FortiSandbox™
Multi-layer proactive threat mitigation

FortiSandbox

FortiSandbox 1000D, 3000D, FortiSandbox-VM and FortiSandbox Cloud

Multi-layer proactive threat mitigation

Today's most sophisticated cybercriminals are increasingly bypassing traditional antimalware solutions and inserting advanced persistent threats deep within networks. These highly targeted attacks evade established signature-based detection by masking their malicious nature in many ways — compression, encryption, polymorphism, the list of techniques goes on. Some have even begun to evade virtual "sandbox" environments using VM detection, "time bombs" and more. Fighting today's attacks requires a comprehensive and integrated approach — more than antimalware. More than a virtual sandbox. More than a separate monitoring system.

FortiSandbox offers a robust combination of proactive detection and mitigation, actionable threat insight and easy, integrated deployment. At its foundation is a unique, dual-level sandbox which is complemented by Fortinet's award-winning antimalware and optional integrated FortiGuard threat intelligence. Years of Fortinet threat expertise is now packaged up and available on site via FortiSandbox.

Proactive Detection and Mitigation

Suspicious codes are subjected to multi-layer pre-filters prior to execution in the virtual OS for detailed behavioral analysis. The highly effective pre-filters include a screen by our AV engine, queries to cloud-based threat databases and OS-independent simulation with a code emulator, followed by execution in the full virtual runtime environment. Once a malicious code is detected, results are submitted for antimalware signature creation as well as updates to other threat databases.

Actionable Insight

All classifications — malicious and high/medium/low risk — are presented within an intuitive dashboard. Full threat information from the virtual execution — including system activity, exploit efforts, web traffic, subsequent downloads, communication attempts and more — is available in rich logs and reports.

The ultimate combination of proactive mitigation, advanced threat visibility and comprehensive reporting.
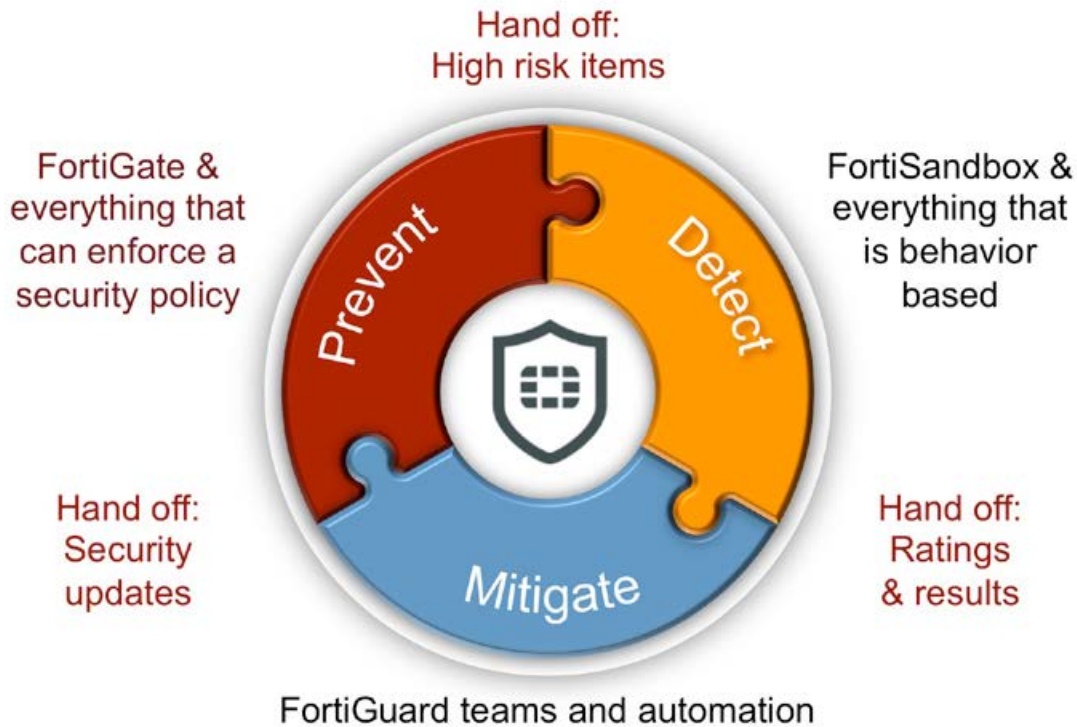
- Secure virtual runtime environment exposes unknown threats

