



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

**APPLICATION FOR HCAI SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: OSP-0904

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Comba Telecom Inc.

Manufacturer's Technical Representative: Charles Mitchell

Mailing Address: 568 Gibraltar Drive, Milpitas, CA 95035

Telephone: (408) 526-0180

Email: cmitchell@combausa.com

Product Information

Product Name: Public Safety Communications Equipment

Product Model Number(s): ComFlex NG Series

Product Category: Internal Communication Servers and Routers

Product Sub-Category: Wireless Communication Systems

General Description: Public Safety Communications Equipment

Mounting Description: Several - See Certified Product Tables

Tested Seismic Enhancements: None

Applicant Information

Applicant Company Name: TRU Compliance, by Structural Integrity Associates, Inc.

Contact Person: Victoria Ahrens

Mailing Address: 233 SW Wilson Ave UNIT 101, Bend, OR 97702

Telephone: (541) 292-5820

Email: vahrens@structint.com

Title: Certification Engineer



**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT**

California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: STRUCTURAL INTEGRITY ASSOCIATES, INC.

Name: LACHEZAR HANDZHIYSKI California License Number: S6515

Mailing Address: 5215 Hellyer Avenue, Suite 210, San Jose, CA 95138

Telephone: (669) 437-0200 Email: Lhandzhiyski@StructInt.com

Certification Method

- GR-63-Core
- ICC-ES AC156
- IEEE 344
- IEEE 693
- NEBS 3
- Other (Please Specify): _____

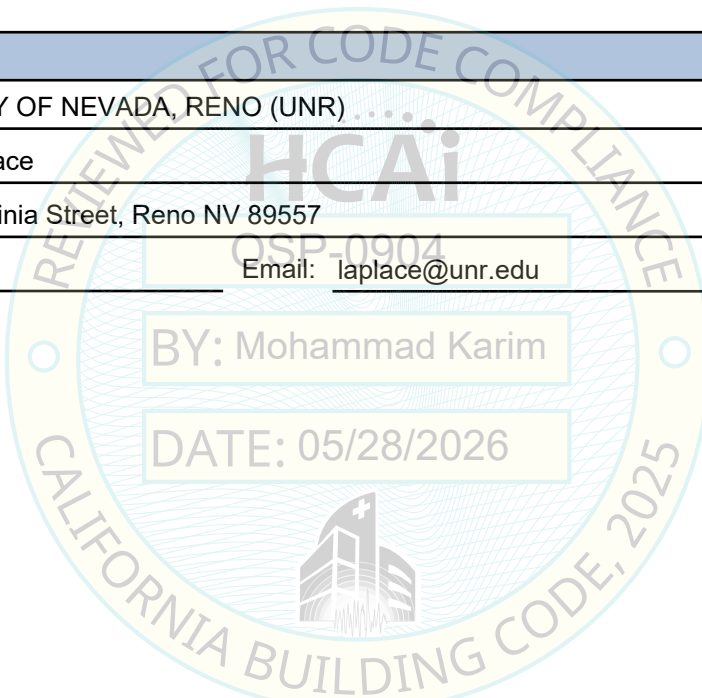
Testing Laboratory

Company Name: UNIVERSITY OF NEVADA, RENO (UNR)

Contact Person: Patrick LaPlace

Mailing Address: 1664 N. Virginia Street, Reno NV 89557

Telephone: (775) 784-6937 Email: laplace@unr.edu





**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT**

Seismic Parameters

Certified Response Spectral Acceleration Factors:(F_p/W_p)

Horizontal (A Flx-H), $g = \underline{3.20}$ (A Rig-H), $g = \underline{2.15}$
 Vertical (A Flx-V), $g = \underline{1.67}$ (A Rig-V), $g = \underline{0.67}$

SDS (Design spectral response acceleration at short period, g) = 2.00 ($z/h = 1$); 2.50 ($z/h = 0$)

H_f (Force amplification height factor) = 3.5 ($z/h = 1$); 1.0 ($z/h = 0$)

