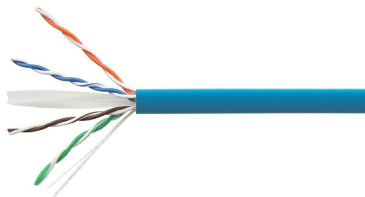


5-1427070-6 | CS30Z3 BLU C6 4/24 U/UTP RIB 305M ANATEL



Category 6 U/UTP Cable, 24AWG, low smoke zero halogen, blue jacket, 4 pair count, 305 m length Reel in box

Product Classification

Regional Availability	Latin America
Portfolio	NETCONNECT®
Product Type	Twisted pair cable

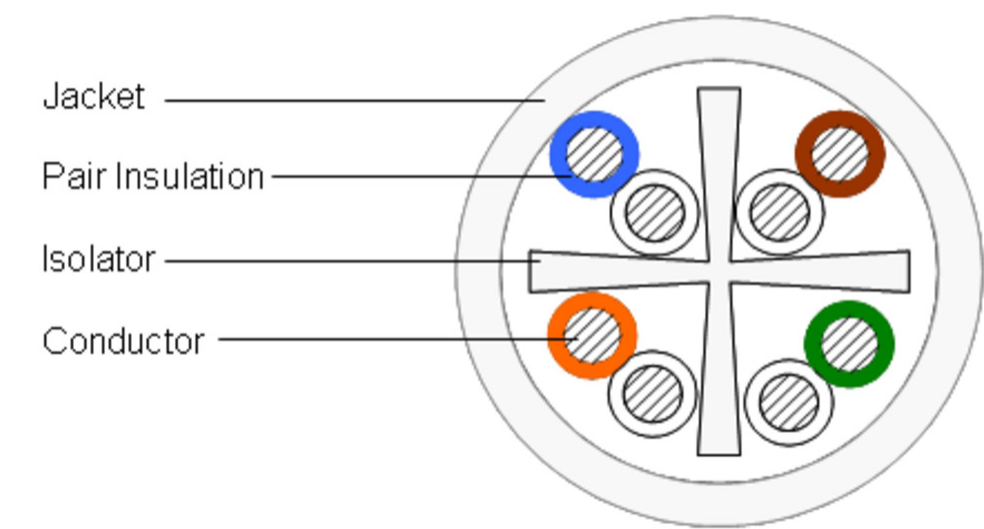
General Specifications

Product Number	CS30Z3
ANSI/TIA Category	6
Cable Component Type	Horizontal
Cable Type	U/UTP (unshielded)
Conductor Type, singles	Solid
Conductors, quantity	8
Jacket Color	Blue
Pairs, quantity	4
Separator Type	Isolator
Transmission Standards	ABNT/NBR 14703 ANSI/TIA-568.2-D Anatel

Dimensions

Cable Length	304.8 m 1000 ft
Diameter Over Insulated Conductor	0.978 mm 0.038 in
Diameter Over Jacket, nominal	5.588 mm 0.22 in
Conductor Gauge, singles	24 AWG

Cross Section Drawing



Electrical Specifications

Characteristic Impedance	100 ohm
Characteristic Impedance Tolerance	±15 ohm
Nominal Velocity of Propagation (NVP)	68 %
Operating Voltage, maximum	80 V
Remote Powering	Fully complies with the recommendations set forth by IEEE 802.3bt (Type 4) for the safe delivery of power over LAN cable when installed according to ISO/IEC 14763-2, CENELEC EN 50174-1, CENELEC EN 50174-2 or TIA TSB-184-A

Material Specifications

Conductor Material	Bare copper
Insulation Material	Polyolefin
Jacket Material	Low Smoke Zero Halogen (LSZH)
Separator Material	Polyolefin

Environmental Specifications

Installation temperature	0 °C to +60 °C (+32 °F to +140 °F)
Operating Temperature	-20 °C to +60 °C (-4 °F to +140 °F)
Acid Gas Test Method	IEC 60754-2
Environmental Space	Low Smoke Zero Halogen (LSZH)
Flame Test Method	ABNT/NBR 14705 IEC 60332-1 IEC 60332-3-22

Smoke Test Method

IEC 61034-2

Packaging and Weights

Packaging Type

Reel in box

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on www.commscope.com/ProductCompliance
ROHS	Compliant

