3.2.4 Belgium Markets	75
Computing 2018-2024	75
Office Equipment 2018-2024	75
Control & Instrumentation 2018-2024	75
Medical & Industrial 2018-2024	76
Communications & Radar 2018-2024	76
Telecommunications 2018-2024	76
Consumer 2018-2024	76
Video 2018-2024	76
Audio 2018-2024	77
Personal 2018-2024	77
Components 2018-2024	77

	Active 2018-2024	77
	Passive 2018-2024	78
	Other 2018-2024	78
3.3 DENMARK		79
3.3.1 Economic Outlook		79
3.3.2 Electronics Industry Overview		80
3.3.3 Denmark Production		83
Computing 2018-2021		83
Office Equipment 2018-2021		83
Control & Instrumentation 2018-2021		83
Medical & Industrial 2018-2021		84
Communications & Radar 2018-2021		84
Telecommunications 2018-2021		84
Consumer 2018-2021		85
Video 2018-2021		85
Audio 2018-2021		85
Personal 2018-2021		85
Components 2018-2021		85
Active 2018-2021		85
Passive 2018-2021		86
Other 2018-2021		86
3.3.4 Denmark Markets		88
Computing 2018-2024		88
Office Equipment 2018-2024		88
Control & Instrumentation 2018-2024		88
Medical & Industrial 2018-2024		89
Communications & Radar 2018-2024		89
Telecommunications 2018-2024		89
Consumer 2018-2024		90
Video 2018-2024		90
Audio 2018-2024		90
Personal 2018-2024		90
Components 2018-2024		91
Active 2018-2024		91
Passive 2018-2024		91
Other 2018-2024		92
3.4 FINLAND		93
3.4.1 Economic Outlook		93
3.4.2 Electronics Industry Overview		94
3.4.3 Finland Production		97
Computing 2018-2021		97
Office Equipment 2018-2021		97
Control & Instrumentation 2018-2021		97
Medical & Industrial 2018-2021		97
Communications & Radar 2018-2021		98
Telecommunications 2018-2021		98
Consumer 2018-2021		98
Video 2018-2021		98
Audio 2018-2021		98
Personal 2018-2021		98
Components 2018-2021		98
Active 2018-2021		98
Passive 2018-2021		99
Other 2018-2021		99

3.4.4 Finland Markets	100
Computing 2018-2024	100
Office Equipment 2018-2024	100
Control & Instrumentation 2018-2024	100
Medical & Industrial 2018-2024	100
Communications & Radar 2018-2024	101
Telecommunications 2018-2024	101
Consumer 2018-2024	101
Video 2018-2024	101
Audio 2018-2024	102
Personal 2018-2024	102
Components 2018-2024	102
Active 2018-2024	102
Passive 2018-2024	103
Other 2018-2024	103
3.5 FRANCE	105
3.5.1 Economic Outlook	105
3.5.2 Electronics Industry Overview	106
3.5.3 France Production	109
Computing 2018-2021	109
Office Equipment 2018-2021	109
Control & Instrumentation 2018-2021	109
Medical & Industrial 2018-2021	110
Communications & Radar 2018-2021	110
Telecommunications 2018-2021	111
Consumer 2018-2021	111
Video 2018-2021	111
Audio 2018-2021	111
Personal 2018-2021	111
Components 2018-2021	112
Active 2018-2021	112
Passive 2018-2021	112
Other 2018-2021	113
3.5.4 France Markets	114
Computing 2018-2024	114
Office Equipment 2018-2024	114
Control & Instrumentation 2018-2024	114
Medical & Industrial 2018-2024	115
Communications & Radar 2018-2024	115
Telecommunications 2018-2024	116
Consumer 2018-2024	116
Video 2018-2024	116
Audio 2018-2024	116
Personal 2018-2024	116
Components 2018-2024	117
Active 2018-2024	117
Passive 2018-2024	117
Other 2018-2024	118
3.6 GERMANY	119
3.6.1 Economic Outlook	119
3.6.2 Electronics Industry Overview	120
3.6.3 Germany Production	124
Computing 2018-2021	124
Office Equipment 2018-2021	124

Control & Instrumentation 2018-2021	124
Medical & Industrial 2018-2021	125
Communications & Radar 2018-2021	125
Telecommunications 2018-2021	126
Consumer 2018-2021	126
Video 2018-2021	126
Audio 2018-2021	126
Personal 2018-2021	126
Components 2018-2021	127
Active 2018-2021	127
Passive 2018-2021	127
Other 2018-2021	128
3.6.4 Germany Markets	129
Computing 2018-2024	129
Office Equipment 2018-2024	129
Control & Instrumentation 2018-2024	129
Medical & Industrial 2018-2024	130
Communications & Radar 2018-2024	130
Telecommunications 2018-2024	131
Consumer 2018-2024	131
Video 2018-2024	131
Audio 2018-2024	131
Personal 2018-2024	131
Components 2018-2024	132
Active 2018-2024	132
Passive 2018-2024	133
Other 2018-2024	133
3.7 GREECE	135
3.7.1 Economic Outlook	135
3.7.2 Electronics Industry Overview	136
3.7.3 Greece Production	139
Computing 2018-2021	139
Office Equipment 2018-2021	139
Control & Instrumentation 2018-2021	139
Medical & Industrial 2018-2021	139
Communications & Radar 2018-2021	139
Telecommunications 2018-2021	140
Consumer 2018-2021	140
Video 2018-2021	140
Audio 2018-2021	140
Personal 2018-2021	140
Components 2018-2021	140
Active 2018-2021	140
Passive 2018-2021	140
Other 2018-2021	141
3.7.4 Greece Markets	142
Computing 2018-2024	142
Office Equipment 2018-2024	142
Control & Instrumentation 2018-2024	142
Medical & Industrial 2018-2024	142
Communications & Radar 2018-2024	143
Telecommunications 2018-2024	143
Consumer 2013-2019	143
Video 2018-2024	143

Audio 2018-2024	143
Personal 2018-2024	144
Components 2018-2024	144
Active 2018-2024	144
Passive 2018-2024	144
Other 2018-2024	145
3.8 IRELAND	146
3.8.1 Economic Outlook	146
3.8.2 Electronics Industry Overview	147
3.8.3 Ireland Production	150
Computing 2018-2021	150
Office Equipment 2018-2021	150
Control & Instrumentation 2018-2021	150
Medical & Industrial 2018-2021	150
Communications & Radar 2018-2021	151
Telecommunications 2018-2021	151
Consumer 2018-2021	151
Video 2018-2021	151
Audio 2018-2021	151
Personal 2018-2021	151
Components 2018-2021	151
Active 2018-2021	151
Passive 2018-2021	152
Other 2018-2021	152
3.8.4 Ireland Markets	153
Computing 2018-2024	153
Office Equipment 2018-2024	153
Control & Instrumentation 2018-2024	153
Medical & Industrial 2018-2024	153
Communications & Radar 2018-2024	154
Telecommunications 2018-2024	154
Consumer 2018-2024	154
Video 2018-2024	154
Audio 2018-2024	154
Personal 2018-2024	155
Components 2018-2024	155
Active 2018-2024	155
Passive 2018-2024	155
Other 2018-2024	156
3.9 ITALY	157
3.9.1 Economic Outlook	157
3.9.2 Electronics Industry Overview	158
3.9.3 Italy Production	161
Computing 2018-2021	161
Office Equipment 2018-2021	161
Control & Instrumentation 2018-2021	161
Medical & Industrial 2018-2021	162
Communications & Radar 2018-2021	162
Telecommunications 2018-2021	162
Consumer 2018-2021	163
Video 2018-2021	163
Audio 2018-2021	163
Personal 2018-2021	163
Components 2018-2021	163

