

Cisco Power Distribution Unit

A key requirement for today's Hybrid Fiber Coax distribution networks is reliability. The New Cisco Power Distribution Unit (PDU) not only provides improved RF specifications and packaging, but also has increased survivability against power surges as compared to its predecessor.

The PDU upgrades any Cisco Surge-Gap and standard Multimedia tap to provide power distribution capability. Operators only need to install PDUs at tap locations where revenue-generating telephony subscribers are located. This cost-efficient approach matches incremental expenses with new revenue opportunities.

The PDU is available in 2/4 way and 8-way sizes, and is designed to provide safe power distribution to individual subscriber drops. Both versions of the PDU, the coaxial drop powering and the twisted-pair powering, are compatible with all Cisco Surge-Gap and standard Multimedia taps. After initial installation, the PDU allows power activation and current limiting on a per-port basis without interruption to any subscribers. These features provide for minimum subscriber interruption plus ensure that individual subscribers and the overall network are isolated from potential ground faults and other AC powering concerns.

Figure 1. Cisco Power Distribution Unit (PDU)



Features

- Fully compatible with all Cisco Surge-Gap and standard Multimedia taps
- Available in 2/4 way and 8-way housing sizes
- Coaxial and twisted-pair powering versions available
- Universal design works with all faceplate values to minimize inventory management concerns
- AC/RF bypass switch activation feature provides uninterrupted downstream subscriber service during tap faceplate removal
- Power activation and current limiting on a per-port basis for maximum network reliability
- Advanced gasket technology ensures maximum protection against moisture intrusion and RF interference in aerial, pedestal, and vault deployments
- AL 360T housing with powder coating for superior environmental protection
- Twisted-Pair Connection: 22 to 24 AWG conductor capable
- High-current version PDU is available for coaxial versions

Product Specifications

See the tables below for product specifications.

Table 1. RF Specifications

Items	Specification	Notes
Pass band	5 to 1000 MHz	
Insertion Loss	See Insertion Loss Table	
AC to RF Isolation (twisted pair to tap port)	65 dB (minimum)	
Return Loss	-	1

Table 2. AC/RF Bypass Switch Performance

Items	Specification	Notes
Current Limiting	350 mA @ 60 °C per drop	2
	1.2 A @ 60 °C per drop	3
Surge Resistance	1 kV combination wave-Main Port 1 kV ring wave-Tap Port	4
	6 kV combination wave-Main Port 6 kV ring wave-Tap Port	5

Table 3. Mechanical Specifications

Items	Specification		
	2-Way/4-Way	8-Way	Notes
COAX Version PDU			
Height	3.6 mm 91 in.	4.5 mm 114 in.	6
Width	3.8 mm 97 in.	5.6 mm 142 in.	
Depth	1.7 mm 43 in.	0.9 mm (23 in.	
Twisted-Pair Version PDU			
Height	5.0 mm 127	6.1 mm 155 in.	6
Width	3.8 mm 97 in.	5.6 mm 142 in.	
Depth	0.7 mm 18 in.	0.7 mm 18 in.	
Combined PDU & TAP			
Height	5.0 mm 127 in.	6.1 mm 155 in.	7
Width	3.8 mm 97 in.	5.6 mm 142 in.	
Depth	4.1 mm 104 in.	4.1 mm 104 in.	

Table 4. Incremental Insertion Loss

Incremental Insertion Loss	Specification (dB)								Notes
	2/4-W Coax		8-W Coax		2/4-W Twisted Pair		8-W Twisted Pair		
Frequency	Avg.	Max.	Avg.	Max.	Avg.	Max.	Avg.	Max.	8
									10
5-50 MHz	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2	
51-550 MHz	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3	
551-650 MHz	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3	
651-750 MHz	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3	
751-870 MHz	0.2	0.3	0.3	0.4	0.2	0.3	0.2	0.3	
871-1000 MHz	0.4	0.5	0.6	0.7	0.3	0.4	0.5	0.6	

Table 5. Incremental Tap Loss

Incremental Tap Loss	Specification (dB)								Notes
	2/4-W Coax		8-W Coax		2/4-W Twisted Pair		8-W Twisted Pair		
Frequency	Avg.	Max.	Avg.	Max.	Avg.	Max.	Avg.	Max.	9
									10
5-50 MHz	0.3	0.4	0.1	0.2	0.1	0.2	0.1	0.2	
51-550 MHz	0.6	0.7	0.4	0.5	0.3	0.4	0.4	0.5	
551-650 MHz	0.7	0.8	0.4	0.5	0.4	0.5	0.4	0.5	
651-750 MHz	0.8	0.9	0.6	0.7	0.5	0.6	0.4	0.5	
751-870 MHz	0.9	1.0	0.7	0.8	0.6	0.7	0.5	0.6	
871-1000 MHz	0.9	1.2	1.1	1.3	0.6	0.7	0.6	0.7	

Table 6. Standards Compliance

Standards Compliance	Specification
Cisco PDUs meet or exceed the following industry standards	
EMC	FCC Part 76 Emissions
	EU 50083-2 Emissions
Safety	UL 497, 1459, 60950-1
	EN 60065
National Electrical Code	Class 2 circuits
	Twisted-Pair Connection: 22 to 24 AWG conductor capable

Note:

1. Subtract 1 dB from the "tap only" return loss specification to determine the typical return loss performance for the tap/PDU.
2. When used with part number 738445-8. See **Ordering Information** for details.
3. When used with part number 4044262-3. See **Ordering Information** for details.
4. When used with standard Multimedia taps.
5. When used with Surge-Gap Taps.
6. Approximate external PDU dimensions when installed in tap housing.
7. Overall dimensions with PDU installed, not including strand clamp.
8. Incremental Insertion Loss is the additional insertion loss (through loss) that the tap/PDU combination will exhibit. It is added to the "tap only" insertion loss to determine total tap/PDU loss.
9. Incremental Tap Loss is the additional tap loss (input to tap port) that the tap/PDU combination will exhibit. It is added to the "tap only" tap loss to determine total tap/PDU loss.
10. The "Max" specification for incremental loss applies to $\geq 95\%$ of tap/PDU combinations.
11. Please see the data sheets of individual Cisco Multimedia Taps for the "tap only" specifications referred to on this page.

Ordering Information

The following tables list the part numbers (P/N) for the PDU.

Table 7. Ordering Information

Description	Part Number
2/4-Way Coaxial-Drop Powering PDU	738447
8-Way Coaxial-Drop Powering PDU	738448
2/4-Way Twisted-Pair Powering PDU ¹	738445
8-Way Twisted-Pair Powering PDU ¹	738446
2/4-Way High-Current Coaxial-Drop Powering PDU ²	4044262
8-Way High-Current Coaxial-Drop Powering PDU ²	4044263
Positive Temperature Coefficient (PTC) Assembly, 1 bag of 100	592049

Note:

1. Twisted-Pair drop powering PDUs require PTCs that are sold separately.
2. High-Current PDUs are not used to feed residential homes.



Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. A listing of Cisco's trademarks can be found at www.cisco.com/go/trademarks. Third party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1009R)
Specifications and product availability are subject to change without notice.
© 2001, 2012 Cisco and/or its affiliates. All rights reserved.

Cisco Systems, Inc.
800 722-2009 or 678 277-1120
www.cisco.com

Part Number 95-738928-01 Rev B
October 2012