- Unique multi-layer pre-filters for fast and effective threat detection

- Rich reporting for full threat lifecycle visibility

- Inspection of many protocols in one appliance simplifies deployment and reduces cost

- Integration with FortiGate enhances rather than duplicates security infrastructure

- Validated security with NSS BDS (Breach Detection Systems) testing

ADVANCED THREAT PROTECTION FRAMEWORK

The most effective defense against advanced targeted attacks is founded on a cohesive and extensible protection framework. The Fortinet framework uses security intelligence across an integrated solution of traditional and advanced security tools for network, application and endpoint security, and threat detection to deliver actionable, continuously improving protection.

Fortinet integrates the intelligence of FortiGuard Labs into FortiGate next generation firewalls, FortiMail secure email gateways, FortClient endpoint security, FortiSandbox advanced threat detection, and other security products to continually optimize and improve the level of security delivered to organizations with a Fortinet solution.

Hand off:
High risk items

FortiGate &
everything that
can enforce a
security policy

Prevent

Detect

FortiSandbox &
everything that
is behavior
based

Hand off:
Security
updates

Mitigate

Hand off:
Ratings
& results

FortiGuard teams and automation

Prevent Attacks

Fortinet next generation firewalls, secure email gateways, endpoint security and similar solutions use security such as antivirus, web filtering, IPS, and other traditional security techniques to quickly and efficiently prevent known threats from impacting an organization.

Detect and Analyze Threats

FortiSandbox and other advanced detection techniques step in to detect "Zero-day" threats and sophisticated attacks, delivering risk ratings and attack details necessary for remediation.

Mitigate Impact and Improve Protection

In a Fortinet solution, detection findings can be used to trigger prevention actions to ensure the safety of resources and data until remediation is in place. Finally, the entire security ecosystem updates to mitigate any impact from future attacks through the strong, integrated threat intelligence research and services of FortiGuard Labs.

DEPLOYMENT OPTIONS

Easy Deployment

FortiSandbox supports inspection of many protocols in one unified solution, thus simplifies network infrastructure and operations. Further, it integrates with FortiGate as a new capability within your existing security framework.

The FortiSandbox is the most flexible threat analysis appliance in the market as it offers various deployment options for customers' unique configurations and requirements. Organizations can also have all three input options at the same time.
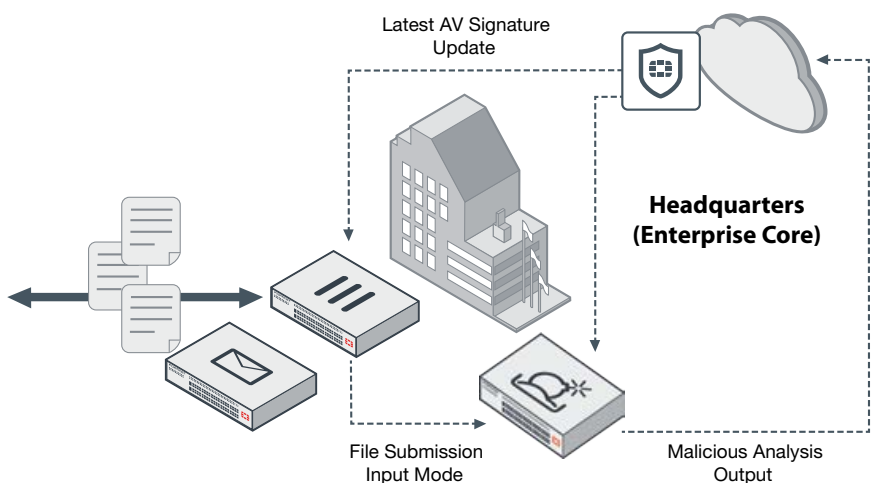
Standalone

This deployment mode relies on inputs from spanned switch ports and/or administrators' on-demand file uploads using the GUI. It is the most suitable infrastructure for adding protection capabilities to existing threat protection systems from various vendors.