Active 2018-2021	163
Passive 2018-2021	164
Other 2018-2021	164
3.9.4 Italy Markets	166
Computing 2018-2024	166
Office Equipment 2018-2024	166
Control & Instrumentation 2018-2024	166
Medical & Industrial 2018-2024	167
Communications & Radar 2018-2024	167
Telecommunications 2018-2024	168
Consumer 2018-2024	168
Video 2018-2024	168
Audio 2018-2024	168
Personal 2018-2024	168
Components 2018-2024	169
Active 2018-2024	169
Passive 2018-2024	169
Other 2018-2024	170
3.10 NETHERLANDS	171
3.10.1 Economic Outlook	171
3.10.2 Electronics Industry Overview	172
3.10.3 Netherlands Production	175
Computing 2018-2021	175
Office Equipment 2018-2021	175
Control & Instrumentation 2018-2021	175
Medical & Industrial 2018-2021	176
Communications & Radar 2018-2021	176
Telecommunications 2018-2021	176
Consumer 2018-2021	177
Video 2018-2021	177
Audio 2018-2021	177
Personal 2018-2021	177
Components 2018-2021	177
Active 2018-2021	177
Passive 2018-2021	178
Other 2018-2021	178
3.10.4 Netherlands Markets	180
Computing 2018-2024	180
Office Equipment 2018-2024	180
Control & Instrumentation 2018-2024	180
Medical & Industrial 2018-2024	181
Communications & Radar 2018-2024	181
Telecommunications 2018-2024	181
Consumer 2018-2024	182
Video 2018-2024	182
Audio 2018-2024	182
Personal 2018-2024	182
Components 2018-2024	183
Active 2018-2024	183
Passive 2018-2024	183
Other 2018-2024	184
3.11 NORWAY	185
3.11.1 Economic Outlook	185
3.11.2 Electronics Industry Overview	186

3.11.3 Norway Production	189
Computing 2018-2021	189
Office Equipment 2018-2021	189
Control & Instrumentation 2018-2021	189
Medical & Industrial 2018-2021	189
Communications & Radar 2018-2021	189
Telecommunications 2018-2021	190
Consumer 2018-2021	190
Video 2018-2021	190
Audio 2018-2021	190
Personal 2018-2021	190
Components 2018-2021	190
Active 2018-2021	190
Passive 2018-2021	191
Other 2018-2021	191
3.11.4 Norway Markets	192
Computing 2018-2024	192
Office Equipment 2018-2024	192
Control & Instrumentation 2018-2024	192
Medical & Industrial 2018-2024	192
Communications & Radar 2018-2024	193
Telecommunications 2018-2024	193
Consumer 2018-2024	193
Video 2018-2024	193
Audio 2018-2024	193
Personal 2018-2024	194
Components 2018-2024	194
Active 2018-2024	194
Passive 2018-2024	194
Other 2018-2024	195
3.12 PORTUGAL	196
3.12.1 Economic Outlook	196
3.12.2 Electronics Industry Overview	197
3.12.3 Portugal Production	200
Computing 2018-2021	200
Office Equipment 2018-2021	200
Control & Instrumentation 2018-2021	200
Medical & Industrial 2018-2021	200
Communications & Radar 2018-2021	200
Telecommunications 2018-2021	201
Consumer 2018-2021	201
Video 2018-2021	201
Audio 2018-2021	201
Personal 2018-2021	201
Components 2018-2021	201
Active 2018-2021	201
Passive 2018-2021	202
Other 2018-2021	202
3.12.4 Portugal Markets	204
Computing 2018-2024	204
Office Equipment 2018-2024	204
Control & Instrumentation 2018-2024	204
Medical & Industrial 2018-2024	204
Communications & Radar 2018-2024	204

Telecommunications 2018-2024	205
Consumer 2018-2024	205
Video 2018-2024	205
Audio 2018-2024	205
Personal 2018-2024	205
Components 2018-2024	206
Active 2018-2024	206
Passive 2018-2024	206
Other 2018-2024	207
3.13 SPAIN	208
3.13.1 Economic Outlook	208
3.13.2 Electronics Industry Overview	209
3.13.3 Spain Production	212
Computing 2018-2021	212
Office Equipment 2018-2021	212
Control & Instrumentation 2018-2021	212
Medical & Industrial 2018-2021	212
Communications & Radar 2018-2021	213
Telecommunications 2018-2021	213
Consumer 2018-2021	213
Video 2018-2021	213
Audio 2018-2021	213
Personal 2018-2021	213
Components 2018-2021	213
Active 2018-2021	213
Passive 2018-2021	214
Other 2018-2021	214
3.13.4 Spain Markets	215
Computing 2018-2024	215
Office Equipment 2018-2024	215
Control & Instrumentation 2018-2024	215
Medical & Industrial 2018-2024	215
Communications & Radar 2018-2024	216
Telecommunications 2018-2024	216
Consumer 2018-2024	216
Video 2018-2024	216
Audio 2018-2024	216
Personal 2018-2024	217
Components 2018-2024	217
Active 2018-2024	217
Passive 2018-2024	217
Other 2018-2024	218
3.14 SWEDEN	219
3.14.1 Economic Outlook	219
3.14.2 Electronics Industry Overview	220
3.14.3 Sweden Production	224
Computing 2018-2021	224
Office Equipment 2018-2021	224
Control & Instrumentation 2018-2021	224
Medical & Industrial 2018-2021	225
Communications & Radar 2018-2021	225
Telecommunications 2018-2021	225
Consumer 2018-2021	226
Video 2018-2021	226

