

# COMPUTER SECURITY RESOURCE CENTER



PROJECTS

CRYPTOGRAPHIC MODULE VALIDATION PROGRAM

## Cryptographic Module Validation Program



### Certificate #3402

#### Details

Module Name	Apple CoreCrypto Module v9.0 for Intel												
Standard	FIPS 140-2												
Status	Active												
Sunset Date	3/12/2024												
Validation Dates	3/13/2019 4/12/2019												
Overall Level	1												
Caveat	When operated in FIPS mode.												
Security Level Exceptions	<ul style="list-style-type: none"> <li>Physical Security: N/A</li> </ul>												
Module Type	Software												
Embodiment	Multi-Chip Stand Alone												
Description	The Apple CoreCrypto Module v9.0 for Intel is a software cryptographic module running on a multi-chip standal provides services intended to protect data in transit and at rest.												
Tested Configuration(s)	<ul style="list-style-type: none"> <li>macOS Mojave 10.14 running on iMac Pro with Xeon CPU with PAA</li> <li>macOS Mojave 10.14 running on iMac Pro with Xeon CPU without PAA</li> <li>macOS Mojave 10.14 running on Mac mini with i5 CPU with PAA</li> <li>macOS Mojave 10.14 running on Mac mini with i5 CPU without PAA</li> <li>macOS Mojave 10.14 running on MacBook Pro with i7 CPU with PAA</li> <li>macOS Mojave 10.14 running on MacBook Pro with i7 CPU without PAA</li> <li>macOS Mojave 10.14 running on MacBook Pro with i9 CPU with PAA</li> <li>macOS Mojave 10.14 running on MacBook Pro with i9 CPU without PAA</li> <li>macOS Mojave 10.14 running on MacBook with Core M CPU with PAA</li> <li>macOS Mojave 10.14 running on MacBook with Core M CPU without PAA (single-user mode)</li> </ul>												
FIPS Algorithms	<table> <tr> <td>AES</td> <td>Certs. #5769, #5770, #5771, #5772, #5773, #5774, #5775, #5776, #5777, #5778, #5779, #5780, #5781, #5785, #5786, #5787, #5788, #5789, #5790, #5791, #5792, #5793, #5800, #5801, #5802, #5803, #5804, #5808, #5809, #5810, #5811, #5812, #5813 and #5814</td> </tr> <tr> <td>CVL</td> <td>Certs. #2092, #2093, #2095, #2096, #2097, #2105, #2106, #2107, #2108 and #2109</td> </tr> <tr> <td>DRBG</td> <td>Certs. #2364, #2365, #2366, #2367, #2368, #2369, #2370, #2371, #2372, #2373, #2374, #2375, #2376, #2380, #2381, #2382, #2383, #2384, #2385, #2386, #2387, #2388, #2393, #2394, #2395, #2396, #2397, #2401 and #2402</td> </tr> <tr> <td>DSA</td> <td>Certs. #1468, #1469, #1470, #1471 and #1472</td> </tr> <tr> <td>ECDSA</td> <td>Certs. #1553, #1554, #1555, #1556 and #1557</td> </tr> <tr> <td>HMAC</td> <td>Certs. #3817, #3818, #3819, #3820, #3821, #3822, #3823, #3824, #3825, #3826, #3827, #3828, #3829, #</td> </tr> </table>	AES	Certs. #5769, #5770, #5771, #5772, #5773, #5774, #5775, #5776, #5777, #5778, #5779, #5780, #5781, #5785, #5786, #5787, #5788, #5789, #5790, #5791, #5792, #5793, #5800, #5801, #5802, #5803, #5804, #5808, #5809, #5810, #5811, #5812, #5813 and #5814	CVL	Certs. #2092, #2093, #2095, #2096, #2097, #2105, #2106, #2107, #2108 and #2109	DRBG	Certs. #2364, #2365, #2366, #2367, #2368, #2369, #2370, #2371, #2372, #2373, #2374, #2375, #2376, #2380, #2381, #2382, #2383, #2384, #2385, #2386, #2387, #2388, #2393, #2394, #2395, #2396, #2397, #2401 and #2402	DSA	Certs. #1468, #1469, #1470, #1471 and #1472	ECDSA	Certs. #1553, #1554, #1555, #1556 and #1557	HMAC	Certs. #3817, #3818, #3819, #3820, #3821, #3822, #3823, #3824, #3825, #3826, #3827, #3828, #3829, #
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#3836, #3837, #3838 and #3839

KTS AES Certs. #5769, #5770, #5771, #5772, #5773, #5779, #5780, #5781, #5782, #5783, #5800, #5801, #58 establishment methodology provides between 128 and 256 bits of encryption strength

KTS vendor affirmed

PBKDF vendor affirmed

RSA Certs. #3073, #3074, #3075, #3076 and #3077

SHS Certs. #4592, #4593, #4594, #4595, #4596, #4597, #4598, #4599, #4600, #4601, #4602, #4603, #4604, #4611, #4612, #4613 and #4614

Triple-DES Certs. #2856, #2857, #2858, #2859 and #2860

Allowed Algorithms

Diffie-Hellman (CVL Certs. #2092, #2093, #2095, #2096 and #2097, key agreement; key establishment methodology of encryption strength); EC Diffie-Hellman (CVL Certs. #2092, #2093, #2095, #2096 and #2097, key agreement; key methodology provides 128 or 256 bits of encryption strength); MD5; NDRNG; RSA (key wrapping; key establishment 112 or 128 bits of encryption strength)

Software Versions

9.0

Product URL

http://support.apple.com/en-us/HT201159

Vendor

Apple Inc.  
One Apple Park Way  
MS: 927-1CPS  
Cupertino, CA 95014  
USA

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geddis@apple.com  
Phone: 669-227-3579  
Fax: 866-315-1954  
Stephanie Motre Martin  
smotre@apple.com  
Phone: 408-750-6235  
Fax: 866-315-1954

Related Files

Security Policy  
Consolidated Certificate

Lab

ATSEC INFORMATION SECURITY CORP  
NVLAP Code: 200658-0



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Gaithersburg, MD 20899

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