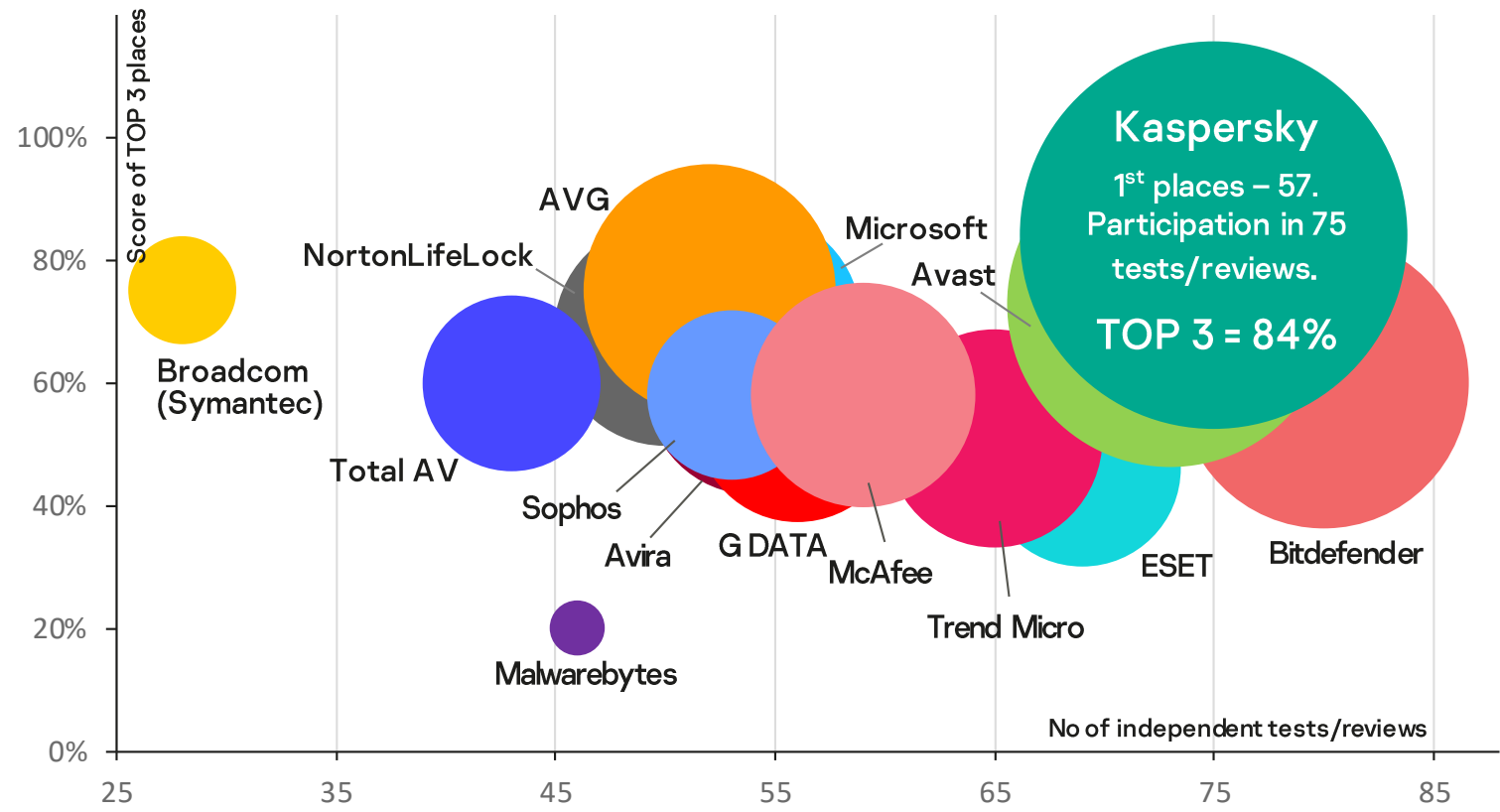


Most tested. Most awarded. Kaspersky protection.*



In 2021 Kaspersky products participated in 75 independent tests and reviews. Our products were awarded 57 firsts and achieved 63 top-three finishes.