Data Center

Sniffer Input Mode   On-Demand Input Mode
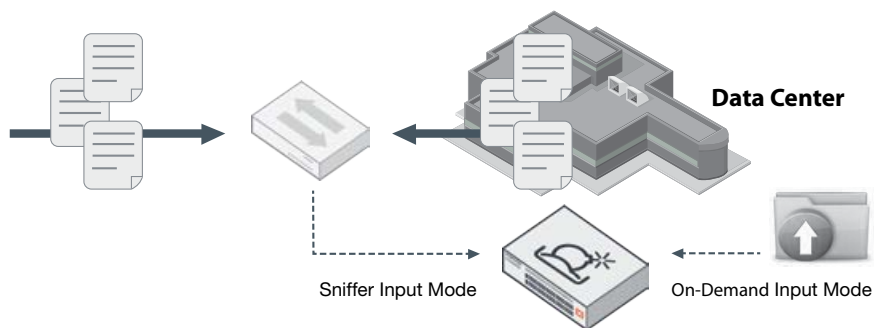
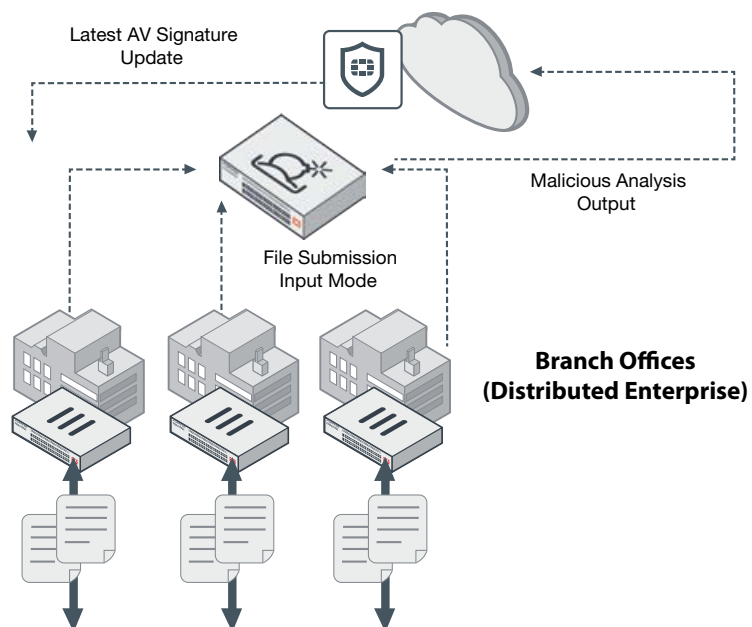## *FortiGate/FortiMail Integrated