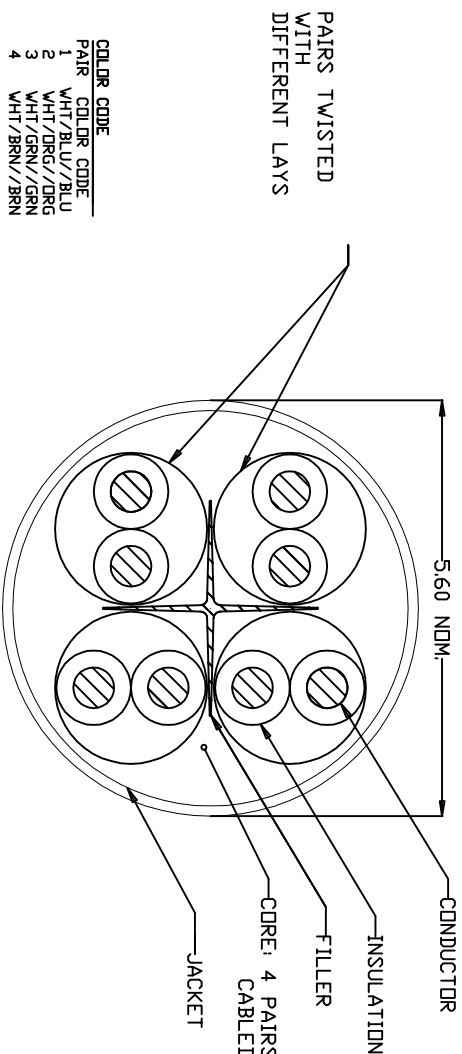


THIS DRAWING IS UNPUBLISHED.		RELEASED FOR PUBLICATION		DATE	
© 2016 Corvscope, INC. Confidential		RECEIVED FROM DRAWING		DATE	
<p>NOTES: Name, drawing and modification are the intellectual property of Corvscope, Inc. and may be used only for the specific purpose authorized in writing by Corvscope, Inc.</p>					
CATEGORY 6 PERFORMANCE CHARACTERISTICS					
REVISIONS					
P		DESCRIPTION		DATE	
D		ECP4800001 B320. Change pricing.		15DEC2016	
		RL		CW	

CATEGORY 6 PERFORMANCE CHARACTERISTICS

FREQUENCY (MHz)	ATTENUATION (db/100m)		NEXT (db, WDRST PR)		PSENFEXT (db)		ELFEXT (db, WDRST PR)		PSELFEXT (db)		DELAY (ms/100m)		RL (db)		IMPEDANCE (Z0cOhms)		ACR (db)	
	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM
1	2.0	74.3	64.8	72.3	67.8	55.8	52.8	55.2	23.0	100±15	72.3	61.5						
4	3.8	65.3	63.3	59.8	45.7	55.8	52.8	55.2	23.0	100±15	61.5	55.5						
8	5.3	60.8	58.8	57.3	47.8	54.8	54.5	25.0	100±15	55.5	51.5							
10	6.0	59.3	54.8	54.2	43.7	54.3	54.2	25.0	100±15	51.5	48.7							
16	7.6	56.2	52.8	52.8	41.8	54.8	54.2	25.0	100±15	48.7	46.3							
20	8.5	54.8	52.8	52.8	41.8	54.8	54.2	25.0	100±15	46.3	44.3							
25	9.5	53.3	52.8	52.8	41.8	54.8	54.2	25.0	100±15	44.3	42.3							
31.25	10.7	51.9	52.8	52.8	41.8	54.8	54.2	25.0	100±15	42.3	40.3							
62.5	15.4	47.4	52.8	52.8	41.8	54.8	54.2	25.0	100±15	40.3	38.3							
100	19.8	44.3	52.8	52.8	41.8	54.8	54.2	25.0	100±15	38.3	36.4							
200	29.0	39.8	52.8	52.8	41.8	54.8	54.2	25.0	100±15	36.4	34.4							
250	32.8	38.3	52.8	52.8	41.8	54.8	54.2	25.0	100±15	34.4	32.4							

FOR ENGINEERING PURPOSES ONLY, ALL MEASUREMENTS ARE SWEEPED OVER THE FREQUENCY RANGE OF INTEREST.



PAIRS TWISTED WITH DIFFERENT LAYS

COLOR CODE	
PAIR	COLOR CODE
1	WHT/BLU//BLU
2	WHT/ORG//ORG
3	WHT/GRN//GRN
4	WHT/BRN//BRN

LEGEND SHALL BE REPEATED EVERY METER

LEGEND SHALL BE REPEATED EVERY METER

⚠ LENGTH SEQUENCE IS RETURNED TO ZERO FOR EACH LENGTH MEASUREMENT ACCURACY TO BE $\pm 1\%$

PRINT COLOR SHALL BE BLACK EXCEPT WHITE ON BLACK JACKET


 PRINT DURABILITY SHALL BE PER UL 444

4 GOVERNING SPECIFICATIONS – LATEST REVISIONS

TIA 568
NEC 800
UL 444

5 JACKET COLOR SHALL BE IN ACCORDANCE WITH EIA-359-A WIRE AND CABLE LIMITS OR COMMScope SUPPLIED COLOR STANDARD

6. FOR BRAZIL MARKET, DIFFERENT LEGEND ON THE JACKET.
"ANATEL 00913-16-02925" IS BRAZIL ANATEL CERTIFICATE NUMBER
"NBR 14703" IS BRAZILIAN STANDARD NUMBER FOR CABLE

