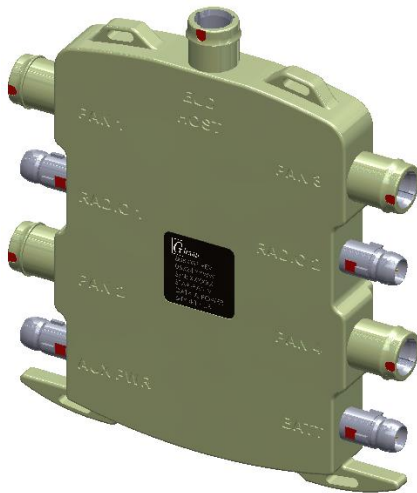




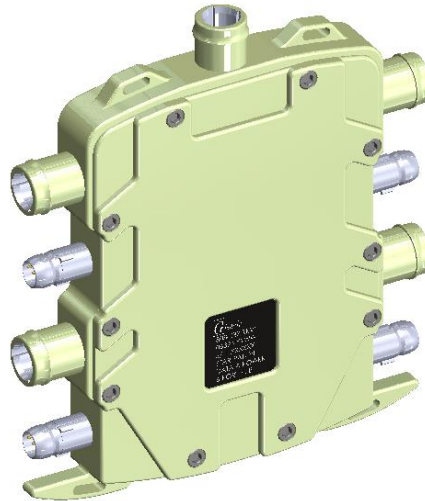
Glenair, Inc. 1211 Air Way, Glendale, CA 91201
Tel: (818) 247-6000 Fax: (818) 247-7240

**QUALIFICATION TEST REPORT ABSTRACT
FOR
STAR-PAN™ VI DATA AND POWER
6 PORT HUB 808-037**

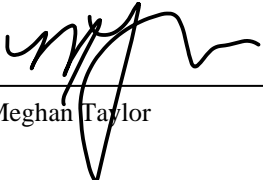
REPORT NO. GT-21-438 ABSTRACT



Front View
6 Port Hub, Gen 1.5



Rear View
6 Port Hub, Gen 1.5

PREPARED BY: 
Meghan Taylor

DATE: 12/3/2021

UPDATED BY: _____

DATE: _____

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QUALIFICATION TEST REPORT
STAR-PAN™ VI 6 Port Hub, Gen 1.5
Part No. 808-037

No.: GT-21-438 Abstract
Date: December 2, 2021
Sheet 2 of 6

1.0 Product Description/Application

Glenair 808-037 STAR-PAN™ VI 6 Port Hub gen 1.5 is a USB hub with integrated power management functions for supplying power to connected devices. Its rugged construction is intended for tactical applications in hostile environments. The 6 Port Hub, subjected to a series of environmental immersion tests, is designed to meet the requirements of MIL-STD-810H, Method 512.6 while utilizing lightweight aluminum alloy housing and high conductivity gold plated copper alloy contacts.

1.1 Purpose

Testing was performed on Glenair 808-037 STAR-PAN™ VI 6 Port Hub gen 1.5 to determine its conformance to the performance requirements of MIL-STD-810H.

1.2 Scope

This report summarizes the environmental qualification testing of STAR-PAN™ 6 Port Hub gen 1.5. The information in this report was obtained from tests conducted by Vertical Labs and Glenair. The documents listed below are on file at Glenair and are available upon request.

Applicable Test Reports		
Test Report Number	Provider	Date Tested
21200R1LQV2	Vertical Labs	10/25/2021
GT-21-438	Glenair Inc.	10/26/2021

1.3 Conclusion

Glenair STAR-PAN™ VI 6 Port Hub gen 1.5 has been shown to be capable of meeting performance requirements of MIL-STD-810H.

1.4 Test Specimen

Test Sample Description	
Description	Part Number
6 Port Hub gen 1.5 <i>with</i> protective caps	808-037
6 Port Hub gen 1.5 <i>without</i> protective caps	808-037

1.5 Inspection Procedure

All tests were performed with the test specimen at standard laboratory conditions and within procedural parameters as defined below.

1. Water temperature between 18°C and 10° C at the start of testing.
2. UUT preconditioned at 27°C above water temperature for a minimum of two hours before immersion period
3. UUT placed into the depth immersion vessel (with and without protective caps), and the vessel shall be pressurized to simulate at least 2 meters of depth (2.8 psig) for at least two hours.



2.0 Qualification Test Summary

Qualification Test Summary		
Test Description	Abstract Reference	Results
Pre-testing visual and mechanical inspection	3.1	Passed
2 meter depth immersion with protective caps	3.2	Passed
6 meter depth immersion with protective caps	3.3	Passed
10 meter depth immersion with protective caps	3.4	Passed
2 meter depth immersion <i>without</i> protective caps	3.5	Passed
6 meter depth immersion <i>without</i> protective caps	3.6	Passed
10 meter depth immersion <i>without</i> protective caps	3.7	Passed
Post-test visual inspection	3.8	Passed
Pre- and post-test functionality verification, three modes.	3.9	Passed

3.0 Qualification Testing Details

3.1 **Visual and mechanical inspection**

Specimen submitted for testing was representative of standard production lots. Specimen was accepted by Glenair Quality Assurance prior to submittal to testing.

