

SUPPLIER		[1] CONTACT INFORMATION		SUPPLIER SIGNATURE	
SUPPLIER NAME	Realtek Semiconductor Corp.	DocuSigned by: <i>Chung-You Chang</i> BD9D0CB7F2924A7		7/23/2023	
SUPPLIER CONTACT EMAIL	chungyou@realtek.com				
ACCREDITED LABORATORY		ACCREDITED LABORATORY SIGNATURE			
LABORATORY NAME	UNH InterOperability Laboratory	DocuSigned by: <i>Michayla Newcomb</i> F07473998F8F4E1...		7/24/2023	
LABORATORY CONTACT EMAIL	usgv6-sdoc@iol.unh.edu				
[2] PRODUCT VERSION TESTED			[3] PRODUCT ID		
2.16.0			RTL8153AH-VB-CG		
[4] PRODUCT FAMILY					
APPLICABLE SERIES HARDWARE			APPLICABLE SERIES SOFTWARE		
RTL8153AH-VB-CG			r8152-2.16		
[5] UNITARY OR COMPOSITE SDOC					
<input checked="" type="checkbox"/> <b>Unitary:</b> All of the declared capabilities of this product are addressed by original test results reported in this SDoC.			<input type="checkbox"/> <b>Composite:</b> Some or all of the capabilities of this product are provided by the use and/or integration of unmodified components that have their own unique SDoCs. All of the relevant referenced SDoCs are identified in section 6 and linked.		
[6] REF	SUPPLIER	PRODUCT ID/STACK ID	CAPABILITY SUMMARY		COMPOSITE SDOC LINK
i.	Realtek Semiconductor Corp.	RTL8153AH-VB-CG/2.16.0	USGv6-r1:Host+Core+Addr-Arch+Link=Ethernet		
[7] USGV6-CAPABLE REQUIREMENTS					
<input type="checkbox"/> USGv6-r1-Capable-Host <input type="checkbox"/> USGv6-r1-Capable-Router <input type="checkbox"/> USGv6-r1-Capable-Switch <input type="checkbox"/> USGv6-r1-Capable-NPP					
[8] PROFILE(S) REFERENCED					
i.	NIST SP 500-267Br1, USGv6 Profile				
ii.					
[9] SUPPLEMENTARY ATTESTATIONS					
<input checked="" type="checkbox"/> This product is fully functional in dual stack environments. That is, no claimed capabilities are invalidated if this product is operated in a dual stack (IPv6 and IPv4) network environment.			<input checked="" type="checkbox"/> This product is fully functional in IPv6 only environments. That is, no claimed capabilities are invalidated if this product is deployed in a network environment that does not support IPv4.		
<input checked="" type="checkbox"/> This SDoC contains a capabilities test report for each unique IPv6 stack in the product. If not, the stacks/ports not covered are documented, and how their IPv6 capabilities differ from those reported are explained.			<input checked="" type="checkbox"/> All of the products listed in the product family in section 4 are implemented such that their capabilities are identical in form and function across the entire product family. The specific conformance and interoperability test results for the capabilities of an identified member of this product family are provided in this SDoC. The SDoC attests that these tested capabilities are identical and unmodified for all the products cited above.		

## Host Capabilities

[10] PRODUCT ID/ STACK ID				CAPABILITY SUMMARY		
RTL8153AH-VB-CG/2.16.0				USGv6-r1:Host+Core+Addr-Arch+Link=Ethernet		
[11] SUPPORTED CAPABILITY	CAPABILITY	CONFORMANCE		INTEROPERABILITY/FUNCTIONAL		NOTES
		TEST SELECTION	RESULT ID	TEST SELECTION	RESULT ID	
-	IPv6-ONLY			IPv6-ONLY_R1v1.*_F		
PASS	Core	Core_R1v1.*_C	UNH-IOL/36548	Core_R1v1.*_I	UNH-IOL/36550	
-	Extended-ICMP	Self-Test		Self-Test		
-	PLPMTUD	Self-Test		Self-Test		
-	ND-Ext	Self-Test		Self-Test		
-	ND-WL	Self-Test		Self-Test		
-	SEND	Self-Test		Self-Test		
NOTES	SLAAC	SLAAC_R1v1.*_C	UNH-IOL/36548	SLAAC_R1v1.*_I	UNH-IOL/36550	The DUT continued using RDNSS and DNSSL option values after their option lifetime had elapsed.
-	PriAddr	Self-Test		Self-Test		
-	DHCP-Stateless	DHCP-Stateless_R1v1.*_C		DHCP-Stateless_R1v1.*_I		
-	DHCP-Client	DHCP-Client_R1v1.*_C		DHCP-Client_R1v1.*_I		
-	DHCP-Client-Ext	Self-Test		Self-Test		
-	DHCP-Prefix	DHCP-Prefix_R1v1.*_C		DHCP-Prefix_R1v1.*_I		
-	DHCP-Prefix-Ext	Self-Test		Self-Test		
-	6Lo	Self-Test		Self-Test		

