Testing Summary
Panasonic Toughbook A3 Tablet Docking Station
(7160-1416-00, 7160-1416-02)
Summary of Tests Performed at Gamber-Johnson

Test Description	Test Parameters
Vibration – Operational Test date: Nov, 2020	Panasonic's Toughbook criteria per graph B, tailored MIL-STD 810G 514.6. Test duration is 2 hours along three mutually orthogonal axes – not simultaneously (6 hours total). • Unit is unlocked
Vibration – Operational **RF Connection** Test date: Nov, 2020	MIL-STD-810G, Method 514.6, Procedure 1, Category 4, per Figure 514.6C-1. Test duration is 2 hours along three mutually orthogonal axes – not simultaneously (6 hours total). • Unit is unlocked • Panasonic provided operating conditions • Test is performed simultaneously with operational test. • Test is monitored to record any breaks in RF connectivity during vibration.
Vibration – Non-Operational (Minimum Integrity) Test date: Nov 2020	Panasonic's Toughbook tested criteria per graph A.MIL-STD-810G, Method 514.6, Category 24, per Figure 514.6E-1. Test duration is one hour along three mutually orthogonal axes – not simultaneously (3 hours total). • Unit is unlocked • Tested in both laptop and tablet orientations.
Functional Shock - Non-Operational Test date:	MIL-STD-810G, Method 516.6, Procedure 1, 3 positive and 3 negative pulses each axis (vertical, longitudinal and transverse), 18 pulses • 20G, 11ms half sine • Unit is unlocked
Mechanical Shock Safety - Non-Operational Test date:	MIL-STD-810G, Method 516.6, Procedure 1, 3 positive and 3 negative pulses each axis (vertical, longitudinal and transverse), 18 pulses • 40G, 11ms half sine • Unit is unlocked
Cycle Testing – Non-Operational Test date: Nov, 2020	30,000 cycles of the docking connector, latching and locking mechanisms

Electrostatic Discharge – Operational Test date: August, 2020	ISO 10605, Section 8, Table C.2, Category 2 – Direct Air Discharge

Summary of Tests Performed at Independent Facility

Test Description	Test Parameters
Humidity Test date: July-Aug, 2020	MIL-STD 810G, Method 507.5, Procedure ll, Aggravated • Ten 24-hour cycles, temperature varied from 30°C to 60°C to 30°C at constant 95% relative humidity.
Thermal Shock Test date: July-Aug, 2020	Panasonic Toughbook Criteria Specification 85°C to -40°C, Non-Operating • 2hrs at each temperature, 50 cycles
Low Temperature: Operational Test date: July-Aug, 2020	MIL-STD 810G, Method 502.5, Procedure ll • -20°C Operating, 24 hours
Low Temperature: Storage Test date: July-Aug, 2020	MIL-STD 810G, Method 502.5, Procedure l • -40°C Operating, 24 hours • Non-Operational
Cold Resistance: Test date: July-Aug, 2020	Panasonic Toughbook Criteria Specification • -40°C Non-Operating, 72 hours • Non Operational
High Temperature: Operational Test date: July-Aug, 2020	MIL-STD 810G, Method 501.5, Procedure ll – Induced Conditions • 50°C Operating • (5) 24-hour cycles
High Temperature: Storage Test date: July-Aug, 2020	MIL-STD 810G, Method 501.5, Procedure l – Induced Conditions • Non-Operational • 33°C to 71°C w/ humidity as low as possible • Seven cycles (one cycle is 24 hours)

Heat Resistance Test date: July-Aug, 2020	Panasonic Toughbook Criteria Specification • 72 hour soak at 85°C • Non-Operational
Shock – Crash Hazard Test date: July, 2020	SAE J1455, Section 4.11.3.5, per Figure 13 • Unit is unlocked
EMC Testing Test date: August, 2020	EN 50498:2010
EMC Testing Test date: Sept, 2020	EN 55032:2012 • VCCI-CISPR 32 – Class A • FCC Part 15, Subpart B – Class A
Safety Testing Test date: August, 2020	62368 • IEC 62368 • EN62368-1:2014 + A11:2017 • CAN/CSA C22.2 No. 62368-1:2014 • UL 62368-1:2014

Other Certifications

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