MOST TESTED*
MOST AWARDED*
KASPERSKY PROTECTION
*kaspersky.com/top3

- * Notes:**
- According to summary results of independent tests in 2021 for corporate, consumer and mobile products.
 - Summary includes independent tests conducted by: AppEsteem, AV-Comparatives, AV-TEST, ICSA Labs, MRGEffitas, SE Labs, Testing Ground Labs, Virus Bulletin.
 - Tests performed in these programs assess all protection technologies against known, unknown and advanced threats.
 - The size of the bubble reflects the number of 1st places achieved.
 - Most tested over the period 2013 to 2021.

www.kaspersky.com/top3

2021 TOP3 metric description

2

TOP3 metric reflects how successful a vendor was in independent tests within a calendar year.

The main characteristic of success is a **TOP3** score that shows how many times a vendor with its products gained the first, second, or third place in independent tests they participated in within a reported period. The **TOP3 score** is calculated by dividing a vendor's **TOP3 counter** by a vendor's **Participation counter**.

The **TOP3 score** is determined for each participating vendor separately and then compared to each other.

- Depending on a test, final test results may vary from giving awards for participating vendors to providing only a list of their detection rates and false positives.
A vendor's **TOP3 counter** is incremented either for winning an award or ranking in the first three places in a test. It cannot be incremented both for receiving the award and one of the first three places. Several vendors can achieve equal results in detection rates, or summary results, or win awards of the same grade. In this case, the vendors share the same place in the same test. In case of detection rates or summary results, the place of a vendor with the lower result is calculated as "number of higher ranked vendors + 1". For instance, the sequence "1,1,2,3" is not possible, whilst "1,1,3,4", or "1,2,2,4", or "1,1,1,1,6" are. In the latest sequences TOP3 counter will be incremented for bolded vendors only.
- A vendor's Participation counter is incremented each time one of its products participates in a test/review/overview. In some tests several products of one vendor can participate in the same test. In those cases, since all products increment the vendor's Participation counter, the Participation counter can be higher than a total number of tests.

Only those who participate in 35% or more of the total number of tests have their results represented in the chart.

The deadline for submitting scores attained in 2021 was February, 1st 2022, with no option to add any test/review after this date.

Among the security vendors participating in the TOP3 measurements are: Avast, AVG, Avira, Bitdefender, BlackBerry (Cylance), Broadcom (Symantec), BullGuard, CrowdStrike, ESET, F-Secure, G DATA, McAfee, Kaspersky, Microsoft, NortonLifeLock, Palo Alto, Panda, Sentinel One, Sophos, Trend Micro, Quick Heal and VMware (Carbon Black). A complete list of participants appears at the end of this document.

	No of tests entered	No of TOP3 places	Score of TOP3 places (%)	No of 1st places
Kaspersky	75	63	84%	57
AVG	52	39	75%	37
Broadcom (Symantec)*	28	21	75%	16
Avast	73	53	73%	48
Microsoft	54	38	70%	32
NortonLifeLock	50	34	68%	33
Bitdefender	80	48	60%	43
Total AV	43	26	60%	26
Avira	54	32	59%	31
McAfee	59	34	58%	33
Sophos	53	31	58%	25
G DATA	56	30	54%	30
Trend Micro	65	33	51%	32
ESET	69	32	46%	29
Malwarebytes	46	9	20%	8

*Broadcom (Symantec) participated in only 23% of the total number of tests, but we consider it valuable to have the vendor's results represented in the chart.