## Host Capabilities

-	Happy-Eyeballs	Self-Test		Self-Test		
PASS	Addr-Arch	Addr-Arch_R1v1.*_C	UNH-IOL/36549	Addr-Arch_R1v1.*_I	UNH-IOL/36551	
-	CGA	Self-Test		Self-Test		
-	DNS-Client	Self-Test		Self-Test		
-	URI	Self-Test		Self-Test		
-	NTP-Client	Self-Test		Self-Test		
-	NTP-Server	Self-Test		Self-Test		
-	DNS-Server	Self-Test		Self-Test		
-	DHCP-Server	DHCP-Server_R1v1.*_C		DHCP-Server_R1v1.*_I		
-	DHCP-Server-Ext	Self-Test		Self-Test		
-	DHCP-Relay	DHCP-Relay_R1v1.*_C		DHCP-Relay_R1v1.*_I		
-	IPsec	IPsec_R1v1.*_C		IPsec_R1v1.*_I		
-	IPsec-SHA-512	IPsec-SHA-512_R1v1.*_C		IPsec-SHA-512_R1v1.*_I		
-	SSHV2	Self-Test		Self-Test		
-	TLS	Self-Test		Self-Test		
-	TLS-1.3	Self-Test		Self-Test		
-	Tunneling-IP	Self-Test		Self-Test		

## Host Capabilities

-	<b>Tunneling-UDP</b>	Self-Test		Self-Test		
-	<b>XLAT</b>	Self-Test		Self-Test		
-	<b>NAT64</b>	Self-Test		Self-Test		
-	<b>DNS64</b>	Self-Test		Self-Test		
-	<b>SNMP</b>	Self-Test		Self-Test		
-	<b>Tunneling</b>	Self-Test		Self-Test		
-	<b>DiffServ</b>	Self-Test		Self-Test		
-	<b>NETCONF</b>	Self-Test		Self-Test		
-	<b>SSM</b>	Self-Test		Self-Test		
-	<b>Multicast</b>	Multicast_R1v1 .*_C		Multicast_R1v1 .*_I		
-	<b>ECN</b>	Self-Test		Self-Test		
<b>PASS</b>	<b>Link = Ethernet</b>	Self-Test	Self Declaration	Self-Test	Self Declaration	

## Router Capabilities

[10] PRODUCT ID/ STACK ID				CAPABILITY SUMMARY		
[11] SUPPORTED CAPABILITY	CAPABILITY	CONFORMANCE		INTEROPERABILITY/FUNCTIONAL		NOTES
		TEST SELECTION	RESULT ID	TEST SELECTION	RESULT ID	
-	IPv6-ONLY			IPv6-ONLY_R1v1.*_F		
-	Core	Core_R1v1.*_C		Core_R1v1.*_I		
-	Extended-ICMP	Self-Test		Self-Test		
-	PLPMTUD	Self-Test		Self-Test		
-	ND-Ext	Self-Test		Self-Test		
-	ND-WL	Self-Test		Self-Test		
-	SEND	Self-Test		Self-Test		
-	SLAAC	SLAAC_R1v1.*_C		SLAAC_R1v1.*_I		
-	PrivAddr	Self-Test		Self-Test		
-	DHCP-Prefix	DHCP-Prefix_R1v1.*_C		DHCP-Prefix_R1v1.*_I		
-	DHCP-Prefix-Ext	Self-Test		Self-Test		
-	6Lo	Self-Test		Self-Test		
-	Addr-Arch	Addr-Arch_R1v1.*_C		Addr-Arch_R1v1.*_I		
-	CGA	Self-Test		Self-Test		