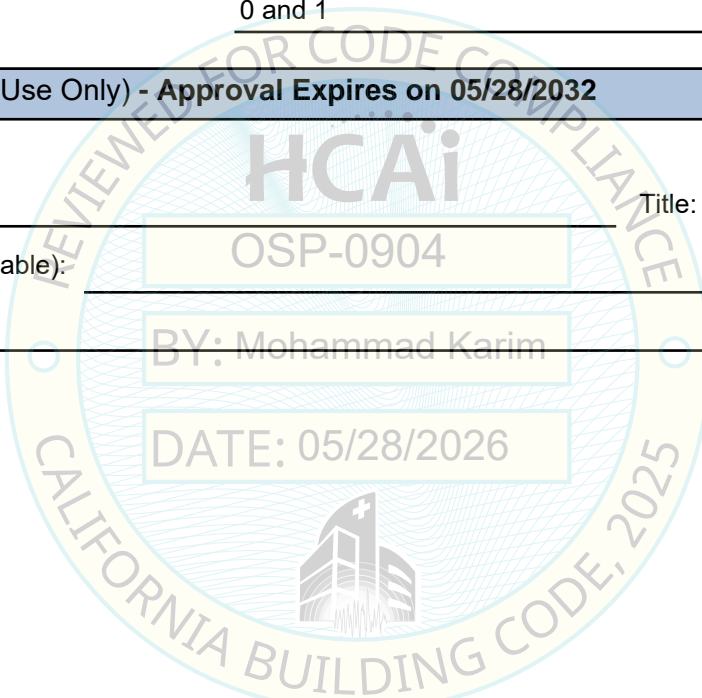
R_u (Structure ductility reduction factor) = 1.3 ($z/h = 1$); 1.0 ($z/h = 0$)

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 0 and 1

HCAI Approval (For Office Use Only) - Approval Expires on 05/28/2032

Date: 5/28/2026
 Name: Mohammad Karim Title: Supervisor, Health Facilities
 Condition of Approval (if applicable): OSP-0904
BY: Mohammad Karim
DATE: 05/28/2026



SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

2552927-CR-001-R1



Manufacturer: Comba Telecom		Table Description: Master Unit Subcomponents					TABLE 4	
Model Line: ComFlex NG Series								
Building Code: CBC 2025		Seismic Certification Limits:						
		$S_{DS} = 2.00 g \ z/h=1.0$			$R_{\mu} = 1.3$		$H_f = 3.5$	
		$S_{DS} = 2.50 g \ z/h=0.0$			$R_{\mu} = 1.0$		$H_f = 1.0$	
Component Type	Manufacturer	Model	Dimension (in)			Weight (lbs.)	Description	UUT
			Depth	Width	Height			
Bi-Directional Amplifier (BDA)	Comba	MU-BDA20-2B-LH	9.7	2.1	6.9	4	1 low band (700 MHz/850 MHz) and 1 high band (1900 MHz/2100 MHz)	1
		MU-BDA20-2B-HH	9.7	2.1	6.9	4	2 high band channels (1900 MHz/2100 MHz)	1
Demodulation Card	Comba	MU-DEMOD	9.7	2.1	6.9	4	4G LTE/5G NR -728-3980 MHz	1
Fiber Optic Unit	Comba	MU-FOU	9.7	8.4	1.5	4	600-4000 MHz, 4Optical Ports	1
Point of Interface (POI)	Comba	MU-POI-LP-FDD	9.7	2.1	6.9	7	700 MHz/850 MHz/1900 MHz/2100 MHz, 10-23dBm Input	Interp.
		MU-POI-HP-FDD	9.7	2.1	6.9	7	700 MHz/850 MHz/1900 MHz/2100 MHz, 20-37dBm Input	1
		MU-POI-LP-2500TDD	9.7	2.1	6.9	7	2496-2690 MHz, 10-23dBm Input	1
		MU-POI-HP-2500TDD	9.7	2.1	6.9	7	2496-2690 MHz, 20-37dBm Input	Interp.
		MU-POI-LP-3700TDD	9.7	2.1	6.9	7	3700-3980 MHz, 10-23dBm Input	1
		MU-POI-HP-3700TDD	9.7	2.1	6.9	7	3700-3980 MHz, 20-37dBm Input	Interp.