These tests were performed against various types of malware, including advanced threats as well as false positives

Specific threats

Ransomware

- AV-Comparatives. Advanced Threat Protection Test: Consumer and Business
- AV-Comparatives. Business Security Test
- AV-Comparatives. Malware Protection Test
- AV-Comparatives. Real-World Protection Test
- AV-TEST. Advanced Threat Protection: Ransomware Protection Test
- AV-TEST. Bi-Monthly Certification: Consumer and Business
- AV-TEST. Red Team Test: EDR and EPP, Consumer and Business
- SE Labs. Enterprise Advanced Security (EDR) Test
- SE Labs. Enterprise Endpoint Protection Test
- SE Labs. Home Anti-Malware Protection Test
- SE Labs. Small Business Endpoint Protection Test
- MRG Effitas. 360 Degree Assessment & Certification

Fileless

- AV-Comparatives. Endpoint Prevention & Response (EPR) Test
- AV-Comparatives. Advanced Threat Protection Test: Consumer and Business

Exploits

- AV-Comparatives. Advanced Threat Protection Test: Consumer and Business

- MRG Effitas. 360 Degree Assessment & Certification
- SE Labs. Enterprise Advanced Security (EDR) Test
- SE Labs. Enterprise Endpoint Protection Test
- SE Labs. Home Anti-Malware Protection Test
- SE Labs. Small Business Endpoint Protection Test

APT

- AV-Comparatives. Advanced Threat Protection Test: Consumer and Business
- AV-Comparatives. Endpoint Prevention & Response (EPR) Test
- ICSA. Advanced Threat Detection Certification
- SE Labs. Enterprise Advanced Security (EDR) Test

Phishing

- AV-Comparatives. Anti-Phishing Test

Stalkerware

- AV-Comparatives. Stalkerware Test
- AV-TEST. Stalkerware Test

Dedicated tests

- AV-Comparatives. Android VPN Test
- AV-TEST. Personal Identifiable Information Protection: Sensitive Data Discovery test
- AV-TEST. Parental Control Certification
- AV-TEST. VPN Test

Android tests

- AV-Comparatives. Android VPN Test
- AV-Comparatives. Mobile Security Review
- AV-Comparatives. Stalkerware Test
- AV-TEST. Android Mobile Security Products Test: Consumer and Business
- AV-TEST. Stalkerware Test
- MRG Effitas. Android 360 Assessment Programme
- Testing Ground Labs. Android Malware Detection Test

Mac tests

- AV-Comparatives. Mac Security Test & Review
- AV-TEST. Mac Detection & Performance Test: Consumer and Business

Real-world tests

- AV-Comparatives. Advanced Threat Protection Test: Consumer and Business
- AV-Comparatives. Business Security Test
- AV-Comparatives. Real-World Protection Test
- AV-TEST Bi-Monthly Certification Consumer and Business
- SE Labs. Enterprise Endpoint Protection Test
- SE Labs. Home Anti-Malware Protection Test
- SE Labs. Small Business Endpoint Protection Test

False positives (FP)

- All the tests mentioned above include FP measurements

The following tests were performed in 2021 and used to calculate the metric:

AppEsteem

• **Deceptor Fighter Certification**

These tests are held every month, and measure the ability of participating products to block Deceptors apps and allow Certified apps.

Only products that block 95% / allow no more than two of the Deceptor apps, and allow 95% / block no more than two of the Certified apps, pass the certification and gain an increment of TOP3 counter for their vendor.

AV-Comparatives

• **Product of the Year**

At the end of the year, this annual award is given to the Consumer related product which attained the highest awards in an entire year's testing cycle, involving the following tests: 2 Malware Protection Tests (MPT) + 2 Real-World Protection Tests (RWPT) + Enhanced Real-World Test + 2 Performance Tests. According to AV-Comparatives' rules, in cases where two or more products receive the same maximum score, the award goes to the product which gained the highest individual scores and did not receive it the previous year. The seal is counted as a first place in the TOP3 metric

Products which were nominated, but did not receive the 'Product of the Year' award, are given the 'Outstanding Product' rank for their vendors, which counts as a second place in the TOP3 metrics.