Audio 2018-2021	226
Personal 2018-2021	226
Components 2018-2021	226
Active 2018-2021	226
Passive 2018-2021	226
Other 2018-2021	227
3.14.4 Sweden Markets	228
Computing 2018-2024	228
Office Equipment 2018-2024	228
Control & Instrumentation 2018-2024	228
Medical & Industrial 2018-2024	229
Communications & Radar 2018-2024	229
Telecommunications 2018-2024	230
Consumer 2018-2024	230
Video 2018-2024	230
Audio 2018-2024	230
Personal 2018-2024	230
Components 2018-2024	231
Active 2018-2024	231
Passive 2018-2024	231
Other 2018-2024	232
3.15 SWITZERLAND	233
3.15.1 Economic Outlook	233
3.15.2 Electronics Industry Overview	234
3.15.3 Switzerland Production	237
Computing 2018-2021	237
Office Equipment 2018-2021	237
Control & Instrumentation 2018-2021	237
Medical & Industrial 2018-2021	237
Communications & Radar 2018-2021	238
Telecommunications 2018-2021	238
Consumer 2018-2021	238
Video 2018-2021	238
Audio 2018-2021	238
Personal 2018-2021	238
Components 2018-2021	239
Active 2018-2021	239
Passive 2018-2021	239
Other 2018-2021	239
3.15.4 Switzerland Markets	241
Computing 2018-2024	241
Office Equipment 2018-2024	241
Control & Instrumentation 2018-2024	241
Medical & Industrial 2018-2024	241
Communications & Radar 2018-2024	242
Telecommunications 2018-2024	242
Consumer 2018-2024	242
Video 2018-2024	242
Audio 2018-2024	243
Personal 2018-2024	243
Components 2018-2024	243
Active 2018-2024	243
Passive 2018-2024	244
Other 2018-2024	244

3.16 UNITED KINGDOM	245
3.16.1 Economic Outlook	245
3.16.2 Electronics Industry Overview	246
3.16.3 UK Production	250
Computing 2018-2021	250
Office Equipment 2018-2021	250
Control & Instrumentation 2018-2021	250
Medical & Industrial 2018-2021	251
Communications & Radar 2018-2021	251
Telecommunications 2018-2021	252
Consumer 2018-2021	252
Video 2018-2021	252
Audio 2018-2021	252
Personal 2018-2021	252
Components 2018-2021	253
Active 2018-2021	253
Passive 2018-2021	253
Other 2018-2021	254
3.16.4 UK Markets	255
Computing 2018-2024	255
Office Equipment 2018-2024	255
Control & Instrumentation 2018-2024	255
Medical & Industrial 2018-2024	256
Communications & Radar 2018-2024	257
Telecommunications 2018-2024	257
Consumer 2018-2024	257
Video 2018-2024	257
Audio 2018-2024	258
Personal 2018-2024	258
Components 2018-2024	258
Active 2018-2024	258
Passive 2018-2024	259
Other 2018-2024	259
4 APPENDICES	261
4.1 Consolidated Summary of West European Electronics Production 2018-2021 (Euro)	261
4.2 Consolidated Summary of West European Electronics Production 2018-2024 (Euro)	263
4.3 Exchange Rates	267
4.4 Guide to Interpretation of the Statistics	268
4.5 Guide to Statistical Trade Classifications	272
4.6 Guide to the Definition of the Electronic Product Headings	274
4.7 List of Sources	281

SAMPLE DATA

Over the following pages we provide sample data from the **current** edition of the report. This includes summary data for both production and markets, and sample data from several countries.

CONSOLIDATED SUMMARY OF PRODUCTION 2020

Table 2.7

Country	\$M Computing	\$M Office Equip	\$M Control & Instr	\$M Medical & Industrial	\$M Radio Comms & Radar*	\$M Telecomm- unications	\$M Consumer	\$M Compo- nents	\$M TOTAL
Austria	178	2	1148	983	361	330	5	1860	4867
Belgium	511	-	877	852	566	148	5	838	3797
Denmark	197	-	1097	905	222	88	23	508	3041
Finland	44	-	877	523	356	330	-	392	2522
France	682	80	3713	2057	10568	1331	131	6605	25165
Germany	3426	77	23881	8631	3313	1523	842	15447	57139
Greece	174	3	61	18	175	78	2	56	568
Ireland	1398	7	847	1661	239	127	15	5392	9685
Italy	472	28	3703	1694	2580	1011	24	4269	13782
Netherlands	818	-	2874	3155	423	267	28	1230	8795
Norway	98	-	552	191	330	80	-	91	1341
Portugal	102	-	222	116	375	114	673	486	2088
Spain	258	7	375	528	818	534	16	1011	3548
Sweden	62	-	1509	213	1617	1093	49	575	5118
Switzerland	390	2	4436	2009	388	330	2919	1893	12367
UK	1071	38	5132	3215	5168	301	83	2605	17614
TOTAL	9882	245	51303	26751	27498	7684	4815	43257	171435

CONSOLIDATED SUMMARY OF MARKETS 2020

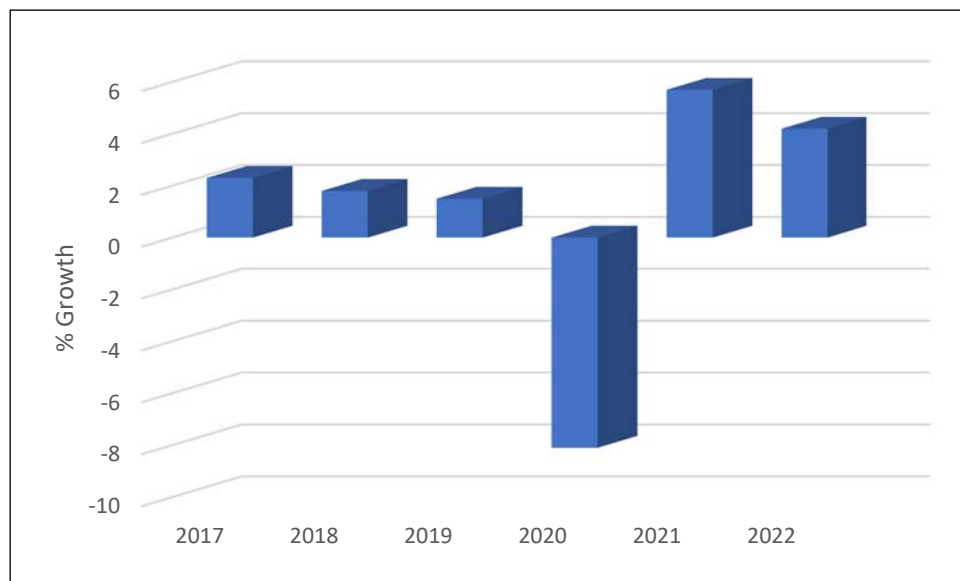
Table 2.22

Country	\$M Computing	\$M Office Equip	\$M Control & Instr	\$M Medical & Industrial	\$M Radio Comms & Radar*	\$M Telecomm- unications	\$M Consumer	\$M Compo- nents	\$M TOTAL
Austria	1817	27	949	890	670	377	640	1417	6787
Belgium	3102	48	806	690	1305	502	461	1399	8313
Denmark	1601	31	474	259	420	320	261	819	4184
Finland	1382	27	569	327	350	117	262	990	4024
France	9469	318	2860	2173	6890	2249	2861	5876	32697
Germany	19647	381	9988	4249	5088	2533	5184	16773	63840
Greece	734	38	248	128	460	271	373	453	2705
Ireland	2477	15	298	331	531	219	236	2197	6304
Italy	5963	261	3734	1763	4392	1724	2157	4497	24490
Netherlands	6686	152	1942	1136	1584	949	957	2400	15807
Norway	1126	39	414	306	496	184	384	416	3365
Portugal	1244	17	269	310	739	366	431	809	4185
Spain	3928	144	1327	1145	3775	1734	1599	3118	16772
Sweden	2022	40	1054	284	1451	485	540	1636	7513
Switzerland	4827	198	1723	726	2039	562	1146	1846	13066
UK	10556	353	3254	1881	7769	1699	3410	4546	33468
TOTAL	76582	2088	29910	16597	37957	14291	20901	49192	247519

