



Model 2745 24x12 Power Combiner Installation Guide

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This guide provides the basic information required to install the Comtest Model 2745 24x12 Power Combiner Shelf on a 19 or 23 inch rack assembly.

Unpacking the 2745 Shelf

Before opening the 2745 shipping box, carefully inspect for any signs of damage. If the box has been damaged, note the damage before opening the box. Open the box and remove the 2745 shelf and carefully examine it for any damage. If the shelf is damaged, contact your supplier for instructions to return it for a replacement. If there is no damage, verify that all packed items have been received. You should receive the following:

- Comtest model 2745 shelf, part number SA-2745-1201
- Quantity 1 Rack Mounting Bracket kit, part number SA-2745-0010
 - Quantity 2 Rack Mount Brackets, part number PD-2745-0010
- Quantity 1 Mounting hardware kit, part number SA-0000-0001
 - Quantity 4, 10-32 x 3/8 screws, part number HW-PP06-05SS
 - Quantity 4, #10 external tooth lock washers, part number HW-WE06-00SS
- Quantity 1 Ground Kit, part number CA-2745-0013
- Quantity 2 Power Combiner Cables, part number CA-2745-0014
- Quantity 1 Installation Guide SA-2745-1217

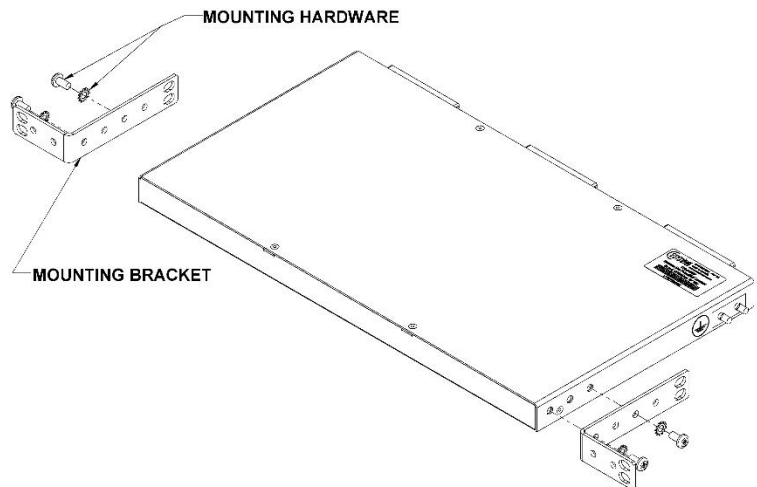
If any of the above items are missing, please contact your supplier.

Installation

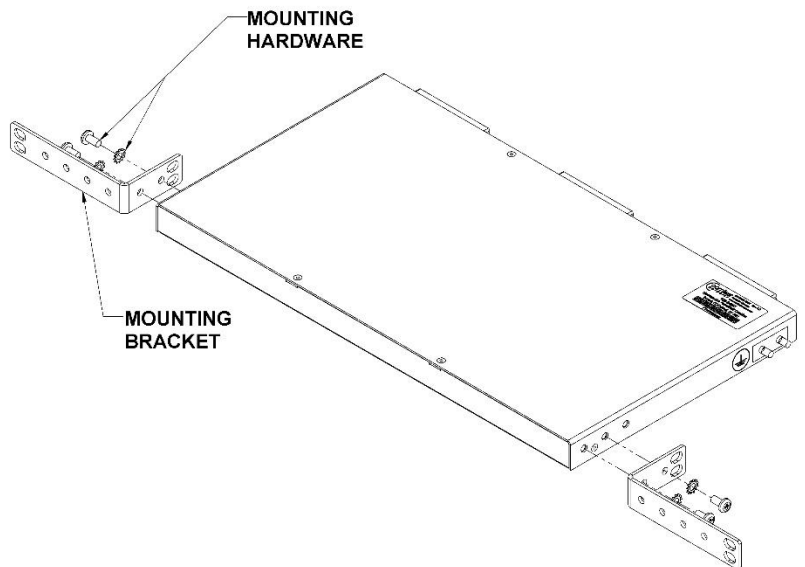
The 2745 requires ½U (0.875 inches) of rack space. The shelf is supplied with mounting brackets and hardware to allow installation in a 19 inch or 23 inch rack.

Preparation for Mounting

- 19 Inch Mounting
For 19 inch mounting, the long side of the mounting bracket is attached to the side of the shelf. There are three positions to mount the bracket on the shelf and four positions on the mounting bracket. The Rack Mounting Bracket can also be mounted with the flange at the back. Thus, there are 24 possible mounting positions for the Rack Mounting Bracket. Choose a suitable mounting position for the shelf then, using the provided 10-32 screws and lock washers, attach the bracket to each side of the shelf. Place the shelf in position on the rack and, using the appropriate screws and lock washers, attach the shelf to the rack. Please note the hardware (screws) required to mount the shelf to the rack is not supplied with the 2745 shelf mounting kit.