Products which achieved at least 90 points across the entire test cycle are awarded the 'Top Rated' rank for their vendors, which counts as a third place in the TOP3 metric. Products that fail to score any points in, at least, one of the tests are excluded.

At the end of the year, medals ('Gold', 'Silver', 'Bronze') are also given for the best results in specific tests: MPT, RWPT, Performance, Enhanced Real-World Test. As these test results have already contributed to overall TOP3 metrics, the medals themselves do not count towards it since 2015.

Only awards can contribute towards TOP3 counters in AV-Comparatives tests.

• **Malware Protection Test**

This test is a successor of the File Detection Test and includes execution of the tested files. It is conducted twice a year and, correspondingly, is counted two times in the metrics. The test consists of two parts: Detection Rate and False Positives.

Products receive the following awards: "Advanced+", "Advanced", "Standard" or "Tested". Only products with "Advanced+" gain an increment of TOP3 counters for their vendor.

• **Real-World Protection Test**

The test lasts for four months and is finalized in a half-year report using mainly current, visible, and relevant malicious websites/malware. The test is conducted twice a year and, correspondingly, counted two times in the metrics. Because all product components contribute a significant role in overall protection, results achieved in this category are a good indicator of anti-malware product efficiency in real-world scenarios.

Products receive the following awards: "Advanced+", "Advanced", "Standard" or "Tested". Only products with "Advanced+" gain an increment of TOP3 counters for their vendor.

• **Anti-Phishing Test**

This test is performed and counted in the metrics once a year and simulates a common situation: users rely on the anti-phishing protection provided by their security products while browsing the web. The test consists of two parts: Detection Rate and False Positives.

If all products achieved zero False Positives, the products achieving the highest three places based on Protection Rate, gain an increment of TOP3 counters for their vendor.

If any of participating products achieved any False Positives, only certified products gain an increment of TOP3 counters for their vendor.

AV-Comparatives

• **Advanced Threat Protection Test: Consumer and Business**

This test uses hacking and penetration techniques that allow attackers to target specific external computer systems, and evaluates how well security products protect against such attacks. This test checks protection against targeted advanced threats, such as exploits and fileless attacks.

Despite the fact that all products from consumer Main-Test-Series are expected to be tested by default, the vendors were given the opportunity to opt out of this test before it started, which is why not all vendors are included in this test. This test is conducted and counted in the metrics once a year. Consumer and Business related products are assessed separately.

Consumer products receive the following awards: "Advanced+", "Advanced", "Standard" or "Tested". Only products with "Advanced+" gain an increment of TOP3 counters for their vendor.

Business products which block at least 8 of the 15 attacks used in the test, without blocking non-malicious operations, are certified by the test lab and gain an increment of TOP3 counters for their vendor.

• **Endpoint Prevention & Response (EPR) Test**

This test is performed and counted once a year and includes a study of security solution performance metrics in relation to targeted attacks (time to prevention; time to response), correlating all stages to the tactics and techniques of the MITRE ATT&CK matrix, and the total cost of ownership (TCO) calculated for each product.

Products that demonstrate the three highest Prevention/Response Capabilities gain an increment of TOP3 counters for their vendor.

• **Business Security Report**

This report is published twice a year. Correspondingly, it is counted twice in the metrics. The report includes a review of various business security products and evaluates the protection efficiency in categories such as Protection Rate on different malware sets, websites, and exploits, and a False Positive level.

Products achieving at least a 90 percent Protection Rate with no False Positives on common business software in the Malware Protection Test and at least 90 percent Protection Rate with less than 100 False Positives on any clean software/websites in the overall Real-World Protection Test, with no major performance issues, are certified by the test lab, and gain an increment of TOP3 counters for their vendor.