The FortiGate, as the Internet security gateway, can be set up to submit suspicious files to the FortiSandbox. This seamless integration reduces network complexity and expands the applications and protocols supported including SSL encrypted ones such as HTTPS.
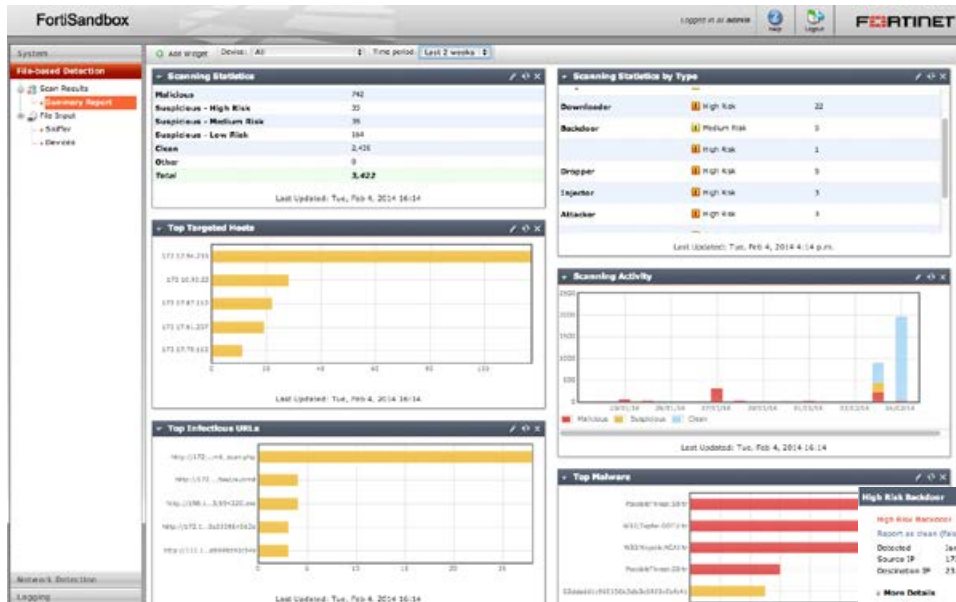
* Requires: FortiOS V5.0.4+, FortiMail V5.1+

Latest AV Signature Update

Headquarters (Enterprise Core)

File Submission Input Mode   Malicious Analysis Output

Distributed FortiGate Integrated

This deployment is attractive for organizations that have distributed environments, where FortiGates are deployed in the branch offices and submit suspicious files to a centrally-located FortiSandbox. This setup yields the benefits of lowest TCO and protects against threats in remote locations.
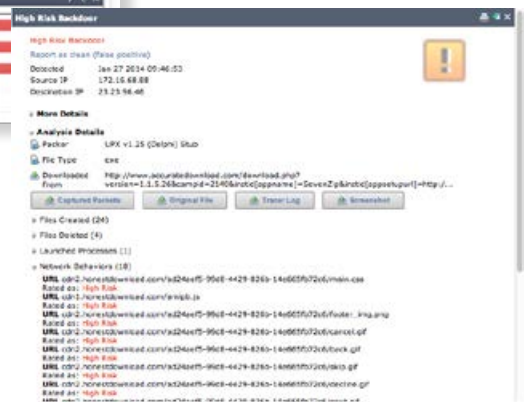

Latest AV Signature Update

Malicious Analysis Output

File Submission Input Mode

Branch Offices (Distributed Enterprise)

FEATURES

Dashboard widgets — real-time threat status

VM Sandboxing

Complement your established defenses with cutting-edge capability — analyzing suspicious and high-risk files in a contained environment to uncover the full attack lifecycle using system activity and callback detection.

