



2400 Research Blvd, Suite 395
 Rockville, MD 20850
 tel: +1 (703) 375-9820
 info@acumensecurity.net
 www.acumensecurity.net

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Whom It May Concern:

Acumen Security verified that the following product faithfully embeds a FIPS 140-2 validated cryptographic module,

- Cisco IOS-XE 16.12

The software version is known to operate on the following platform(s):

- Cisco Aggregation Services Router (ASR) 1000 series.
- Cisco Integrated Services Router (ISR) 4000 series.
- Cisco Cloud Services Router (CSR) 1kv.
- Cisco Integrated Services Router (ISR) 1100 series.

During the course of the review, Acumen Security confirmed that the following cryptographic module is properly incorporated into the product:

- IOS Common Cryptographic Module (IC2M) Rel5 – Cert #2388

Acumen Security confirmed that the following features leverage the embedded cryptographic module,

Feature	Cryptographic Service
IKE/IPsec	<ul style="list-style-type: none"> • Session establishment supporting each service, • All underlying cryptographic algorithms supporting each services' key derivation functions, • Hashing for each service, • Symmetric encryption for each service.
SNMPv3	
SSH	
TLS TLS(HTTPS)	
Encrypted Passwords	<ul style="list-style-type: none"> • Symmetric encryption
RADIUS TACACS BGP IKE/IPsec OSPF NTP IS-IS	<ul style="list-style-type: none"> • Session establishment supporting each service, • All underlying cryptographic algorithms supporting each services' key derivation functions, • Hashing for each service, • Symmetric encryption for each service. When transmitted through an IKE/IPsec tunnel.



Details of the verification may be obtained from Cisco Systems, Inc. at the request of interested parties. This letter represents the independent opinions of Acumen Security and does not imply endorsement of the product by the CMVP or any other parties.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ashit Vora', written over a faint blue circular stamp.

Ashit Vora
Laboratory Director
Acumen Security