## Router Capabilities

-	<b>DNS-Client</b>	Self-Test		Self-Test		
-	<b>URI</b>	Self-Test		Self-Test		
-	<b>NTP-Client</b>	Self-Test		Self-Test		
-	<b>NTP-Server</b>	Self-Test		Self-Test		
-	<b>DNS-Server</b>	Self-Test		Self-Test		
-	<b>DHCP-Server</b>	<b>DHCP-Server_R1v1.*_C</b>		<b>DHCP-Server_R1v1.*_I</b>		
-	<b>DHCP-Server-Ext</b>	Self-Test		Self-Test		
-	<b>DHCP-Relay</b>	<b>DHCP-Relay_R1v1.*_C</b>		<b>DHCP-Relay_R1v1.*_I</b>		
-	<b>OSPF</b>	Self-Test		<b>OSPF_R1v1.*_I</b>		
-	<b>OSPF-IPsec</b>	Self-Test		Self-Test		
-	<b>OSPF-Auth</b>	Self-Test		<b>OSPF-Auth_R1v1.*_I</b>		
-	<b>OSPF-Ext</b>	Self-Test		Self-Test		
-	<b>OSPF-Trans</b>	Self-Test		Self-Test		
-	<b>OSPF-Graceful</b>	Self-Test		Self-Test		
-	<b>ISIS</b>	Self-Test		Self-Test		
-	<b>IS-IS-Auth</b>	Self-Test		Self-Test		
-	<b>IS-IS-Ext</b>	Self-Test		Self-Test		
-	<b>IS-IS-MT</b>	Self-Test		Self-Test		

## Router Capabilities

-	<b>BGP</b>	Self-Test		<b>BGP_R1v1.*_I</b>		
-	<b>BGP-Reflect</b>	Self-Test		Self-Test		
-	<b>BGP-Graceful</b>	Self-Test		Self-Test		
-	<b>BGP-FlowSpec</b>	Self-Test		Self-Test		
-	<b>BGP-OV</b>	Self-Test		Self-Test		
-	<b>BGP-VPLS</b>	Self-Test		Self-Test		
-	<b>BGP-EVPN</b>	Self-Test		Self-Test		
-	<b>BGP-6VPE</b>	Self-Test		Self-Test		
-	<b>BGP-MVPN</b>	Self-Test		Self-Test		
-	<b>MPLS</b>	Self-Test		Self-Test		
-	<b>CE-Router</b>	<b>CE_Router_R1v1.*_C</b>		<b>CE_Router_R1v1.*_I</b>		
-	<b>VRRP</b>	Self-Test		Self-Test		
-	<b>IPsec</b>	<b>IPsec_R1v1.*_C</b>		<b>IPsec_R1v1.*_I</b>		
-	<b>IPsec-VPN</b>	<b>IPsec-VPN_R1v1.*_C</b>		<b>IPsec-VPN_R1v1.*_I</b>		
-	<b>IPsec-SHA-512</b>	<b>IPsec-SHA-512_R1v1.*_C</b>		<b>IPsec-SHA-512_R1v1.*_I</b>		
-	<b>IPsec-SHA-512-VPN</b>	<b>IPsec-SHA-512-VPN_R1v1.*_C</b>		<b>IPsec-SHA-512-VPN_R1v1.*_I</b>		
-	<b>SSHV2</b>	Self-Test		Self-Test		
-	<b>TLS</b>	Self-Test		Self-Test		

## Router Capabilities

-	<b>TLS-1.3</b>	Self-Test		Self-Test		
-	<b>Tunneling-IP</b>	Self-Test		Self-Test		
-	<b>Tunneling-UDP</b>	Self-Test		Self-Test		
-	<b>GRE</b>	Self-Test		Self-Test		
-	<b>DS-Lite</b>	Self-Test		Self-Test		
-	<b>LW4over6</b>	Self-Test		Self-Test		
-	<b>MAP-E</b>	Self-Test		Self-Test		
-	<b>MAP-T</b>	Self-Test		Self-Test		
-	<b>XLAT</b>	Self-Test		Self-Test		
-	<b>NAT64</b>	Self-Test		Self-Test		
-	<b>DNS64</b>	Self-Test		Self-Test		
-	<b>6PE</b>	Self-Test		Self-Test		
-	<b>LISP</b>	Self-Test		Self-Test		
-	<b>SNMP</b>	Self-Test		Self-Test		
-	<b>Tunneling</b>	Self-Test		Self-Test		
-	<b>DiffServ</b>	Self-Test		Self-Test		
-	<b>NETCONF</b>	Self-Test		Self-Test		
-	<b>SSM</b>	Self-Test		Self-Test		



## Router Capabilities

-	<b>PIM-SM</b>	Self-Test		Self-Test		
-	<b>PIM-SM-IPsec</b>	Self-Test		Self-Test		
-	<b>PIM-SM-BiDir</b>	Self-Test		Self-Test		
-	<b>Multicast</b>	Multicast_R1v1. *_C		Multicast_R1v1. *_I		
-	<b>ECN</b>	Self-Test		Self-Test		
-	<b>Link =</b>	Self-Test		Self-Test		