3.2 **2 meter depth immersion with protective caps**

3.2.1 Test Method

MIL-STD-810H, 512.6, Procedure 1
 @15.8°C, 3.1 psig/3 hrs

3.2.2 Requirement

No water ingress into the test unit.
 Post-test functionality modes:

Mode 1: BATT=13.28V/3.11A R1=5.09/0.229A R2=5.099V/0.237A	Mode 2: AUX=16.0V/3.56A R1=5.1/0.23A R2=5.099V/0.236A	Mode 3: R1=5.1/0.790A R2=5.099V/0.740A
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3.2.3 Results

PASS. PN 808-037, SN 000958 did not exhibit errors or failures.

3.2.4 Test Anomalies/Deviations

N/A

3.3 **6 meter depth immersion with protective caps**

3.3.1 Test Method

MIL-STD-810H, 512.6, Procedure 1
 @14.5°C, 9.0 psig/3 hrs



3.3.2 Requirement

No water ingress into the test unit.

Post-test functionality modes:

Mode 1: BATT=13.28V/3.128A R1=5.09/0.228A R2=5.098V/0.23A	Mode 2: AUX=16.0V/3.57A R1=5.099/0.230A R2=5.099V/0.236A	Mode 3: R1=5.1/0.790A R2=5.099V/0.740A
--	---	--

3.3.3 Results

PASS. PN 808-037, SN 000956 did not exhibit errors or failures.

3.3.4 Test Anomalies/Deviations

N/A

3.4 **10 meter depth immersion with protective caps**

3.4.1 Test Method

MIL-STD-810H, 512.6, Procedure 1
@15.1°C, 14.3 psig/3 hrs

3.4.2 Requirement

No water ingress into the test unit.

Post-test functionality modes:

Mode 1: BATT=13.309V/3.121A R1=5.1V/0.228A R2=5.099V/0.251A	Mode 2: AUX=16.0V/3.57A R1=5.1/0.230A R2=5.099V/0.236A	Mode 3: R1=5.1/0.790A R2=5.099V/0.740A
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3.4.3 Results

PASS. PN 808-037, SN 000956 did not exhibit errors or failures.

3.4.4 Test Anomalies/Deviations

N/A

3.5 **2 meter depth immersion without protective caps**

3.5.1 Test Method

MIL-STD-810H, 512.6, Procedure 1
@16°C, 3.0 psig/3 hrs

3.5.2 Requirement

No water ingress into the test unit.

Post-test functionality modes:

Mode 1: BATT=15.003V/3.35A R1=4.998V/0.226A R2=4.999V/0.255A	Mode 2: AUX=16.0V/3.51A R1=4.998/0.255A R2=4.999V/0.227A	Mode 3: R1=4.998/0.766A R2=4.998V/0.750A
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3.5.3 Results

PASS. PN 808-037, SN 000956 did not exhibit errors or failures.



3.5.3.1 Test Anomalies/Deviations
 N/A

3.6 **6 meter depth immersion without protective caps**

3.6.1 Test Method
 MIL-STD-810H, 512.6, Procedure 1
 @13.90.1°C, 8.8 psig/3 hrs

3.6.2 Requirement
 No water ingress into the test unit.
 Post-test functionality modes:

Mode 1: BATT=15.003V/3.35A R1=4.998V/0.226A R2=4.999V/0.255A	Mode 2: AUX=16.0V/3.51A R1=4.998/0.255A R2=4.999V/0.227A	Mode 3: R1=4.998/0.766A R2=4.998V/0.750A
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3.6.3 Results
 PASS. PN 808-438, SN 000956 did not exhibit errors or failures.

3.6.4 Test Anomalies/Deviations
 N/A

3.7 **10 meter depth immersion without protective caps**

3.7.1 Test Method
 MIL-STD-810H, 512.6, Procedure 1
 @12.9°C, 14.2 psig/3 hrs

3.7.2 Requirement
 No water ingress into the test unit.
 Post-test functionality modes:

Mode 1: BATT=14.962V/3.33A R1=4.999V/0.226A R2=4.999V/0.256A	Mode 2: AUX=16.0V/3.50A R1=4.999/0.255A R2=4.999V/0.227A	Mode 3: R1=4.999/0.768A R2=4.998V/0.747A
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3.7.3 Results
 PASS PN 808-037, SN 000956 did not exhibit errors or failures.

3.7.4 Test Anomalies/Deviations
 N/A

3.8 **Post-test visual inspection**

3.8.1 Test Method
 MIL-STD-810H, 512.6, Procedure 1



3.8.2 Requirement

The part shall show no evidence of water ingress into any ports with or without protective caps.

3.8.3 Results

PASS. Specimen met the requirement.

3.8.4 Test Anomalies/Deviations

N/A

3.9 **Pre- and post-test functionality verification, three modes**

3.9.1 Test Method

MIL-STD-810H, 512.6, Procedure 1

3.9.2 Requirement

Pre- and post-immersion, the part must be fully operational and not exhibit any errors or failures during test.

3.9.3 Results

PASS. Specimen met the requirement.

3.9.4 Test Anomalies/Deviations

N/A