UNIT UNDER TEST (UUT) SUMMARY SHEET

2552927-CR-001-R1



Manufacturer: Comba Telecom
Model Line: ComFlex NG Series

UUT	Unit Description (mounting)	Report Number (UUT#)	Testing Lab	Tested	ISO 17025?	S _{DS}	z/h	R _μ	H _f	I _p
1	MU-Chassis-AC (rack mounted - rigid)	2552927-TR-001 (UUT1)	University of Nevada, Reno (UNR)	11-Feb 2026	No ¹	2.0 2.5	1.0 0.0	1.3 1.0	3.5 1.0	1.5
2	ARU-HUB-AC (wall mounted - rigid)	2552927-TR-001 (UUT2)	Univeristy of Nevada, Reno (UNR)	11-Feb 2026	No ¹	2.0 2.5	1.0 0.0	1.3 1.0	3.5 1.0	1.5
3	MRU-78517192537-AC (wall mounted - rigid)	2552927-TR-001 (UUT3)	University of Nevada, Reno (UNR)	11-Feb 2026	No ¹	2.0 2.5	1.0 0.0	1.3 1.0	3.5 1.0	1.5
4	ARU-6B-Internal (wall mounted - rigid)	2552927-TR-001 (UUT4)	University of Nevada, Reno (UNR)	11-Feb 2026	No ¹	2.0 2.5	1.0 0.0	1.3 1.0	3.5 1.0	1.5
5	ARU-6B-Internal (Hanger rod) (ceiling mounted - rigid)	2552927-TR-001 (UUT5)	University of Nevada, Reno (UNR)	11-Feb 2026	No ¹	2.0 2.5	1.0 0.0	1.3 1.0	3.5 1.0	1.5
6	ARU-6B-Internal (Bracket) (ceiling mounted - rigid)	2552927-TR-001 (UUT6)	University of Nevada, Reno (UNR)	11-Feb 2026	No ¹	2.0 2.5	1.0 0.0	1.3 1.0	3.5 1.0	1.5
7	HRU-7851719-AC (wall mounted - rigid)	2552927-TR-001 (UUT7)	University of Nevada, Reno (UNR)	11-Feb 2026	No ¹	2.0 2.5	1.0 0.0	1.3 1.0	3.5 1.0	1.5

Notes:
1. Univeristy of Nevada, Reno (UNR) is not ISO 17025 accredited but has been reviewed by TRU Compliance and found to meet the requirements for ICC-ES AC156 testing. Review form is on file with TRU Compliance.

UNIT UNDER TEST (UUT) SUMMARY SHEET

2552927-CR-001-R1



Manufacturer:	Comba Telecom	UUT 1
Product Type:	Public Safety Communications Equipment	
Product Function:	Distributed Antenna System (DAS)	
Model Line:	ComFlex NG Series	
Model Number:	MU-Chassis-AC	
Serial Number:	09230002	Test Report: 2552927-TR-001 (UUT1)

UUT Properties						
Weight ¹ (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
603	15.5	19.0	10.5	7.32	12.62	12.68

UUT Highest Passed Seismic Run Information										
Building Code	Test Criteria	S _{DS} (g)	z/h	R _μ	H _f	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2025	ICC-ES AC 156-24	2.00	1.0	1.3	3.5	1.5	3.20	2.15	1.67	0.67
		2.50	0.0	1.0	1.0					

Product Construction Summary: Enclosure: Aluminum Alloy
Supports 8 RF Units, 2 Fiber Optical Units.
Includes Power Supply and Modem for Remote Connection.