3.5 France

3.5.1 Economic Overview

- After a historic drop in 2020 (-8.1%), real GDP forecast to rebound gradually, particularly in the second half of the year when restrictions should be eased, and supported by the recovery plan 'France Relance'. In 2022, all demand components are set to exceed their precrisis levels, with total activity standing around 1 percentage point higher than in 2019. Overall real GDP is set to rebound gradually by 5.7% in 2021 and 4.2% in 2022.
- Investment fell more sharply than consumption in the first half of 2020, but then also recovered more quickly. It is set to continue growing and benefit from the easing of restrictions from the third quarter of this year. Public and private investment are also poised to benefit from favourable financing conditions and the 'France Relance' plan over the forecast horizon.
- Unemployment in France is projected to increase in 2021. This is due to the slow recovery of the labour market and a surge in the labour force after its sizeable fall in 2020 caused by pandemic related restrictions. In 2022, the unemployment rate should diminish in line with the recovery in all economic sectors.
- Inflation is forecast to increase to 1.4% in 2021 after 0.5% in 2020 due to higher oil prices. Despite the recovery in demand, inflation is set to diminish in 2022 (1.1%), mainly because of a decrease in energy prices and the decision to keep taxes on tobacco steady after several years of sharp increases.



GDP Growth 2017-2022

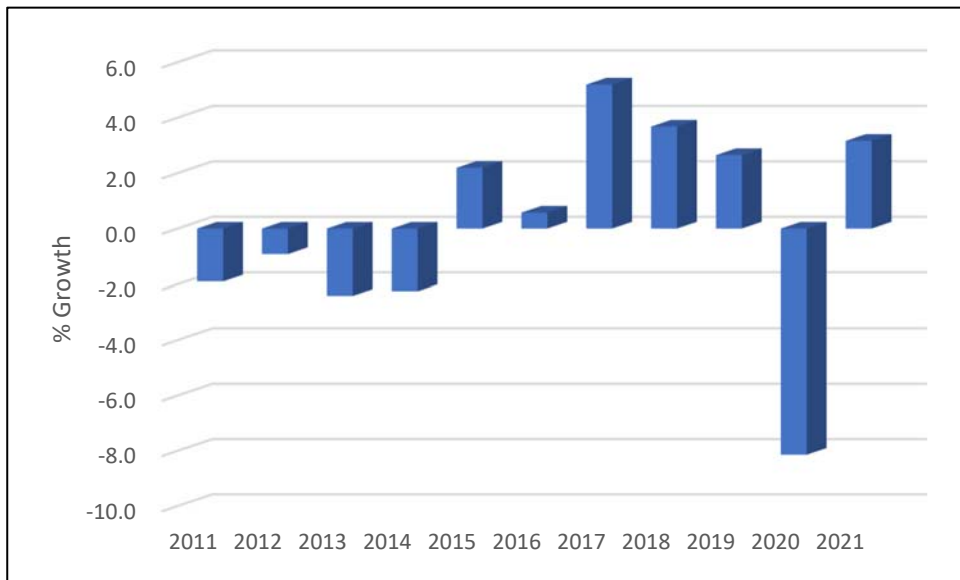
France GDP Growth 2017-2022

% Increase	Actual			Forecast		
	2017	2018	2019	2020	2021	2022
Growth of GDP	2.3	1.8	1.5	-8.1	5.7	4.2

Note: Percentage change on previous year. Source: EU Economic Forecast May 2021

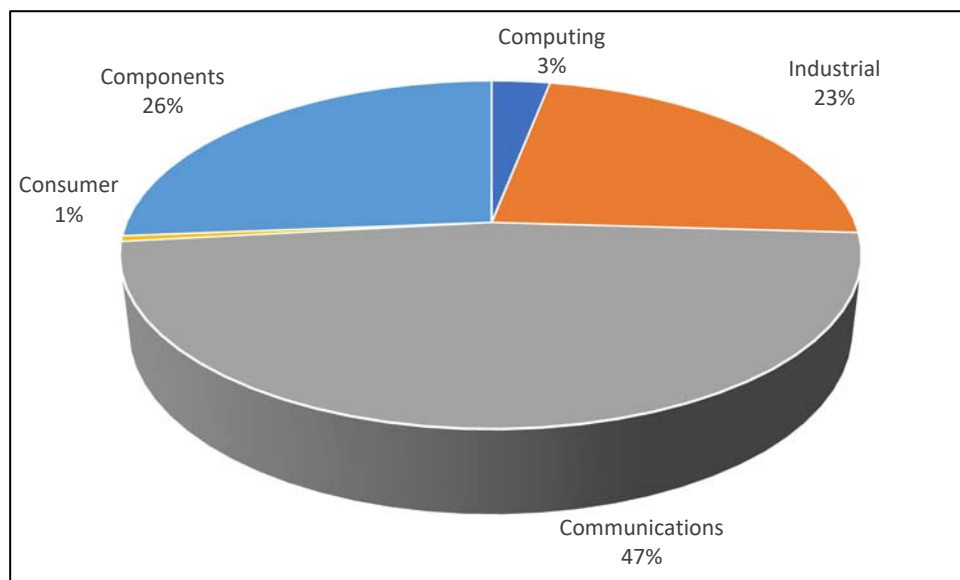
3.5.2 Electronics Industry Overview

- After five years of consecutive growth electronics output declined by 8.1% following the COVID outbreak but is forecast to post a recovery in 2021 with growth of 3.2%.
- The French electronics is dominated by the production of fixed and wireless communications, the two product groups accounting for 20.2% of total output in 2020, down from around 37% at the height of the boom in 2000. The country is also a leading producer of radar, navigation and defence electronics the sector accounting for 27.1% of total output in 2020.



Percentage Growth in French Electronics Production 2011-2021

- The impact of COVID-19 on the French defence sector has been less pronounced than commercial aviation. This is primarily due to the nature of defence programmes where budgets were allocated prior to the pandemic and many projects are critical to national defence. In the longer-term however, defence contractors are expected to see slowing demand as national governments seek to reduce deficits and control expenses.

