

## Testing Summary Dell Laptop Docking Station and Cradle

(7160-0882, 7160-0883)

Summary of Tests Performed at Gamber-Johnson

Test Description	Test Parameters
Vibration –	MIL-STD-810G, Method 514.6, Procedure 1, Category 4, per Figure
Operational	514.6C-1. Test duration is one hour along three mutually orthogonal
Test date: May, 2017	axes – not simultaneously (3 hours total).
	Unit is unlocked
	<ul> <li>Vertical profile was used in all axes</li> </ul>
	<ul> <li>Performed on all three configurations of computers</li> </ul>
	<ul> <li>Latitude 12 Rugged Extreme</li> </ul>
	<ul> <li>Latitude 14 Rugged</li> </ul>
	<ul> <li>Latitude 14 Rugged Extreme</li> </ul>
Vibration –	MIL-STD-810G, Method 514.6, Procedure 1, Category 4, per Figure
Operational	514.6C-1. Test duration is one hour along three mutually orthogonal
RF Connection	axes – not simultaneously (3 hours total).
Test date: May, 2017	Unit is unlocked
	<ul> <li>Test is performed simultaneously with operational test.</li> </ul>
	<ul> <li>Test is monitored to record any breaks in RF connectivity</li> </ul>
	during vibration.
	<ul> <li>Performed on all three configurations of computers</li> </ul>
	<ul> <li>Latitude 12 Rugged Extreme</li> </ul>
	<ul> <li>Latitude 14 Rugged</li> </ul>
	<ul> <li>Latitude 14 Rugged Extreme</li> </ul>
Vibration –	MIL-STD-810G, Method 514.6, Category 24, per Figure 514.6E-1. Test
Non-Operational	duration is one hour along three mutually orthogonal axes – not
(Minimum Integrity)	simultaneously.
Test date: May, 2017	Unit is unlocked
	Performed on the Dell 14" Rugged Extreme
Functional Shock -	MIL-STD-810G, Method 516.6, Procedure 1, 3 positive and 3 negative
Non-Operational	pulses each axis (vertical, longitudinal and transverse), 18 pulses
Test date: May, 2017	• 20G, 11ms half sine
	Unit is unlocked
Cycle Testing –	30,000 cycles of the docking connector, latching and locking
Non-Operational	mechanisms
Test date: June, 2017	

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Electrostatic	ISO 10605, Section 8, Table C.2, Category 2 – Direct Air Discharge
Discharge –	
Operational	
Test date: May, 2017	

Summary of Tests Performed at Independent Facility		
Test Description	Test Parameters	
Humidity	MIL-STD 810G, Method 507.5, Procedure II, Aggravated, Table 507.5-	
Test date: May, 2017	IX	
	• Ten 24-hour cycles, temperature varied from 30°C to 60°C to	
	30°C at constant 95% relative humidity.	
Thermal Shock	MIL-STD 810G, Method 503.5, Procedure I-C	
Test date: May, 2017	<ul> <li>Three cycles from 85°C to -40°C to 85°C</li> </ul>	
Low Temperature:	MIL-STD 810G, Method 502.5, Procedure II	
Operational	<ul> <li>-29°C Operating, 2-hour duration</li> </ul>	
Test date: May, 2017		
Low Temperature:	MIL-STD 810G, Method 502.5, Procedure l	
Storage	<ul> <li>-51°C Non-Operating, 4-hour duration</li> </ul>	
Test date: May, 2017		
High Temperature:	MIL-STD 810G, Method 501.5, Procedure II, Table 501.5-II, Induced	
Operational	Conditions	
Test date: May, 2017	<ul> <li>Three 24-hour cycles, temperature varied from 30°C to 63°C</li> </ul>	
	to 30°C	
High Temperature:	MIL-STD 810G, Method 502.5, Procedure I, Table 502.5-III, Induced	
Storage	Conditions	
Test date: May, 2017	• Seven 24-hour cycles, temperature varied from 33°C to 71°C	
	to 33°C	
Shock – Crash Hazard	SAE J1455, Section 4.11.3.5, per Figure 13	
Test date: June, 2017	Unit is unlocked	
EMC Testing	EN 50498:2010	
Test date: March, 2017		
EMC Testing	EN 55032:2015	
Test date: March, 2017	CISPR 22 – Class A	
	<ul> <li>FCC Part 15, Subpart B – Class A</li> </ul>	

## **Other Certifications**

Description	
EN 50581:2012 RoHS2 Directive 2011/65/EU	

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