Detailed file analysis report

File Analysis Tools

Reports with captured packets, original file, tracer log and screenshot provide rich threat intelligence and actionable insight after files are examined. This is to speed up remediation and updated protection.
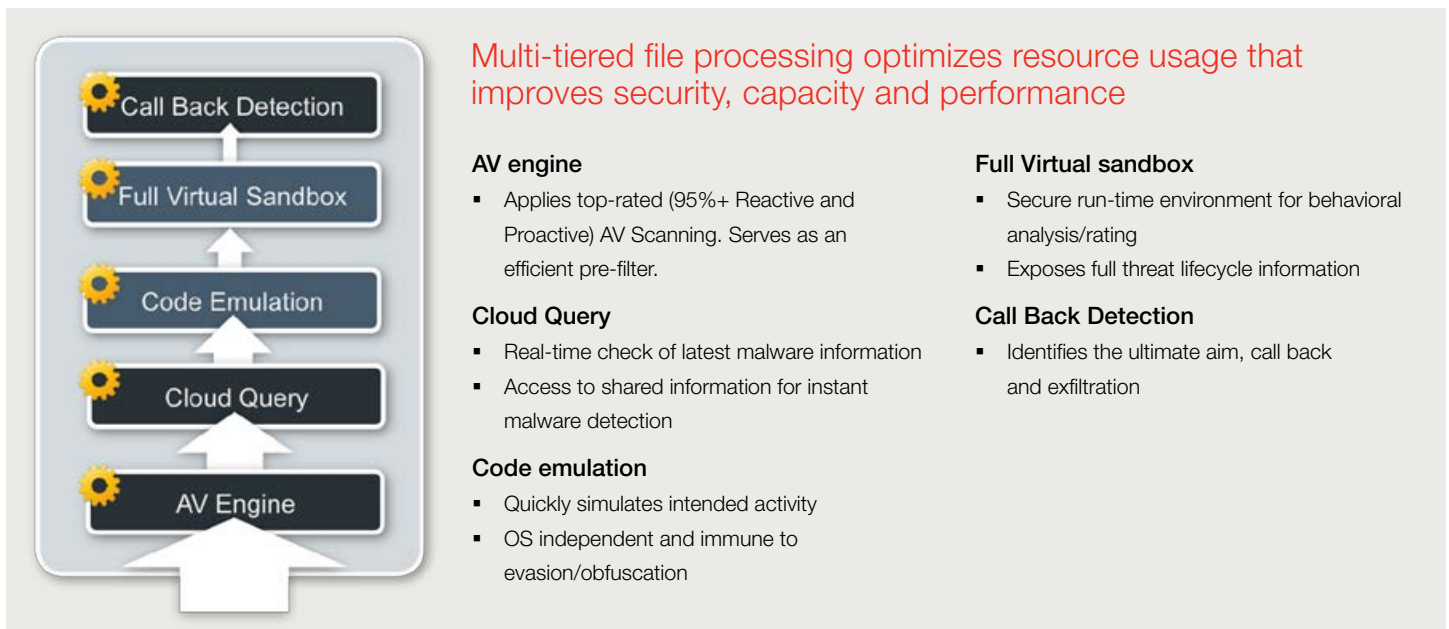
Multi-tiered file processing optimizes resource usage that improves security, capacity and performance

AV engine
- Applies top-rated (95%+ Reactive and Proactive) AV Scanning. Serves as an efficient pre-filter.

Cloud Query
- Real-time check of latest malware information
- Access to shared information for instant malware detection

Code emulation
- Quickly simulates intended activity
- OS independent and immune to evasion/obfuscation

Full Virtual sandbox
- Secure run-time environment for behavioral analysis/rating
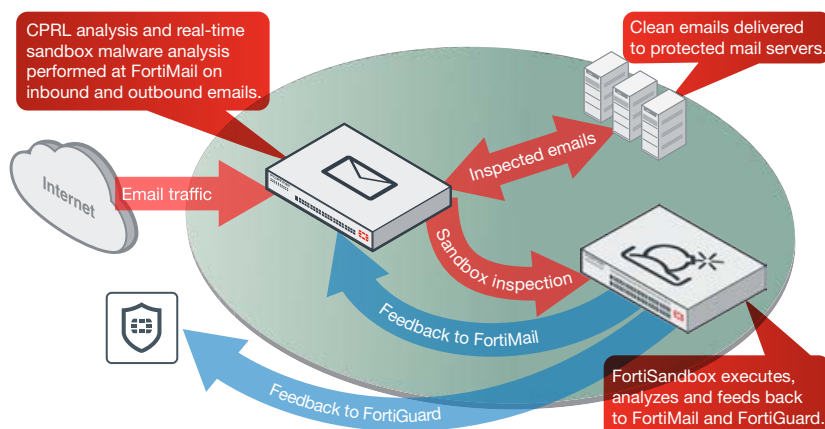- Exposes full threat lifecycle information

Call Back Detection
- Identifies the ultimate aim, call back and exfiltration

FEATURES

Remediation with FortiMail

With many advanced threats starting with a targeted email that contains custom malware, in addition to social engineering that entices the user to open it, organizations are extending their secure email gateway (SEG) with integrated sandboxing. Specifically, the SEG will hold messages while additional analysis is performed in this contained run-time environment and, ultimately, apply policies based on its returned findings.

CPRL analysis and real-time sandbox malware analysis performed at FortiMail on inbound and outbound emails.

