**DIGITAL & TRENDS** 





### Table of Contents

### 01 Overview

Embedded SIM (eSIM) global market size 2023-2027 Smartphone revenues worldwide 2011-2022 Smartphone shipments worldwide 2011-2022 IoT global revenue 2020-2030, by use case Semiconductor market size worldwide 2020-2030, by application

### 02 Benefits and challenges

eSIM benefits ranked by mobile network operators (MNOs) worldwide in 2021	
Top challenges for adopting eSIM in IoT solutions worldwide 2022	
eSIM: Consumers' most expected features 2022	
Consumer familiarity with eSIM in the United States, UK, and Australia 2022	
SIM and eSIM emissions in 2022, by life cycle phase	
Global average lifetime spend for IoT SIM, eSIM, and iSIM use 2022	
Average lifetime costs for SIM, eSIM, and iSIM across technologies 2022	

### 03 Adoption

Cumulative number of eSIM device shipments worldwide 2021-2030
Penetration rate of eSIM by cellular device 2030
Leading industries for eSIMs according to telecommunications business worldwide 2021
Plans for adopting eSIMs by 2025 within telecommunications business worldwide 2021

#### 04 Companies

<u>13</u> 14 15

<u>17</u> <u>18</u> <u>19</u> <u>20</u>

<u>03</u>	Ranking of eSIM provisioning companies worldwide 2022	22
<u>04</u>	Revenue of the Thales Group 2000-2022	<u>23</u>
<u>05</u>	Thales Group: revenue 2013-2022, by operating segment	<u>24</u>
<u>06</u>	Giesecke+Devrient net sales 2018-2022	<u>25</u>
07	Giesecke+Devrient net sales 2018-2022, by segment	<u>26</u>

### 05 Special focus: IoT device outlook

<u>09</u>	Number of IoT connected devices worldwide 2019-2030, by vertical	<u>28</u>
<u>10</u>	Cellular IoT connections worldwide 2022-2028, by connection technology	<u>29</u>
<u>11</u>	Global figure of connected devices 2014-2028, by device	<u>30</u>
<u>12</u>	Wide-area and short-range IoT device installed base worldwide 2014-2027	<u>31</u>



CHAPTER 01



# Embedded SIM (eSIM) market size worldwide in 2023 with a forecast for 2027 (in billion U.S. dollars)

Embedded SIM (eSIM) global market size 2023-2027



Description: The global embedded SIM (eSIM) market generated 4.7 billion U.S. dollars in 2023. Strong growth is forecast over the coming years, with the market expected to reach 16.3 billion U.S. dollars in revenue by 2027. Read more Note(s): Worldwide; 2023 and 2027; \*Forecast. Read more Source(s): Juniper Research

## Smartphone revenues worldwide from 2011 to 2022 (in billion U.S. dollars)

Smartphone revenues worldwide 2011-2022



Description: Betwewen 2011 and 2022, the global smartphone market revenue generally increased. In 2022, the smartphone market worldwide experienced a decrease, with its size going from over 448 billion U.S. dollars to around 419 billion U.S. dollars. Read more Note(s): Worldwide; 2011 to 2021 Source(s): Counterpoint Research

## Smartphone unit shipments worldwide from 2011 to 2022 (in millions)

Smartphone shipments worldwide 2011-2022

5



Description: The smartphone unit shipments worldwide close to tripled between 2011 and 2017 when it peaked at 1.56 billion units. Since then, however, the global smartphone shipments decreased year-on-year and reached 1.3 billion smartphone unit shipments unit 2020. If 2021 marked the first year to experience a growth in global smartphone unit shipments since 2017, global shipments decreased again to 1.23 million units in 2022. Read more Note(s): Worldwide; 2011 to 2022 Source(s): Counterpoint Research

# Internet of Things (IoT) annual revenue worldwide from 2020 to 2030, by use case (in billion U.S. dollars)

IoT global revenue 2020-2030, by use case



Description: From 2020 to 2030, the annual revenue of consumer internet and media devices is forecast to make a leap from 2.7 billion to 25 billion U.S. dollars. Connected vehicles IoT revenue is also anticipated to see a significant increase over the course of the next ten years. Read more
Note(s): Worldwide: 2020 to 2022; \*Forecast Read more



Source(s): Worldwide; 2020 to 2022; ^ Forecas

# Semiconductor market revenue worldwide from 2020 to 2030, by application (in billion U.S. dollars)

Semiconductor market size worldwide 2020-2030, by application



**Description:** By 2025, one of the leading application within the global semiconductor industry is expected to be smartphones, particularly the continued development of image sensors in such devices. In 2022, the smartphone semiconductor market was valued at 144 billion U.S. dollars, with projections suggesting this is likely to rise to 150 billion U.S. dollars by 2025. <u>Read more</u>



Note(s): Worldwide; 2020 to 2022; \* Forecast. The source calculated the semiconductor market size by application based on industry based on external research of market outlook. Read more Source(s): ASML

CHAPTER 02

## Benefits and challenges

# Importance of potential benefits associated with eSIM according to mobile network operators (MNOs) worldwide in 2021

eSIM benefits ranked by mobile network operators (MNOs) worldwide in 2021



## 9 Description: In a 2021 survey, a majority of mobile network operators (MNOs) ranked a range of benefits associated with eSIMs as "extremely" or "very" important. 50 percent ranked the potential of eSIM to streamline logistics costs by reducing physical SIM



purchasing as extremely important, the highest of 8 surveyed statements. <u>Read more</u> Note(s): Worldwide; 2021; 100 respondents; Respondents included global mobile network operators Source(s): GSMA Intelligence; Mobile World Live