- 23 Inch Mounting
For 23 inch mounting, the short side of the mounting brackets is attached to the side of the shelf. There are three positions to mount the brackets on the shelf. Choose a suitable mounting position for the shelf then, using the provided 10-32 screws and lock washers, attach the bracket to each side of the shelf. Place the shelf in position on the rack and, using the appropriate screws and lock washers, attach the shelf to the rack. Please note the hardware (screws) required to mount the shelf to the rack is not supplied with the 2745 shelf mounting kit.



Cabling Overview

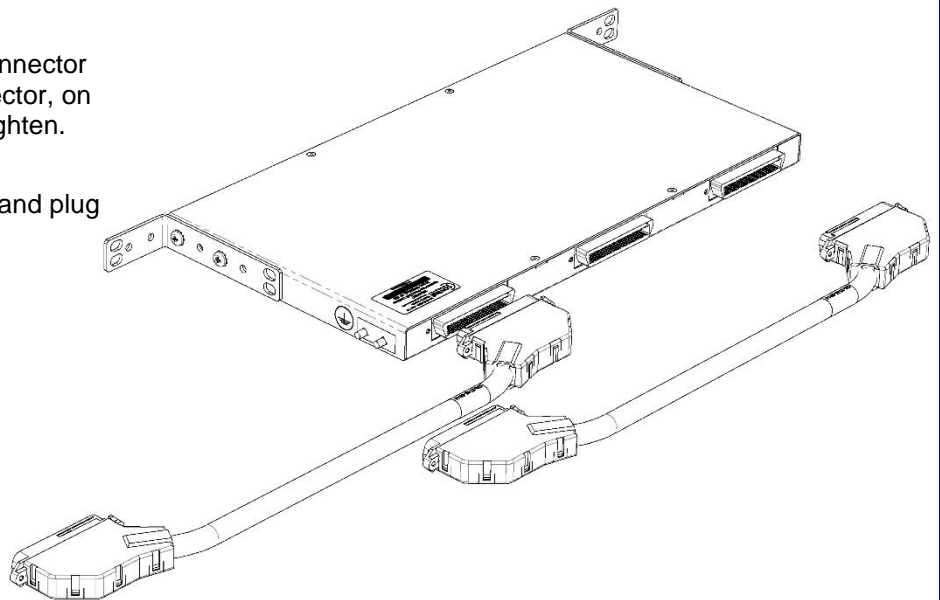
New Installations

The 2745 Shelf cabling configurations will vary depending on installation locations and the number of lines supported by the DSLAM. However, the physical interface to the rear panel connectors is standard 50-pin RJ-21 type receptacle connectors. Each splitter card uses 24 pairs of the 25 pairs available on each 50-pin connector. After the shelf has been attached to the rack, the cabling can be prepared as shown below

For improved DSL performance, Comtest recommends the use of CAT 5, or better, cabling on the DSL connectors for our 2745 Power Combiner Shelf in order to ensure that optimum system performance is achieved and maintained. Comtest suggest that the CAT 5 mating connectors used be equipped with either a 90° or 120° cover so that routing of the cables is simplified.

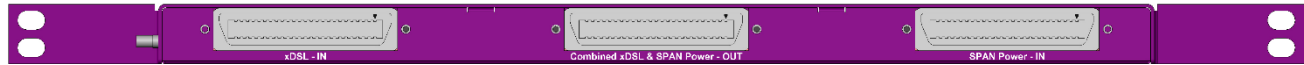
CAUTION - To reduce the risk of fire, use only No. 26 AWG or larger telecommunication line cord/cable.
Install the cables in the following sequence:

- Connect xDSL Cable first
Insert the screw through the connector cover and into the RJ-21 connector, on the back panel, and carefully tighten.
- Connect SPAN Cable second
Assemble the connector cover and plug as above.



Connector Pin Outs

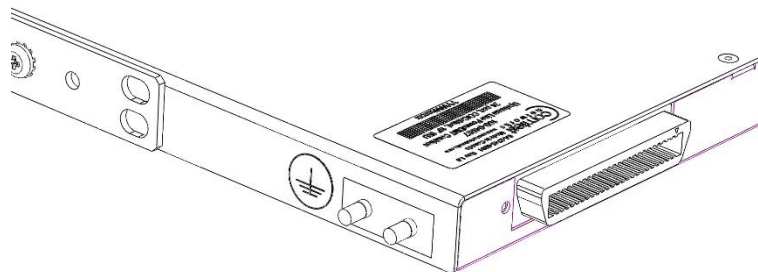
The Model 2745 is a 24 port combiner that provides the required filtering for running Strand Power (+/-190VDC) and providing VDSL2 copper transport over the same copper pairs.