Test Mounting Details:

OSP-0904
BY: Mohammad Karim



Options/Subcomponent Summary:

Description	Mfr.	Part Number
Bi-Directional Amplifier (BDA)	Comba	MU-BDA20-2B-LH (x1)
		MU-BDA20-2B-HH (x1)
Demodulation Card	Comba	MU-DEMOD (x1)
Fiber Optic Unit	Comba	MU-FOU (x2)
Point of Interface (POI)	Comba	MU-POI-HP-FDD (x3)
		MU-POI-LP-2500TDD (x1)
		MU-POI-LP-3700TDD (x1)
Rack	Amphenol	OGS136
Shelves	Kendall Howard	KH-1907-3-000-03 (x5)



Test Mounting Details:

¹ The weight is the combination of the unit, rack and dummy weight.

- Unit: 67.2 lbs.
- Rack: 157.8 lbs.
- Dummy Weight: 377.5 lbs.

UUT1 was rack mounted - rigid.
Rack to Table: Four (4) 7/8" Grade 5 bolts and washers.
Unit to Rack: Eight (8) M6 rack screws. Unit was installed at the top with a max height of 81". See next page for diagram.
 Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

2552927-CR-001-R1

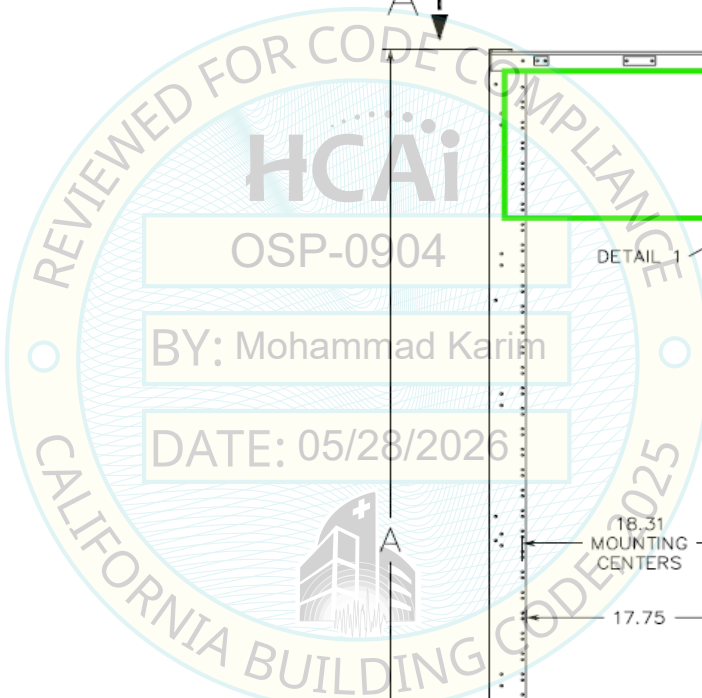
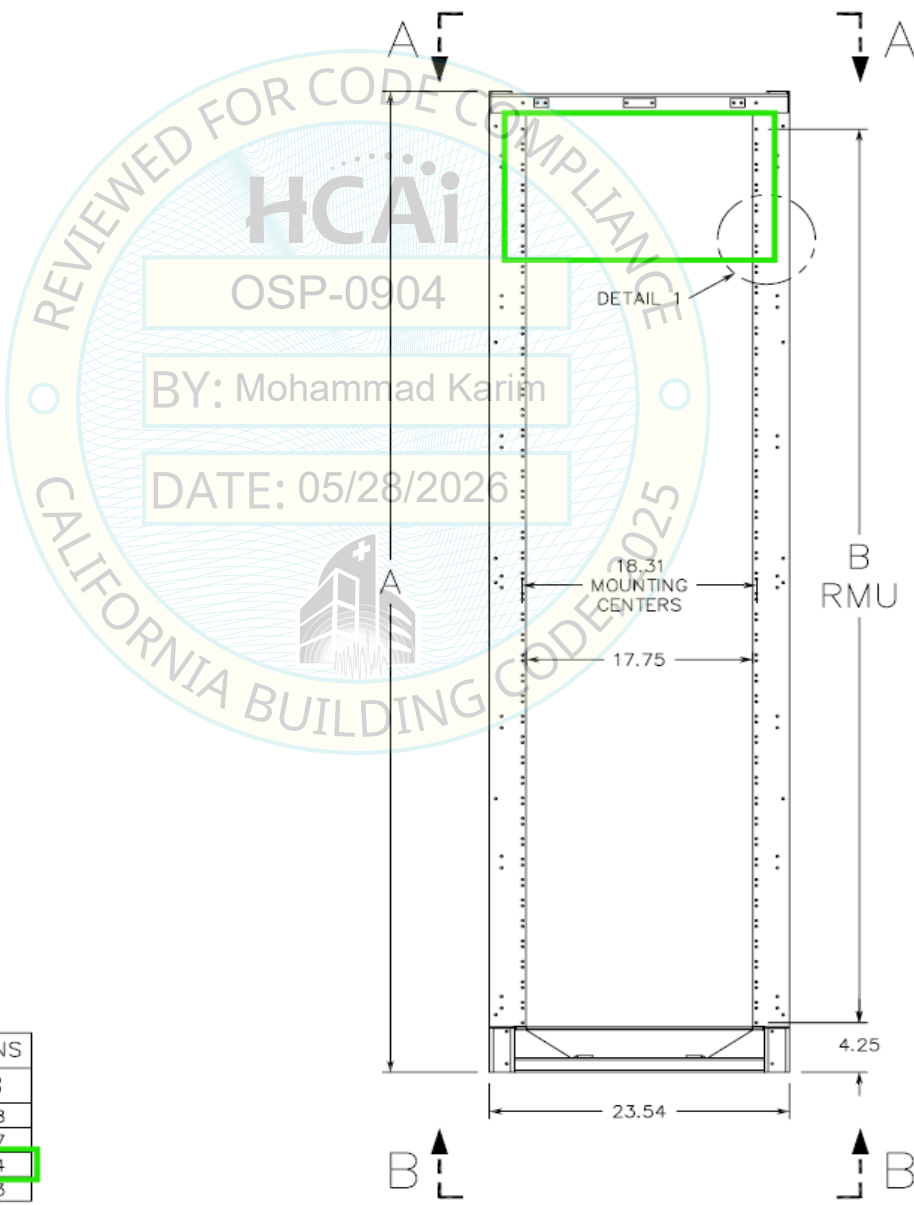