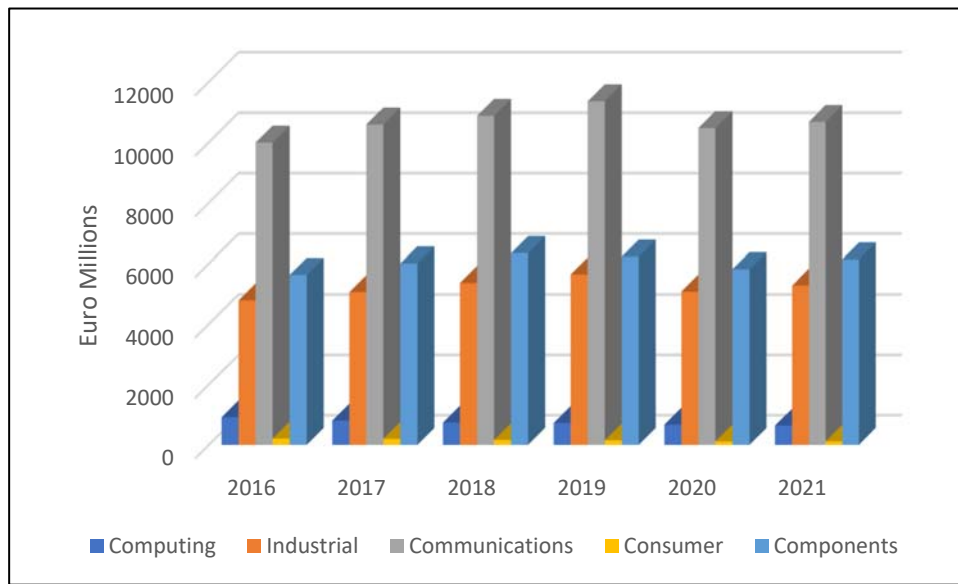


French Electronics Industry by Sector 2020

Summary of French Electronics Production

Euro Millions	2016	2017	2018	2019	2020	2021
Computing	915	801	742	727	670	640
Industrial	4790	5061	5362	5645	5077	5276
Communications	9991	10591	10879	11361	10471	10677
Consumer	213	198	162	150	115	114
Components	5626	6002	6341	6225	5812	6137
Total	21535	22653	23486	24108	22145	22845

Notes: Computing includes office equipment; Industrial combines control and instrumentation and medical and industrial; and communications combines fixed and wireless communications (inc. defence). Due to computer rounding the summary figures above may differ slightly from the figures presented in the main tables.



French Electronics Production by Sector 2016-2021

- In contrast, the pandemic has had a devastating effect on the commercial airline industry. The collapse in international passenger traffic has already led to Airbus to lower airline production which will have a corresponding short- to potentially medium-term impact on the supply chain as the pandemic continues to limit air travel in 2021.
- France is home to a number of the leading European aerospace and defence groups including Thales, Safran, Dassault, Naval Group (formerly DCNS), Nexter and the Airbus Group.
- The production of higher volume wireless and fixed line communications equipment has to a large extent relocated to lower cost locations. France remains an important centre for R&D, in particular Nokia following its acquisition of the French communications equipment manufacturer Alcatel-Lucent and in the development and production of the latest generation technologies which is being boosted by a growing number of start-ups and small to medium-sized companies.
- The production of computer equipment has declined year on year since 2000 a trend which is expected to continue. By the end of 2021, output is forecast to account for 2.5% of total electronics output down from 17.6% in 2000 the sector experiencing declines of 3.1% in 2019, 7.7% in 2020 and a forecasted 4.0% in 2021.

- Electronic component production, despite the recent closure of a number of manufacturing plants, accounted for 26.2% of electronics production in 2020. The production of semiconductor and passive components segments both declined in 2020 but are both forecast to rebound in 2021. The current global shortage of semiconductors is expected to see increased investment in the sector which is expected to boost output.
- Although the major Tier 1 global EMS providers have scaled back or ceased production in the country France is the base for a number of the leading European EMS providers including the Taiwanese-owned Asteelflash (ranked the 12th largest European EMS provider in 2019), Lacroix Electronics (13th), éolane (14th), ALL CIRCUITS (15th), Matra Electronique (40th), and Tronico ALCEN (47th).

Outlook

Summary of French Electronics Production – Medium Term Forecast 2019-2024

Euro Millions	2019	2020	2021	2022	2023	2024
Computing	727	670	640	620	603	585
Industrial	5645	5077	5276	5525	5782	6019
Communications	11361	10471	10677	11092	11585	12110
Consumer	150	115	114	114	114	114
Components	6225	5812	6137	6402	6578	6784
Total	24108	22145	22845	23754	24661	25612

Notes: Computing includes office equipment; Industrial combines control and instrumentation and medical and industrial; and communications combines fixed and wireless communications (inc. defence). Due to computer rounding the summary figures above may differ slightly from the figures presented in the main tables.

- As a result of France's position as a leading supplier to the global aerospace and defence industry communications will remain, despite the prospects of a period of lower growth as the sector gradually recovers from COVID-19, the largest segment accounting for 47.3% of the total in 2024. French companies are also expected to benefit from the Internet of Things, in particular in the later part of the forecast period. Industrial will also benefit from increased demand as the sector benefits from the expected recovery in the global economy and export markets strengthen in the later part of the forecast. In 2024, industrial will account for 23.5% of total electronics production.
- Computing will continue to lose overall share of production as an increasing proportion of the market is served from low-cost locations. The production of commodity electronic components will face increasing competition from Asia although it is expected that the period to 2024, we will see increased investment in the French semiconductor industry as companies look to offset the current shortage in components. Investment will also be supported by the EU as it places greater importance on developing Europe's indigenous semiconductor industry.

3.6.3 GERMANY PRODUCTION

COMPUTING		2018	2019	2020	2021
Computers & Complete Systems	€M	2037	2011	1875	1866
	\$M	2396	2260	2131	2120
Peripherals - Storage	€M	241	256	250	245
	\$M	284	288	284	278
Other Peripherals & Equipment	€M	621	590	550	534
	\$M	731	663	625	607
Accessories & Parts	€M	365	363	340	337
	\$M	429	408	386	383
Computing Total	€M	3264	3220	3015	2982
	\$M	3840	3618	3426	3389

OFFICE EQUIPMENT		2018	2019	2020	2021
Office Equipment	€M	84	84	68	63
	\$M	99	94	77	72
Office Equipment Total	€M	84	84	68	63
	\$M	99	94	77	72

CONTROL & INSTRUMENTATION		2018	2019	2020	2021
Total Industrial & Process Control	€M	10770	10300	9100	9513
	\$M	12671	11573	10341	10811
Instrumentation					
Analytical Instruments	€M	1940	1885	1950	2077
	\$M	2282	2118	2216	2360
Machine & Materials Test Instruments	€M	1995	1980	1670	1702
	\$M	2347	2225	1898	1934
Electrical Quantity Measuring Instruments	€M	472	458	438	439
	\$M	555	515	498	499
Other Instruments	€M	5780	5584	5203	5310
	\$M	6800	6274	5913	6034
Total Instrumentation	€M	10187	9907	9261	9527
	\$M	11985	11131	10524	10826
Accessories & Parts	€M	2973	2954	2654	2920
	\$M	3498	3319	3016	3319
Control & Instrumentation Total	€M	23930	23161	21015	21961
	\$M	28153	26024	23881	24955