• **Stalkerware Test**

This test is performed and counted in the metrics once a year. It evaluates capabilities of Android-based endpoint security solutions and a network analysis tool TinyCheck, which runs on Linux-based devices such as Raspberry Pi mini-computers, to detect the Stalkerware class of threats and correctly cooperate with stalkerware victims in case Stalkerware is detected on a mobile device. Due to it being methodological impossible to compare TinyCheck with Android-based security solutions, these products are assessed separately.

Products placing in the highest three positions based on the Detection Rate gain an increment of TOP3 counters for their vendor.

• **Mobile Security Review**

This review is done and counted in the metrics once a year and includes a malware protection test along with an overview of additional features (theft protection, battery consumption, etc.).

If all products achieved zero False Positives, the products achieving the highest three places based on Protection Rate gain an increment of TOP3 counters for their vendor.

If any of participating products achieved any False Positives, only certified products gain an increment of TOP3 counters for their vendor.

• **Mac Security Test & Review**

This review is done and counted in the metrics once a year and evaluates various Mac protection products against a product feature list and measures protection levels in categories such as Detection Rate on separate Mac- & Windows-related malware sets and a False Positive level.

If all products achieve zero False Positives, the products achieving the highest three places based on Protection Rate, gain an increment of TOP3 counters for their vendor.

If any of participating products achieve any False Positives, only certified products gain an increment of TOP3 counters for their vendor.

2021 TOP3 metric description

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AV-Comparatives

- **Android VPN Test**

This test is done and counted in the metrics once a year. It is performed in collaboration with PC Magazine and assesses several customer-selected Android-based VPN applications in terms of security, privacy, download speed, upload speed, and latency.

Only certified products gain an increment of TOP3 counters for their vendor.

AV-Test

- **Best Protection Award: Consumer and Business**

This annual award is given once a year for perfect results in the Protection category over the course of an entire year, during which bi-monthly certification takes place. Consumer and Business related products are assessed separately.

Only products that receive this award gain a TOP3 counter increment for their vendor.

- **Best Usability Award: Consumer and Business**

This annual award is given once a year for perfect results in the Usability category over the course of an entire year, during which bi-monthly certification takes place. Consumer and Business related products are assessed separately.

Only products that receive this award gain a TOP3 counter increment for their vendor.

- **Best Android Security: Consumer and Business**

This annual award is given once a year for perfect results in the Android security testing over the course of a whole year. Consumer and Business related products are assessed separately.

Only products that receive this award gain a TOP3 counter increment for their vendor.

- **Best Mac Security: Consumer and Business**

This annual award is given once a year for perfect results in the Mac security testing over the course of a whole year. Consumer and Business related products are assessed separately.

Only products that receive this award gain a TOP3 counter increment for their vendor.

- **Bi-Monthly Certification: Consumer and Business**

This year-long certification series consists of Consumer and Business segments, each divided into six separate, two-month-long tests, which results are published every even months, i.e. this test is counted 6 times in the metrics. Consumer and Business related products are assessed separately. All participating products are evaluated and receive points in Protection, Performance and Usability categories. The sum of the points gained in each category makes up the overall score; products in the top three have their TOP3 counters incremented.

- **Android Mobile Security Products Test: Consumer and Business**

This year-long certification series evaluates various security protection products for Android and consists of Consumer and Business segments, each divided into six separate tests. Their results are published every odd month, i.e. this test is counted 6 times in the metrics. Consumer and Business related products are assessed separately. All participating products are evaluated and receive points in Protection, Performance and Usability categories. The sum of the points gained in each category makes up the overall score; products in the top three have their TOP3 counters incremented.

- **Mac Detection & Performance Test: Consumer and Business**

This test evaluates various security protection products for Mac OS X and consists of Consumer and Business segments, the results of which are published and counted in the metrics four times a year. Consumer and Business related products are assessed separately. All participating products receive points in Protection, Performance and Usability categories. The sum of the points gained in each category makes up the overall score; products in the top three have their TOP3 counters incremented.