Manufacturer: Comba Telecom
Product Type: Public Safety Communications Equipment
Product Function: Distributed Antenna System (DAS)
Model Line: ComFlex NG Series
Model Number: MU-Chassis-AC
Serial Number: 09230002

Test Report: 2552927-TR-001 (UUT1)

UUT 1

Subcomponent Mounting Locations:



PART NO	DIMENSIONS	
	A	B
OGS133	90.00	48
OGS134	72.00	37
OGS136 *	84.00	44
OGS138	96.00	53

* TELECT STANDARD

UNIT UNDER TEST (UUT) SUMMARY SHEET

2552927-CR-001-R1



Manufacturer:	Comba Telecom	UUT 3
Product Type:	Public Safety Communications Equipment	
Product Function:	Medium Power Remote Units (MRU)	
Model Line:	ComFlex NG Series	
Model Number:	MRU-78517192537-AC	
Serial Number:	AA2540086316	Test Report: 2552927-TR-001 (UUT3)

UUT Properties						
Weight ¹ (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
40	5.0	9.8	20.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information										
Building Code	Test Criteria	S _{DS} (g)	z/h	R _μ	H _f	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2025	ICC-ES AC 156-24	2.00	1.0	1.3	3.5	1.5	3.20	2.15	1.67	0.67
		2.50	0.0	1.0	1.0					

Product Construction Summary: Enclosure: Aluminum Alloy
Bracket: Carbon Steel (SGCC)
Frequency Band (MHz): 700/850/1900/2100/2500/3700 with AC PSU

Test Mounting Details:

Enclosure: Aluminum Alloy
Bracket: Carbon Steel (SGCC)
Frequency Band (MHz): 700/850/1900/2100/2500/3700 with AC PSU



Options/Subcomponent Summary:

Description	Mfr.	Part Number
n/a	n/a	n/a

Test Mounting Details:

¹ The weight is the combination of the unit and bracket.
 - Unit: 34.0 lbs.
 - Bracket: 5.8 lbs.