xDSL IN				Combined xDSL & SPAN Power OUT				SPAN Power IN			
	Ring		Tip		Ring		Tip		Ring		Tip
1	DSL 1	26	DSL 1	1	DSL 1 + Power 1	26	DSL 1 + Power 1	1	Power 1	26	Power 1
2	DSL 2	27	DSL 2	2	DSL 2 + Power 1	27	DSL 2 + Power 1	2	Power 2	27	Power 2
3	DSL 3	28	DSL 3	3	DSL 3 + Power 2	28	DSL 3 + Power 2	3	Power 3	28	Power 3
4	DSL 4	29	DSL 4	4	DSL 4 + Power 2	29	DSL 4 + Power 2	4	Power 4	29	Power 4
5	DSL 5	30	DSL 5	5	DSL 5 + Power 3	30	DSL 5 + Power 3	5	Power 5	30	Power 5
6	DSL 6	31	DSL 6	6	DSL 6 + Power 3	31	DSL 6 + Power 3	6	Power 6	31	Power 6
7	DSL 7	32	DSL 7	7	DSL 7 + Power 4	32	DSL 7 + Power 4	7	Power 7	32	Power 7
8	DSL 8	33	DSL 8	8	DSL 8 + Power 4	33	DSL 8 + Power 4	8	Power 8	33	Power 8
9	DSL 9	34	DSL 9	9	DSL 9 + Power 5	34	DSL 9 + Power 5	9	Power 9	34	Power 9
10	DSL 10	35	DSL 10	10	DSL 10 + Power 5	35	DSL 10 + Power 5	10	Power 10	35	Power 10
11	DSL 11	36	DSL 11	11	DSL 11 + Power 6	36	DSL 11 + Power 6	11	Power 11	36	Power 11
12	DSL 12	37	DSL 12	12	DSL 12 + Power 6	37	DSL 12 + Power 6	12	Power 12	37	Power 12
13	DSL 13	38	DSL 13	13	DSL 13 + Power 7	38	DSL 13 + Power 7	13		38	
14	DSL 14	39	DSL 14	14	DSL 14 + Power 7	39	DSL 14 + Power 7	14		39	
15	DSL 15	40	DSL 15	15	DSL 15 + Power 8	40	DSL 15 + Power 8	15		40	
16	DSL 16	41	DSL 16	16	DSL 16 + Power 8	41	DSL 16 + Power 8	16		41	
17	DSL 17	42	DSL 17	17	DSL 17 + Power 9	42	DSL 17 + Power 9	17		42	
18	DSL 18	43	DSL 18	18	DSL 18 + Power 9	43	DSL 18 + Power 9	18		43	
19	DSL 19	44	DSL 19	19	DSL 19 + Power 10	44	DSL 19 + Power 10	19		44	
20	DSL 20	45	DSL 20	20	DSL 20 + Power 10	45	DSL 20 + Power 10	20		45	
21	DSL 21	46	DSL 21	21	DSL 21 + Power 11	46	DSL 21 + Power 11	21		46	
22	DSL 22	47	DSL 22	22	DSL 22 + Power 11	47	DSL 22 + Power 11	22		47	
23	DSL 23	48	DSL 23	23	DSL 23 + Power 12	48	DSL 23 + Power 12	23		48	
24	DSL 24	49	DSL 24	24	DSL 24 + Power 12	49	DSL 24 + Power 12	24		49	
25		50		25		50		25		50	

Grounding

For safety reasons, the 2745 needs to be grounded to the rack through a ground terminal located on the right side rear of the shelf. Use the hardware provided to attach your ground wire to the shelf. Note, 8 AWG wire is recommended for the ground.



Warranty

Comtest warrants all equipment manufactured by it and bearing its nameplate to be free from defects in workmanship and materials, during normal use and service, for a period of three (3) years from the date of shipment. In the event that a defect in any such equipment arises within the warranty period it shall be the responsibility of the customer to return the equipment by prepaid transportation to a Comtest service centre prior to the expiration of the warranty period for the purpose of allowing Comtest to inspect and repair the equipment. If inspection by Comtest discloses a defect in workmanship or material it shall, at its option, repair or replace the equipment without cost to the customer, and thereafter return it to the customer by the least expensive mode of transportation the cost of which shall be prepaid by Comtest. In no event shall this warranty apply to equipment which has been modified without the written authorization of Comtest, or which has been subject to abuse, neglect, accident or improper application. If inspection by Comtest discloses that the repairs that must be made on the equipment are not covered by this warranty, the regular repair charges shall apply to any repairs made to the equipment.

This warranty constitutes the only warranty applicable to the equipment sold by Comtest and no other warranty or condition, statutory or otherwise, expressed or implied shall be imposed upon Comtest nor shall any representation made by any person including a representation by a representative or agent of Comtest be effective to extend the warranty coverage provided herein. In no event (including, but not limited to the negligence of Comtest, its agents or employees) shall Comtest be liable for special or consequential damages or damages arising from the loss of use of the equipment and on the expiration of the warranty period all liability of Comtest whatsoever in connection with the equipment shall terminate.

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