Clean emails delivered to protected mail servers.

Internet

Email traffic

Inspected emails

Sandbox inspection

Feedback to FortiMail

Feedback to FortiGuard

FortiSandbox executes, analyzes and feeds back to FortiMail and FortiGuard.

FortiMail submits and queues for suspicious content

FEATURES SUMMARY

Administration
- Supports WebUI and CLI configurations
- Multiple administrator account creation
- Configuration file backup and restore
- Notification email when malicious file is detected
- Weekly report to global email list and FortiGate administrators
- Centralized search page which allows administrators to build customized search conditions
- Frequent signature auto-updates
- Automatic check and download new VM images
- VM status monitoring

Networking/Deployment
- Static Routing Support
- File Input: Offline/sniffer mode, On-demand file upload, file submission from integrated device(s)
- Web-based API with which users can upload samples to scan indirectly
- Option to create simulated network for scanned file to access in a closed network environment
- Device Integration:
  – File Submission input: FortiGate, FortiMail
  – Update Database host: FortiManager
  – Remote Logging: FortiAnalyzer, Syslog Server

Advanced Threat Protection
- Virtual OS Sandbox:
  – Concurrent Windows instances
  – Anti-evasion techniques: sleep calls, process and registry queries
  – Callback Detection: malicious URL visit, Botnet C&C communication and Attacker traffic from activated malware
  – Download Capture packets, Original File, Tracer log and Screenshot
- Unlimited file size support, maximum file size configurable

- File type support:
  – Archived: .tar, .gz, .tar.gz, .tgz, .zip, .bz2, .tar.bz2, .bz, .tar.Z, .cab, .rar, .arj
  – Executable files: (eg: .exe, .dll), PDF, Windows Office Document, Javascript, AdobeFlash and JavaArchive (JAR) files
  – Media files: .avi, .mpeg, .mp3, .mp4
- Protocols/applications supported:
  – Sniffer mode: HTTP, FTP, POP3, IMAP, SMTP, SMB
  – Integrated mode with FortiGate: HTTP, SMTP, POP3, IMAP, MAPI, FTP, IM and their equivalent SSL encrypted versions
  – Integrated mode with FortiMail: SMTP, POP3, IMAP
- Network Threat Detection in Sniffer Mode: Identify Botnet activties and network attacks, malicious URL visit
- Scan SMB/NSF network share and quarantine suspicious files. Scan can be scheduled
- Scan websites with URL links
- Option to auto-submit suspicious files to cloud service for manual analysis and signature creation
- Option to forward files to a network share for further third-party scanning

Monitoring and Report
- Real-Time Monitoring Widgets (viewable by source and time period options): Scanning Result statistics, Scanning Activities (over time), Top Targeted Hosts, Top Malware, Top Infectious URLs, Top Callback Domains
- Drilldown Event Viewer: Dynamic table with content of actions, malware name, rating, type, source, destination, detection time and download path
- Logging — GUI, download RAW log file
- Report generation for malicious files: Detailed reports on file characteristics and behaviors – File Modification, Process Behaviors, Registry Behaviors, Network Behaviors, VM snapshot
- Further Analysis: Downloadable files — Sample file, Sandbox tracer logs and PCAP capture