* The mounting bracket is the default bracket included with the unit's main part number and is not sold separately.

UUT3 was wall mounted - rigid to the test fixture.
Wall Fixture: Mounting bracket* to wall fixture was mounted using four (4) 3/8" x 1-1/2" lag screws and washers.
Unit: Unit to mounting bracket was attached using eight (8) M8 screws. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

2552927-CR-001-R1



Manufacturer:	Comba Telecom	<h2>UUT 4</h2>
Product Type:	Public Safety Communications Equipment	
Product Function:	Distributed Antenna System (DAS)	
Model Line:	ComFlex NG Series	
Model Number:	ARU-6B-Internal	
Serial Number:	AA2450132110	Test Report: 2552927-TR-001 (UUT4)

UUT Properties										
Weight ¹ (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)						
	Depth	Width	Height	Front-Back	Side-Side	Vertical				
8	3.5	9.8	9.8	N/A	N/A	N/A				
UUT Highest Passed Seismic Run Information										
Building Code	Test Criteria	S _{DS} (g)	z/h	R _μ	H _f	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2025	ICC-ES AC 156-24	2.00	1.0	1.3	3.5	1.5	3.20	2.15	1.67	0.67
		2.50	0.0	1.0	1.0					

Product Construction Summary: Enclosure: Aluminum Alloy
Bracket: Carbon Steel (Q235A/T=1.5)
Frequency Band (MHz): 700/850/1900/2100/2500/3700 - 19dBm (FDD) / 22dBm (TDD)

Test Mounting Details:

Enclosure: Aluminum Alloy
Bracket: Carbon Steel (Q235A/T=1.5)
Frequency Band (MHz): 700/850/1900/2100/2500/3700 - 19dBm (FDD) / 22dBm (TDD)



Options/Subcomponent Summary:

Description	Mfr.	Part Number
n/a	n/a	n/a

Test Mounting Details:

¹ The weight is the combination of the unit and bracket.
 - Unit: 7.2 lbs.
 - Bracket: 0.8 lbs.

* The mounting bracket is the default bracket included with the unit's main part number and is not sold separately.

UUT4 was wall mounted - rigid to the test fixture.
Wall Fixture: Mounting bracket* (1) to wall fixture was mounted using four (4) #10 x 1-1/2" screws.
Unit: Mounting bracket* (2) to unit was mounted using four (4) M4x10 screws and washers. Unit with mounting bracket (2) was hung on mounting bracket (1).
 Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

2552927-CR-001-R1



Manufacturer:	Comba Telecom	UUT 5
Product Type:	Public Safety Communications Equipment	
Product Function:	Distributed Antenna System (DAS)	
Model Line:	ComFlex NG Series	
Model Number:	ARU-6B-Internal (Hanger rod)	
Serial Number:	AA2450132208	Test Report: 2552927-TR-001 (UUT5)

UUT Properties										
Weight ¹ (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)						
	Depth	Width	Height	Front-Back	Side-Side	Vertical				
8	3.5	9.8	9.8	N/A	N/A	N/A				
UUT Highest Passed Seismic Run Information										
Building Code	Test Criteria	S _{DS} (g)	z/h	R _μ	H _f	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2025	ICC-ES AC 156-24	2.00	1.0	1.3	3.5	1.5	3.20	2.15	1.67	0.67
		2.50	0.0	1.0	1.0					

Product Construction Summary: **Test Mounting Details:**

Enclosure: Aluminum Alloy
 Bracket: Carbon Steel (Q235A/T=1.5)
 Frequency Band (MHz): 700/850/1900/2100/2500/3700 -
 19dBm (FDD) / 22dBm (TDD)

Options/Subcomponent Summary:

Description	Mfr.	Part Number
n/a	n/a	n/a



Test Mounting Details:

¹ The weight is the combination of the unit and bracket.
 - Unit: 7.2 lbs.
 - Bracket: 0.8 lbs.