## Application Capabilities

[10] PRODUCT ID/ STACK ID				CAPABILITY SUMMARY		
[11] SUPPORTED CAPABILITY	CAPABILITY	CONFORMANCE		INTEROPERABILITY/FUNCTIONAL		NOTES
		TEST SELECTION	RESULT ID	TEST SELECTION	RESULT ID	
-	IPv6-ONLY			IPv6- ONLY_R1v1.*_F		
-	App-Serv=			APP- ONLY_R1v1.*_F		
-	Link =			Self-Test		

## NPP Capabilities

[10] PRODUCT ID/ STACK ID				CAPABILITY SUMMARY		
[11] SUPPORTED CAPABILITY	CAPABILITY	CONFORMANCE		INTEROPERABILITY/FUNCTIONAL		NOTES
		TEST SELECTION	RESULT ID	TEST SELECTION	RESULT ID	
-	IPv6-ONLY			IPv6- ONLY_R1v1.*_F		
-	FW	FW_R1v1.*_C				
-	APFW	Self-Test				
-	IDS	FW_R1v1.*_C				
-	IPS	FW_R1v1.*_C				
-	Link =	Self-Test				

## Switch Capabilities

[10] PRODUCT ID/ STACK ID				CAPABILITY SUMMARY		
[11] SUPPORTED CAPABILITY	CAPABILITY	CONFORMANCE		INTEROPERABILITY/FUNCTIONAL		NOTES
		TEST SELECTION	RESULT ID	TEST SELECTION	RESULT ID	
-	IPv6-ONLY			IPv6- ONLY_R1v1.*_F		
-	DHCPv6-Guard	Self-Test		Self-Test		
-	RA-Guard	Self-Test		Self-Test		
-	MLD-Snooping	Self-Test		Self-Test		
-	Link =	Self-Test		Self-Test		

**DIRECTIONS:** Please use Adobe Acrobat to complete. Detailed instructions for completing and interpreting each numbered field are given below. Contact usgv6-program@nist.gov with questions.

1	CONTACT INFORMATION	Supplier name, email and signature (digital recommended). Include printed name and date if wet ink signed. Accredited laboratory name, email and signature (digital recommended). Include printed name and date if wet ink signed.
2	PRODUCT VERSION TESTED	Firmware/ software version of product declared
3	PRODUCT ID	Suppliers concise name for product declared
4	PRODUCT FAMILY	Applicable hardware or software with an unmodified IPv6 stack from "PRODUCT VERSION TESTED"
5	UNITARY OR COMPOSITE	Indicate if this is a unitary or composite SDoC. If composite is checked, composite SDoC must be linked in section 6.
6	REF	Reference number to profile(s) reference in this SDoC
	SUPPLIER	Supplier name
	PRODUCT ID/STACK ID	Product ID must match field 3. As there may be more than one unique IPv6 stack, stack ID identifies particular stack described in CAPABILITY SUMMARY. Each unique stack requires a CAPABILITY SUMMARY.
	CAPABILITY SUMMARY	The strong notation as described in NIST-SP-500-267Ar1 that describes the product capabilities of the given stack.
	COMPOSITE SDOC LINK	URL link to composite SDoC referenced.
7	USGV6-CAPABLE REQUIREMENTS	Refer to section 5 in NIST-SP-500-267Br1 for CSS strings referenced in this section. Check the appropriate box if the product meets the requirements.
8	PROFILE(S) REFERENCED	Profile(s) referenced in the SDoC.
9	SUPPLEMENTARY ATTESTATIONS	Attestations made by the supplier. Check all that apply.
10	PRODUCT ID/STACK ID	PRODUCT ID/STACK ID for stack documented on given page.
	CAPABILITY SUMMARY	CAPABILITY SUMMARY for stack documented on given page.
11	SUPPORTED CAPABILITY	"PASS" – All requirements of the capability have been met "NOTES" – See notes for details regarding the level of support for this capability "X" – Capability not supported BLANK – No declaration for this capability
	CAPABILITY	IPv6 Capability as described in NIST-SP-500-267Ar1.
	TEST SELECTION	Test Selection Tables version of capabilities with existing test programs. Capabilities without an existing test program are indicated with "Self-Test"
	RESULT ID	Abbreviation of accredited laboratory and unique identifier of test result. Capabilities with "Self-Test" can be self-declared by writing " <i>Self Declaration</i> " in the cell.
	NOTES	The cell must be filled out if "NOTE" is indicated for SUPPORTED CAPABILITY. Suppliers may use notes to clarify unsupported features or non-passing results.

**SUPPLIER GENERAL NOTES**