GERMANY PRODUCTION (ctd)

MEDICAL & INDUSTRIAL		2018	2019	2020	2021
X-Ray & Medical Equipment					
Medical X-Ray Equipment	€M	1068	1430	1475	1536
	\$M	1256	1607	1676	1745
Industrial X-Ray Equipment	€M	424	511	428	447
	\$M	499	574	486	508
Medical Radiation Equipment	€M	50	56	54	56
	\$M	59	63	61	64
Industrial Radiation Equipment	€M	57	59	54	57
	\$M	67	66	61	65
Other Electromedical Equipment (inc Electrocardiographs)	€M	2430	2470	2540	2647
	\$M	2859	2775	2886	3008
Hearing Aids	€M	12	12	10	10
	\$M	14	13	11	11
X-Ray & Medical Equipment Total	€M	4041	4538	4561	4753
	\$M	4754	5099	5183	5401
Industrial Equipment					
Railway Signalling Equipment	€M	545	601	585	614
	\$M	641	675	665	698
Traffic Signalling Equipment	€M	266	262	242	252
	\$M	313	294	275	286
Security & Fire Alarms	€M	630	631	580	595
	\$M	741	709	659	676
Other Signalling Equipment	€M	421	444	400	421
	\$M	495	499	455	478
Other Industrial Equipment	€M	1515	1305	1227	1276
	\$M	1782	1466	1394	1450
Total Industrial Equipment	€M	3377	3243	3034	3158
	\$M	3973	3644	3448	3589
Medical & Industrial Equipment Total	€M	7418	7781	7595	7911
	\$M	8727	8743	8631	8990
COMMUNICATIONS & RADAR		2018	2019	2020	2021
Radar & Navigational Aids	€M	1805	1995	1890	1995
	\$M	2124	2242	2148	2267
Radio Comms inc Mobile Phones Public Broadcasting & Parts	€M	1130	1085	1025	1025
	\$M	1329	1219	1165	1165
Communications & Radar Total	€M	2935	3080	2915	3020
	\$M	3453	3461	3313	3432

GERMANY PRODUCTION (ctd)

TELECOMMUNICATIONS		2018	2019	2020	2021
Telephone Sets	€M	290	230	180	169
	\$M	341	258	205	192
Other Telecoms Equipment	€M	1285	1200	1160	1217
	\$M	1512	1348	1318	1383
Telecommunications Total	€M	1575	1430	1340	1386
	\$M	1853	1607	1523	1575

CONSUMER		2018	2019	2020	2021
Video Equipment					
Colour Television	€M	139	82	70	60
	\$M	164	92	80	68
Digital Cameras	€M	331	317	280	273
	\$M	389	356	318	310
Video Tuners & Satellite Receivers	€M	8	6	4	3
	\$M	9	7	5	3
Video Equipment Total	€M	478	405	354	336
	\$M	562	455	402	382
Audio Equipment					
Mains Audio Equipment	€M	2	2	2	2
	\$M	2	2	2	2
Car Audio	€M	140	125	100	94
	\$M	165	140	114	107
Audio Equipment Total	€M	142	127	102	96
	\$M	167	143	116	109
Personal Consumer Equipment					
Electronic Musical Instruments	€M	34	34	30	31
	\$M	40	38	34	35
Electric/Electronic Watches	€M	278	255	235	246
	\$M	327	287	267	280
Electric/Electronic Clocks	€M	22	22	18	18
	\$M	26	25	20	20
Electronic Flashlights	€M	2	2	2	2
	\$M	2	2	2	2
Total Personal Equipment	€M	336	313	285	297
	\$M	395	352	324	338
Consumer Equipment Total	€M	956	845	741	729
	\$M	1125	949	842	828

GERMANY PRODUCTION (ctd)

COMPONENTS		2018	2019	2020	2021
Active Components					
X-Ray Tubes	€M	92	157	155	158
	\$M	108	176	176	180
Other Valves & Tubes	€M	40	38	42	41
	\$M	47	43	48	47
Diodes	€M	170	180	165	173
	\$M	200	202	188	197
Transistors	€M	856	996	930	975
	\$M	1007	1119	1057	1108
Thyristors	€M	238	157	155	161
	\$M	280	176	176	183
Photocells	€M	495	525	575	630
	\$M	582	590	653	716
Other Discrete Semiconductors	€M	382	360	340	354
	\$M	449	404	386	402
Piezoelectric Crystals	€M	305	300	325	335
	\$M	359	337	369	381
Hybrid Circuits	€M	165	158	150	147
	\$M	194	178	170	167
ICs & Other Microcircuits	€M	4462	5233	4950	5396
	\$M	5249	5880	5625	6132
Active Components Total	€M	7205	8104	7787	8370
	\$M	8476	9106	8849	9511
Passive Components					
Electrolytic Capacitors	€M	7	6	4	4
	\$M	8	7	5	5
Other Fixed Capacitors	€M	141	135	126	140
	\$M	166	152	143	159
Variable Capacitors	€M	2	2	2	2
	\$M	2	2	2	2
Fixed Resistors	€M	267	278	255	281
	\$M	314	312	290	319
Variable Resistors	€M	20	17	11	9
	\$M	24	19	13	10
Multi-Pin & RF Connectors	€M	2154	1958	1850	1933
	\$M	2534	2200	2102	2197
Other Connection Devices	€M	1211	1102	1040	1085
	\$M	1425	1238	1182	1233

GERMANY PRODUCTION (ctd)

COMPONENTS (ctd)		2018	2019	2020	2021
Passive Components (ctd)					
Inductors	€M	410	383	340	352
	\$M	482	430	386	400
Relays	€M	375	365	350	363
	\$M	441	410	398	413
Switches	€M	180	175	163	168
	\$M	212	197	185	191
Printed Circuit Boards	€M	1111	990	834	869
	\$M	1307	1112	948	988
Total Passive Components	€M	5878	5411	4975	5206
	\$M	6915	6080	5653	5916
Other Components					
Microphones	€M	120	108	94	87
	\$M	141	121	107	99
Loudspeakers	€M	185	205	195	203
	\$M	218	230	222	231
Amplifiers	€M	190	140	140	136
	\$M	224	157	159	155
Aerials	€M	65	55	50	47
	\$M	76	62	57	53
Unrecorded Media	€M	110	100	90	83
	\$M	129	112	102	94
Accessories & Parts for Consumer Equipment	€M	284	274	262	257
	\$M	334	308	298	292
Total Other Components	€M	954	882	831	813
	\$M	1122	991	944	924
Total Components Production	€M	14037	14397	13593	14389
	\$M	16514	16176	15447	16351
TOTAL PRODUCTION - GERMANY					
Total	€M	54199	53998	50282	52440
	\$M	63764	60672	57139	59591