* The mounting bracket is the default bracket included with the unit's main part number and is not sold separately.

UUT5 was ceiling mounted - rigid to the test fixture.
Ceiling Fixture: Mounting bracket* (1) to ceiling fixture was mounted using one (1) M8 x 1.25 Class 8.8 27" hanger rod and washers.
Unit: Mounting bracket* (2) to unit was mounted using four (4) M4x10 screws and washers. Unit with mounting bracket (2) was hung on mounting bracket (1).
 Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

2552927-CR-001-R1



Manufacturer:	Comba Telecom	<h2>UUT 6</h2>
Product Type:	Public Safety Communications Equipment	
Product Function:	Distributed Antenna System (DAS)	
Model Line:	ComFlex NG Series	
Model Number:	ARU-6B-Internal (Bracket)	
Serial Number:	AA2450131890	Test Report: 2552927-TR-001 (UUT6)

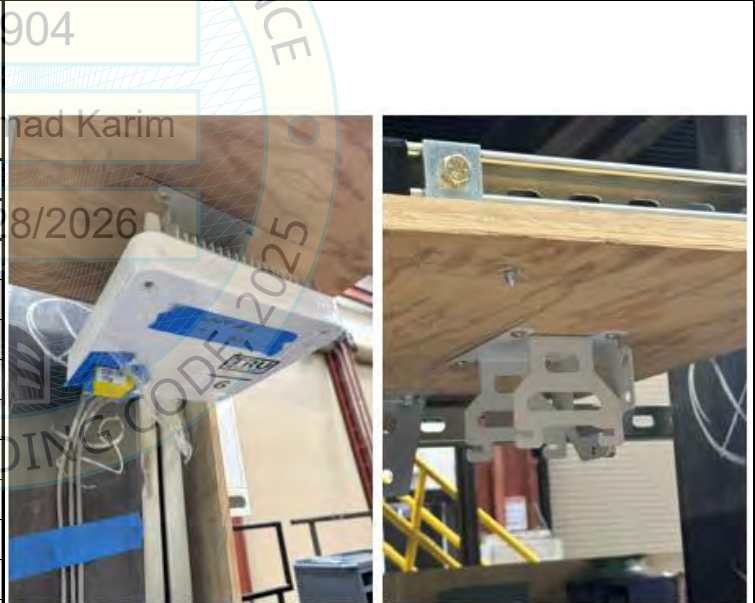
UUT Properties										
Weight ¹ (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)						
	Depth	Width	Height	Front-Back	Side-Side	Vertical				
8	3.5	9.8	9.8	N/A	N/A	N/A				
UUT Highest Passed Seismic Run Information										
Building Code	Test Criteria	S _{DS} (g)	z/h	R _μ	H _f	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2025	ICC-ES AC 156-24	2.00	1.0	1.3	3.5	1.5	3.20	2.15	1.67	0.67
		2.50	0.0	1.0	1.0					

Product Construction Summary: Enclosure: Aluminum Alloy
Bracket: Carbon Steel (Q235A/T=1.5)
Frequency Band (MHz): 700/850/1900/2100/2500/3700 - 19dBm (FDD) / 22dBm (TDD)

Test Mounting Details:

Options/Subcomponent Summary:

Description	Mfr.	Part Number
n/a	n/a	n/a



Test Mounting Details:

¹ The weight is the combination of the unit and bracket.
 - Unit: 7.2 lbs.
 - Bracket: 0.8 lbs.

* The mounting bracket is the default bracket included with the unit's main part number and is not sold separately.

UUT6 was ceiling mounted - rigid to the test fixture.
Ceiling Fixture: Mounting bracket* (1) to ceiling fixture was mounted using four (4) #10 x 1-1/2" screws.
Unit: Mounting bracket* (2) to unit was mounted using four (4) M4x10 screws and washers. Unit with mounting bracket (2) was hung on mounting bracket (1).
 Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