SPECIFICATIONS

	FSA-1000D	FSA-3000D
Hardware		
Form Factor	2 RU	2 RU
Total Network Interfaces	6x GE RJ45 ports, 2x GE SFP slots	4x GE RJ45 ports, 2x GE SFP slots 2x 10 GE SFP+ slots
Storage Capacity	4 TB (max. 8 TB)	8 TB (max. 16 TB)
Power Supplies	2x Redundant PSU	2x Redundant PSU
System		
VM Sandboxing (Files/Hour)	160	560
AV Scanning (Files/Hour)	6,000	15,000
Number of VMs	8	28
Integration and Operation Modes		
File Input Methods	Integrated with FortiGate and FortiMail, sniffer mode, manual on-demand file upload, submission API, network file share inspection	
FortiGate	All models (some require CLI configuration), FortiOS V5.0.4+	
FortiMail	All models, FortiMail OS V5.1+	
Dimensions		
Height x Width x Length (inches)	3.5 x 17.2 x 14.5	3.3 x 19.0 x 29.7
Height x Width x Length (mm)	89 x 437 x 368	84 x 482 x 755
Weight	27.60 lbs (12.52 kg)	71.5 lbs (32.5 kg)
Environment		
Power Consumption (Average / Maximum)	15 / 138 W	392 / 614.6 W
Maximum Current	100V/5A, 240V/3A	110V/10A, 220V/5A
Heat Dissipation	471 BTU/h	2131.14 BTU/h
Power Source	100–240V AC, 60–50 Hz	100–240V AC, 60–50 Hz
Humidity	5–95% non-condensing	20–90% non-condensing
Operation Temperature Range	32–104°F (0–40°C)	50–95°F (10–35°C)
Storage Temperature Range	-13–158°F (-25–70°C)	-40–149°F (-40–65°C)
Compliance		
Certifications	FCC Part 15 Class A, C-Tick, VCCI, CE, BSMI, KC, UL/cUL, CB, GOST	

	FortiSandbox-VM
Hardware Requirements	
Hypervisor Support	VMware ESXi version 5.0 or later
Virtual CPUs (Minimum / Maximum)	4 / Unlimited (Fortinet recommends that the number of vCPUs match the number of Windows VM +4.)
Memory Support (Minimum / Maximum)	8 GB / Unlimited
Virtual Storage (Minimum / Maximum)	30 GB / 16 TB
Total Virtual Network Interfaces (Minimum)	6
System	
VM Sandboxing (Files/Hour)	Hardware dependent
AV Scanning (Files/Hour)	Hardware dependent
Number of VMs	4 to 52 (Upgrade via appropriate licenses)
Integration and Operation Modes	
File Input Methods	Integrated with FortiGate and FortiMail, sniffer mode, manual on-demand file upload, submission API, network file share inspection
FortiGate	All models (some require CLI configuration), FortiOS V5.0.4+
FortiMail	All models, FortiMail OS V5.1+

	FortiSandbox Cloud
System	
VM Sandboxing (Files/Hour)	Unrestricted
AV Scanning (Files/Hour)	Unrestricted
Number of VMs	Not applicable
Integration and Operation Modes	
File Input Methods	Integrated with FortiGate
FortiGate	All models (some require CLI configuration), FortiOS V5.2.3+
FortiMail	Not supported

ORDER INFORMATION

Product	SKU	Description
FortiSandbox 1000D	FSA-1000D	Advanced Threat Protection System — 6x GE RJ45, 2x GE SFP slots, redundant PSU, 8 Windows licenses and 1 Microsoft Office license included.
FortiSandbox 3000D	FSA-3000D	Advanced Threat Protection System — 4x GE RJ45, 2x GE SFP slots, 2x 10 GE SFP+ slots, redundant PSU, 28 Windows licenses and 3 Microsoft Office licenses included.
FortiSandbox-VM	FSA-VM-BASE	Base license for stackable FortiSandbox-VM. 4 Windows licenses and 1 Microsoft Office license included. FSA-VM maximum expansion limited to 52 total VMs.
FortiSandbox Cloud Service	FC-10-00XXX-123-02-12	FortiSandbox Cloud Service Subscription (SKU varied by FortiGate models).
Optional Accessories		
1 GE SFP SX Transceiver Module	FG-TRAN-SX	1 GE SFP SX transceiver module for all systems with SFP and SFP/SFP+ slots.
1 GE SFP LX Transceiver Module	FG-TRAN-LX	1 GE SFP LX transceiver module for all systems with SFP and SFP/SFP+ slots.
10 GE SFP+ Transceiver Module, Short Range	FG-TRAN-SFP+SR	10 GE SFP+ transceiver module, short range for all systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ Transceiver Module, Long Range	FG-TRAN-SFP+LR	10 GE SFP+ transceiver module, long range for all systems with SFP+ and SFP/SFP+ slots.

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