AV-Test

- **Personal Identifiable Information Protection: Sensitive Data Discovery Test**

This vendor-commissioned test is done and counted in the metrics once a year. It assesses two solutions and aims to reveal their capabilities to detect German Personal Identifiable Information (PII) in documents floating in an Office 365 account without generating False Positives.

Each product that passes the certification gains an increment of TOP3 counter for their vendor.

- **VPN Test**

The test is performed and counted in the metrics once a year. It assesses and compares VPN solutions by separate topics of usability, security, privacy, speed, and transparency.

Each product that passes the certification gains an increment of TOP3 counter for their vendor.

- **Parental Control Certification**

This vendor-commissioned test is performed and counted in the metrics once a year and evaluates protection efficiency of security products on Windows, Android and iOS platforms to protect children from visiting unwanted web sites.

Only certified products gain an increment of TOP3 counters for their vendor.

The URL to be provided one of these days

- **Advanced Threat Protection: Ransomware Protection Test**

This vendor-commissioned test is done and counted in the metrics once a year. It assesses security solutions for their protection efficiency against ransomware attacks, implemented in three different scenarios and incorporating different popular ransomware families.

Products placing in the highest three positions based on the Total Protection Rate gain an increment of TOP3 counters for their vendor.

- **Red Team Test: EDR and EPP, Consumer and Business**

This test is done and counted in the metrics twice a year. It assesses detection capabilities of EDR solutions and threat prevention capabilities of EPP solutions against APT attacks deploying ransomware without generating False Positives on normal operations. The executed attack chains are split into separate stages attributed to different TTPs from MITRE ATT&CK. EDR and EPP related products, Consumer and Business ones are assessed separately.

Only certified products gain an increment of TOP3 counters for their vendor.

- **Stalkerware Test**

This test is performed and counted in the metrics one time a year and evaluates capabilities of Android-based security solutions to detect stalkerware class of threats and correctly cooperate with stalkerware victims in case stalkerware is detected on a mobile device.

Products placing in the highest three positions based on the Detection Rate gain an increment of TOP3 counters for their vendor.

ICSA Labs

- **Advanced Threat Defense Certification**

This assessment is performed every quarter, i.e. four times a year, and aims to evaluate the efficiency of security solutions to detect new and little-known threats while minimizing false positives.

Each product that passes the certification gains an increment of TOP3 counter for their vendor.

MRG Effitas

- **360 Assessment & Certification**¹

This test is conducted and published four times a year and evaluates both the ability to block initial infection and time taken to detect and remediate malware on a compromised system. This test replaces the older "Time to Detect & Remediate Assessment" test. Only certified products gain an increment of TOP3 counters for their vendor.

- **Android 360 Assessment Programme**¹

This test is conducted and published four times a year and evaluates both the ability to block initial infection while copying it to the device, so called the Early Stage Detection, and while running it, the Installation Stage. The test also includes a false positive subtest.

Products placing in the highest three positions based on the combined of two stages Detection Rate gain an increment of TOP3 counters for their vendor.

¹ Results for the fourth quarter were not taken into account in the TOP3 metrics as they had not been published by the database freeze deadline.

SE Labs (formerly known as Dennis Technology Labs)

- **Enterprise Endpoint Protection Test**
- **Small Business Endpoint Protection Test**
- **Home Anti-Malware Protection Test**

These quarterly-long tests are published and counted in the metrics four times a year. These tests aim to compare the effectiveness of anti-malware products provided by well-known security companies. Enterprise, Home, and Small Business products are evaluated separately. The products are exposed to live Internet threats during the test period. This exposure is carried out in a very realistic way, closely reflecting the customer experience. The results reflect how products perform under real-life, customer-use-case scenarios, i.e. what happens when a user visits an infected website. The tests include a detection subtest and a false positive one.

Three products with the highest Total Accuracy Rating scores (calculated as a combination of points of the two subsets) gain an increment of TOP3 counters for their vendor.