Notes: 2018 and 2019 are current figures at current exchange rates. 2020 and 2021 are forecasts at 2020 constant values and exchange rates (i.e. inflation is not included). Base year 2020

3.9.4 ITALY MARKETS

COMPUTING		2018	2019	2020	2021	2022	2023	2024
Computers Total	€M	2466	2466	2662	2743	2827	2909	2991
	\$M	2901	2771	3025	3117	3212	3306	3399
Peripherals & Other Equipment	€M	1768	1730	1724	1755	1786	1816	1845
	\$M	2080	1944	1959	1994	2030	2064	2097
Accessories & Parts	€M	950	907	861	864	867	870	871
	\$M	1118	1019	978	982	986	988	990
Computing Total	€M	5184	5103	5247	5362	5480	5595	5707
	\$M	6099	5734	5963	6094	6228	6359	6486

OFFICE EQUIPMENT		2018	2019	2020	2021	2022	2023	2024
Office Equipment	€M	217	248	230	223	215	207	198
	\$M	255	279	261	254	245	235	225
Office Equipment Total	€M	217	248	230	223	215	207	198
	\$M	255	279	261	254	245	235	225

CONTROL & INSTRUMENTATION		2018	2019	2020	2021	2022	2023	2024
Industrial & Process Control								
Total Industrial & Process Control	€M	1554	1540	1324	1379	1443	1510	1576
	\$M	1828	1730	1505	1567	1640	1716	1791
Instrumentation								
Analytical Instruments	€M	252	274	297	309	324	339	353
	\$M	296	308	338	352	368	385	402
Nucleonic Instruments	€M	21	28	22	22	22	22	22
	\$M	25	31	25	25	25	25	25
Signal Generators	€M	9	10	9	9	8	8	8
	\$M	11	11	10	10	10	9	9
Telecoms Instruments	€M	20	21	19	19	20	20	20
	\$M	24	24	22	22	22	23	23
Machine & Materials Test Instruments	€M	156	150	133	137	142	147	152
	\$M	184	169	151	156	162	168	173
Electrical Quantity Measuring Instruments	€M	75	75	73	75	78	81	84
	\$M	88	84	83	86	89	92	95
Other Test & Measuring Instruments	€M	1071	1067	965	1002	1046	1091	1135
	\$M	1260	1199	1097	1139	1188	1240	1290
Total Instrumentation	€M	1604	1625	1518	1574	1640	1708	1775
	\$M	1887	1826	1725	1788	1863	1941	2017

ITALY MARKETS (ctd)

CONTROL & INSTRUMENTATION (ctd)		2018	2019	2020	2021	2022	2023	2024
Control & Instrumentation (ctd)								
Accessories & Parts	€M	448	453	444	458	475	492	509
	\$M	527	509	505	520	540	559	578
Control & Instrumentation Total	€M	3606	3618	3286	3411	3558	3711	3859
	\$M	4242	4065	3734	3876	4043	4216	4385

MEDICAL & INDUSTRIAL		2018	2019	2020	2021	2022	2023	2024
X-Ray & Medical Equipment								
X-Ray Equipment	€M	167	173	175	181	187	192	198
	\$M	196	194	199	205	212	219	226
Other Electromedical Equipment	€M	745	759	806	841	878	916	955
	\$M	876	853	916	956	998	1041	1085
Hearing Aids	€M	60	63	53	53	54	54	54
	\$M	71	71	60	61	61	61	61
X-Ray & Medical Equipment Total	€M	972	995	1034	1075	1118	1162	1207
	\$M	1144	1118	1175	1222	1271	1320	1372
Industrial Equipment								
Railway & Traffic Signalling Equipment	€M	97	98	89	92	95	98	101
	\$M	114	110	101	104	108	112	115
Other Signalling Equipment	€M	416	426	386	402	420	438	456
	\$M	489	479	439	457	477	498	518
Other Industrial Equipment	€M	49	47	42	43	43	44	45
	\$M	58	53	48	48	49	50	51
Industrial Equipment Total	€M	562	571	517	537	558	580	602
	\$M	661	642	588	610	634	660	684
Medical & Industrial Total	€M	1534	1566	1551	1612	1676	1742	1809
	\$M	1805	1760	1763	1832	1905	1980	2056

COMMUNICATIONS & RADAR		2018	2019	2020	2021	2022	2023	2024
Radar & Navigational Aids	€M	946	983	887	919	954	992	1032
	\$M	1113	1104	1008	1044	1084	1127	1173
Radio Comms inc Mobile Phones, Public Broadcasting & Parts	€M	3204	3145	2978	3101	3238	3385	3542
	\$M	3769	3534	3384	3524	3680	3847	4025
Communications & Radar Total	€M	4150	4128	3865	4020	4192	4377	4574
	\$M	4882	4638	4392	4568	4764	4974	5198

ITALY MARKETS (ctd)

TELECOMMUNICATIONS		2018	2019	2020	2021	2022	2023	2024
Telephone Sets	€M	104	94	90	91	93	95	97
	\$M	122	106	102	104	106	108	110
Other Telecommunications Equipment	€M	1454	1473	1427	1482	1543	1608	1678
	\$M	1711	1655	1622	1684	1753	1828	1907
Telecommunications Total	€M	1558	1567	1517	1573	1636	1703	1775
	\$M	1833	1761	1724	1788	1859	1935	2017

CONSUMER		2018	2019	2020	2021	2022	2023	2024
Video Equipment								
Colour Television	€M	1146	1114	1104	1125	1144	1151	1156
	\$M	1348	1252	1255	1278	1300	1308	1314
DVD Players & Recorders	€M	31	27	25	23	20	16	13
	\$M	36	30	28	26	23	18	15
Video & Digital Still Cameras	€M	264	254	232	216	198	183	172
	\$M	311	285	264	245	225	208	195
Video Tuners & Satellite Receivers	€M	111	106	103	97	92	87	84
	\$M	131	119	117	110	105	99	95
Video Equipment Total	€M	1552	1501	1464	1461	1454	1437	1425
	\$M	1826	1687	1664	1660	1652	1633	1619
Audio Equipment								
Portable Audio Equipment	€M	34	30	27	26	24	23	22
	\$M	40	34	31	29	27	26	25
Mains Audio Equipment	€M	32	29	26	23	21	19	17
	\$M	38	33	30	27	24	21	19
Car Audio	€M	82	78	66	64	61	59	57
	\$M	96	88	75	72	70	67	65
Other Audio Equipment	€M	140	138	135	131	128	124	121
	\$M	165	155	153	149	145	141	138
Audio Equipment Total	€M	288	275	254	244	234	225	217
	\$M	339	309	289	277	266	256	246
Personal Consumer Equipment								
Electronic Musical Instruments	€M	25	26	26	29	31	33	35
	\$M	29	29	30	33	35	38	40
Electric/Electronic Watches	€M	179	181	140	148	154	157	159
	\$M	211	203	159	168	175	178	180
Electric/Electronic Clocks	€M	18	16	12	13	14	15	15
	\$M	21	18	14	15	16	17	18