# Main issues with eSIM for Internet of Things (IoT) adoption by companies worldwide in 2022

Top challenges for adopting eSIM in IoT solutions worldwide 2022

10



Description: In a 2022 survey, Internet of Things (IoT) adopter companies listed the main issues they had encountered with eSIM solutions, around 65 percent of whom cited the lack of technical support and monitoring tools to report on the device metrics as the biggest challenge. This challenge went hand-in-hand with the second most common issue, namely, that some mobile network operators (MNOs) only support one type of eSIM and therefore it was difficult to switch between eSIM profile types to [...] Read more Note(s): Worldwide; 2022; 759 respondents; respondents mainly represented companies that had adopted cellular connectivity for the Internet of Things (IoT). Source(s): Kaleido Intelligence; Truphone

# Costumers' most expected features of embedded SIM technology (eSIM) in 2022

eSIM: Consumers' most expected features 2022

11



Description: In 2022, over 30 percent of surveyed consumers rated greater flexibility as the most important and exciting benefit of embedded SIMs (eSIMs). Sustainability and enhanced device features ranked the lowest, with eleven and six percent of respondents selecting those features respectively. <u>Read more</u>

statista 🗹

Note(s): Worldwide, Australia, United Kingdom, United States; 2022; 2500 respondents; 18 years and older; Consumers in USA (1,000), UK (1,000) and Australia (500) Source(s): Amdocs; Dynata

# Consumer familiarity with eSIM in the United States, United Kingdom, and Australia in 2022

Consumer familiarity with eSIM in the United States, UK, and Australia 2022



12 Description: According to a 2022 study, 42 percent of surveyed consumers in the United States, United Kingdom, and Australia were unfamiliar with eSIM (embedded SIM) technology. eSIMs offer several benefits over traditional SIM cards, including faster activation and easier switching between networks. Read more United States (United Kingdom, Likited States), United States (United Kingdom, and Australia were unfamiliar with eSIM (embedded SIM) technology. eSIMs offer several benefits over traditional SIM cards, including faster activation and easier switching between networks. Read more United States (United Kingdom, United States), United States), United States (United Kingdom, United States), United States (United States), United States), United States, United States), United States, United States, United States, United States, United States, United States), United States, United States, United States,

Note(s): Worldwide, Australia, United Kingdom, United States; August 2022; 2,500 respondents; 18 years and older; consumers in USA (1,000), UK (1,000) and Australia (500) Source(s): Amdocs; Dynata



## SIM and eSIM CO2 emissions in 2022, by life cycle phase (in g CO2 eq.)

SIM and eSIM emissions in 2022, by life cycle phase

13



Description: eSIM technology scored 46 percent lower in carbon emissions when compared to traditional SIM cards in a 2022 Life Cycle Assessment (LCA). While the production of a traditional SIM emits a reported 229g CO2 equivalent through all of its life cycle phases (production, transport, usage, end device hardware and End of Life), an eSIM emits only 123g CO2 equivalent. Read more Note(s): Worldwide; 2022 Source(s): Fraunhofer; Giesecke+Devrient



# Lifetime SIM, eSIM, and iSIM use in the Internet of Things (IoT) cost comparison worldwide in 2022 (in U.S. dollars)

Global average lifetime spend for IoT SIM, eSIM, and iSIM use 2022

14



statista 🌠

Description: In a 2022 analysis, embedded SIM (eSIM) use cases for the Internet of Things (IoT) cost an average of eight percent less than traditional plastic SIM cards over the lifetime of a device, and integrated SIM (iSIM) solutions averaged even lower costs especially when paired with remote SIM provisioning (RSP). Plastic multiple international mobile subscriber identity (multi-IMSI) SIM cards were 76 U.S. dollars compared to eSIM multi-IMSI at 68 U.S. dollars, though the favored option of these [...] Read more Note(s): Worldwide: June 2022 Source(s): Transforma Insights

### ■ Plastic ■ eSIM component ■ eSIM module ■ iSIM

# Lifetime SIM, eSIM, and iSIM cost comparison for all technologies worldwide in 2022 (in U.S. dollars)

Average lifetime costs for SIM, eSIM, and iSIM across technologies 2022



■ Plastic ■ eSIM component ■ eSIM module ■ iSIM

15 Description: In a 2022 analysis, both embedded SIM (eSIM) and integrated SIM (iSIM) solutions averaged lower costs across the lifetime of all technologies using them such as smartwatches, cars, and the Internet of Things (IoT). The use of remote SIM provisioning (RSP) in particular was shown to reduce costs by an average of 15 percent, though traditional removable plastic SIMs showed the highest lifetime costs across all categories. The low upfront cost of traditional SIMs was cancelled out by the cost [...] Read more Note(s): Worldwide; June 2022 Source(s): Transforma Insights



以上内容仅为本文档的试下载部分,为可阅读页数的一半内容。如 要下载或阅读全文,请访问: <u>https://d.book118.com/00621514402</u> <u>3010134</u>