- **Enterprise Advanced Security (EDR) Test**

This test is published and counted in the metrics one time this year. It is also known as Breach Response Test (Detection, Protection) and evaluates effectiveness of a tested product against a range of hacking attacks designed to compromise systems and penetrate target networks in the same way as criminals and other attackers breach systems and networks. The tests include a detection subtest and a false positive one. Detection and Protection parts are evaluated separately.

Three products with the highest Total Accuracy scores (calculated as a combination of points of the two subsets) gain an increment of TOP3 counters for their vendor.

- **Annual Awards “BEST”**

These annual awards are counted in the metrics once a year and given for perfect results in different categories over the course of an entire year: Consumer Anti-Malware, Email Security Service, Endpoint Detection Response, Enterprise Endpoint, Free Anti-Malware, Innovator, Network Detection and Response, New Endpoint, Next Generation Firewall, Product Development, Small Business Endpoint. Each award is assessed separately.

Only products that receive one of these awards gain a TOP3 counter increment for their vendor.

Testing Ground Labs

- **Android Malware Detection Test: Consumer and Business**

This test evaluates how effectively mobile products can protect users' Android-based devices from threats. It includes a detection subtest and a false positives one. Consumer and Business related products are assessed separately and are published three times (Consumer) and one time (Business) this year.

Three products with the highest Total Scores (calculated as a combination of the two subsets) gain an increment of TOP3 counters for their vendor.

VirusBulletin

- **VB100 Certification**

These tests are held every month starting from August, 2021 on the Win10 operating system to evaluate different types of products (before that, these tests were held every second month); the reports are published eight times this year.

Each product that passes the certification gains an increment of TOP3 counter for their vendor.

2021 TOP3 metric description

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- | | | | | | |
|-----------------------|-------------------------|----------------------------|--------------------------------|-------------------------|-------------------------|
| • 1E | • Comodo | • ExpressVPN International | • Microworld | • Scanguard | • Vendor A |
| • Acronis | • CORE | • Faronics | • NordVPN | • SecureAge | • Vendor B |
| • AdSpider | • Coronet | • FireEye | • NorthGuard | • SecuriON | • Viettel Security |
| • Ahnlab | • CrowdStrike | • Fortinet | • NortonLifelock | • SentinelOne | • VIPRE |
| • Antiy Labs | • Cybereason | • F-Secure | • Palo Alto | • Seqrite | • VMware (Carbon Black) |
| • ArcaBit | • CyberGhost S.A. | • G DATA | • Panda | • Sequestec | • WatchGuard |
| • Avast | • BlackBerry (Cylance) | • Google | • Pango | • Shield Antivirus | • Webroot |
| • AVG | • Cynet | • GoSecure | • PC Pitstop | • SonicWall | • Zemana |
| • Avira | • CyRadar | • Hammock | • PCProtect | • Sophos | • Zoner |
| • Barracuda | • Data443 | • Ikarus | • Private Internet Access Inc. | • Tabidus | |
| • Bitdefender | • Defenx | • Intego | • PrivaxLimited | • TAPI Security Labs | |
| • Broadcom (Symantec) | • Dr.Web | • Juniper | • Proton Technologies | • TeamViewer | |
| • BullGuard | • Elastic | • K7 | • Qi-ANXIN | • Tencent | |
| • Check Point | • EmsiSoft | • Kaspersky | • Qihoo 360 | • TGSoft | |
| • CHOMAR | • Enigma Software Group | • Lavasoft | • Quick Heal | • Total Defense | |
| • Cisco | • eScan | • LINE | • RCS LT | • Total AV | |
| • ClamXav | • ESET | • Malwarebytes | • RevBits | • Trend Micro | |
| • Clario | • ESTsecurity | • McAfee | • Rising | • Tuxguard | |
| • CMC Cyber Security | • Exosphere | • Microsoft | • Sangfor | • Tweaking Technologies | |