ITALY MARKETS (ctd)

CONSUMER (ctd)		2018	2019	2020	2021	2022	2023	2024
Personal Consumer Equipment								
Electronic Flashlights	€M	3	3	2	2	2	2	2
	\$M	4	3	2	2	2	2	2
Personal Consumer Equipment Total	€M	225	226	180	192	201	206	210
	\$M	265	254	205	218	229	234	239
Consumer Equipment Total	€M	2065	2002	1898	1896	1889	1868	1852
	\$M	2429	2249	2157	2155	2147	2123	2105

COMPONENTS		2018	2019	2020	2021	2022	2023	2024
Active Components								
Valves & Tubes	€M	26	35	21	21	20	20	19
	\$M	31	39	24	24	23	23	22
Diodes	€M	89	87	80	83	87	89	93
	\$M	105	98	91	94	99	101	106
Transistors	€M	130	127	119	124	130	134	139
	\$M	153	143	135	141	148	152	158
Thyristors	€M	20	19	16	17	17	18	18
	\$M	24	21	18	19	19	20	20
Other Discrete Semiconductors	€M	191	177	166	174	182	189	197
	\$M	225	199	189	198	207	215	224
Photoelectric Cells	€M	291	337	259	274	293	312	333
	\$M	342	379	294	311	333	355	378
Piezoelectric Crystals	€M	24	23	20	21	22	22	23
	\$M	28	26	23	24	25	25	26
ICs & Other Microcircuits	€M	1757	1627	1528	1656	1774	1827	1900
	\$M	2067	1828	1736	1882	2016	2076	2159
Active Components Total	€M	2528	2432	2209	2370	2525	2611	2722
	\$M	2974	2733	2510	2693	2869	2967	3093
Passive Components								
Fixed Capacitors	€M	113	109	100	106	111	115	118
	\$M	133	122	114	120	126	131	134
Variable Capacitors	€M	2	1	1	1	1	1	1
	\$M	2	1	1	1	1	1	1
Resistors	€M	93	88	85	90	93	96	100
	\$M	109	99	97	102	106	109	114
Connectors	€M	403	402	374	390	406	421	436
	\$M	474	452	425	443	461	478	495

ITALY MARKETS (ctd)

COMPONENTS		2018	2019	2020	2021	2022	2023	2024
Passive Components (ctd)								
Transformers & Inductors	€M	64	63	58	60	62	64	66
	\$M	75	71	66	68	70	73	75
Relays	€M	61	59	54	56	58	59	61
	\$M	72	66	61	64	66	67	69
Switches	€M	56	54	50	52	53	55	56
	\$M	66	61	57	59	60	63	64
Printed Circuit Boards	€M	369	361	335	348	362	376	389
	\$M	434	406	381	395	411	427	442
Passive Components Total	€M	1161	1137	1057	1103	1146	1187	1227
	\$M	1366	1278	1201	1253	1302	1349	1394
Other Components								
Microphones	€M	23	28	25	26	27	28	28
	\$M	27	31	28	30	31	32	32
Loudspeakers	€M	158	170	160	166	173	178	183
	\$M	186	191	182	189	197	202	208
Amplifiers	€M	34	31	29	28	28	27	26
	\$M	40	35	33	32	32	31	30
Aerials	€M	52	50	47	45	43	41	38
	\$M	61	56	53	51	49	47	43
Unrecorded Media	€M	107	102	97	89	81	74	67
	\$M	126	115	110	101	92	84	76
Accessories & Parts for Consumer Equipment	€M	325	331	333	341	350	358	365
	\$M	382	372	378	388	398	407	415
Other Components Total	€M	699	712	691	695	702	706	707
	\$M	822	800	785	790	798	802	803
Components Total	€M	4388	4281	3957	4168	4373	4504	4656
	\$M	5162	4810	4497	4736	4969	5118	5291

TOTAL MARKET - ITALY		2018	2019	2020	2021	2022	2023	2024
TOTAL MARKET	€M	22702	22513	21551	22265	23020	23707	24431
	\$M	26708	25296	24490	25302	26160	26940	27762

Notes: 2018 and 2019 are current figures at current exchange rates
2020 to 2024 are forecasts at 2020 constant values & exchange rates (i.e. Inflation is not included)
Base year 2020

YEARBOOK 2021 ORDER FORM



Title	Report Only	CD Rom (plus report)	Corporate Licence**	VAT UK Customers* only, European customers see below	Total £/US\$/€
Volume 1 West Europe 2021: ISBN 1 905429 843 (Pub Date 04/21)	£995/\$1395 €1195	£1295/\$1815 €1555	£1990/\$2785 €2390		
Volume 2 America, Japan, Asia Pacific 2021: ISBN 1 905429 851 (Pub Date 7/21)	£1295/\$1815 €1555	£1595/\$2235 €1915	£2590/\$3625 €3110		
Volume 3 East Europe & World Summary 2021: ISBN 1 905429 86X (Pub Date 9/21)	£995/\$1395 €1195	£1295/\$1815 €1555	£1990/\$2785 €2390		
2 Volume Set (Volumes 1 & 2)	£1995/\$2795 €2395	£2595/\$3635 €3115	£3990/\$5585 €4790		
3 Volume Set	£2556/\$3580 €3065	£3522/\$4930 €4225	£5112/\$7155 €6135		
				TOTAL	

*UK customers: to calculate VAT amount (applicable to CD-ROM and Corporate Licence only) deduct the 'REPORT ONLY' price from the CD-ROM or 'Corporate Licence' price (as applicable) to arrive at the taxable amount. VAT is currently 20%.

European customers please enter your VAT No. here (to avoid addition of VAT): _____

** The Corporate License allows electronic distribution (excluding distribution to third parties) of the report throughout your organisation, making it a cost effective and essential tool for your business.

DELIVERY ADDRESS

Name (Mr/Ms): _____

Position: _____

Organisation: _____

Address: _____

City: _____

Postcode/Zip: _____

Country: _____

Tel: _____

Fax: _____

Email Address*: _____

RETURN TO: ORDERS DEPARTMENT

Fax: +44 (0) 1235 420515
Tel: +44 (0) 1235 227310
Post: Reed Electronics Research,
 Boston House
 Grove Technology Park, Oxon OX12 9FF
 United Kingdom
 Email: orders@rer.co.uk

* We would like to keep you informed about our products and services. Please tick here if you do not wish to be contacted about this information. We do not pass email addresses on to third parties

PAYMENT

Payment enclosed - cheques payable to Reed Electronics Research (postage free of charge)

Please charge my MasterCard/Visa/American Express (postage free of charge)

Cardholder Name: _____

Cardholder Address: _____

Card Number: _____

Security Number: _____ Expiry Date: _____

Please invoice me: Company Purchase Order No: _____
 (postage and packing at cost)

Signature: _____

Date: _____