BLUE	REEL	500±1%	4-1427070-6
GRAY	REEL	500±1%	4-1427070-4
WHITE	REEL	500±1%	4-1427070-2
YELLOW	REEL IN BOX	305±1%	1427070-8
RED	REEL IN BOX	305±1%	1427070-7
BLUE	REEL IN BOX	305±1%	1427070-6
GRAY	REEL IN BOX	305±1%	1427070-4
WHITE	REEL IN BOX	305±1%	1427070-2
COLOR 	PACKAGE	LENGTH(M)	PART NUMBER

THIS DRAWING IS A CONTROLLED DOCUMENT.

DRW	23SEP2016
REV	
REV	31SEP2016

COMMSCOPE, INC.

[illegible]

ETL Verified Certificate of Conformance Number: 104211622CRT-001

On the basis of the tests undertaken, the sample(s) of the below product have been found to comply with the essential requirements of the referenced specifications at the time the tests were carried out.

Rendered to:

CommScope, Inc

Network Cable Division

3642 US Hwy 70 East

Claremont, NC 28610

www.commscope.com

Contact: Mr. Jeff Harrill

Product Tested: 4 pair, 24 AWG, UTP, LSZH, Non-Plenum, Horizontal (solid) Cable.
Model(s) or Brand Name: CS30Z1
Standard(s): ANSI/TIA-568.2-D and ISO/IEC 11801-1 Category 6 with the applicable electrical transmission characteristics
Authorized cable marking: ETL Verified to ANSI/TIA-568.2-D and ISO/IEC 11801-1 Category 6

Continuing compliance to this specification is monitored through production testing, ongoing inspections by Intertek at the production facility and random sample testing.

Date Issued: February 25, 2020

Approved By:



Antoine Pelletier, Project Engineer

This verification supersedes all previous verifications with the noted Verification/Report number(s) dated before this verification notice.

NOTE: This verification is part of the full test report(s) and should be read in conjunction with it.

This Verification is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Verification. Only the Client is authorized to copy or distribute this Verification. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results referenced from this Verification are relevant only to the sample tested. This Verification by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

CERTIFICATE

Certificate Number: 111045.000
Including Seven Page Addendum

The Quality Management System and implementation of:

CommScope, Inc.

With Virtual Central Function at:
1100 CommScope Place SE
Hickory, NC 28602
United States

meets the requirements of the standard:

ISO 9001:2015

Scope:

The sales, marketing, design, manufacture, test, repair, support, service, and distribution of telecommunications products, components, and services for the telecommunications, wireless, and broadcast networks industries

Certificate Expires: January 04, 2026
Certificate Issued: January 05, 2023
Certified Since: January 10, 2001

Business Segments	Exceptions
Connectivity and Cable Solutions (CCS)	None
Networking, Intelligent Cellular & Security Solutions (NICS)	None
Outdoor Wireless Networks (OWN)	None
Access Network Solutions (ANS)	None



Dr. Cem O. Onus
Managing Director

DEKRA Certification, Inc.
1945 The Exchange SE #300
Atlanta, GA 30339 USA
(215) 997-4519
<https://www.dekra.us/en/audits/>



CERTIFICATE ADDENDUM

Certificate Number: 111045.000
ADDENDUM Page One of Seven

The Quality Management System and implementation of:

CommScope, Inc.

meets the requirements of the standard:

ISO 9001:2015

Site Activities Legend:	HQ = Headquarters	MFG = Manufacturing	SER = Services (Professional Services and/or Technical Support)
	HW DE= Hardware Development	REP = Repair	SC = Purchasing, Supplier Management, Manufacturing Support, Repair Support
	SW DE= Software Development	SAL = Sales, Marketing	DIST = Distribution

Site Address	Site Activities
CommScope Inc 1100 CommScope Place SE Hickory, NC 28602 United States	HQ (Virtual)
ARRIS Technology, Inc. 3871 Lakefield Drive Suwanee, GA 30024 United States	HW & SW DE, SAL, SER, SC
ARRIS Technology, Inc. 101 Tournament Dr. Horsham, PA, 19044 United States	HW & SW DE, SAL, SER, SC
ARRIS Technology, Inc. 6450 Sequence Drive San Diego, CA 92121 United States	SW DE, SER
ARRIS Technology, Inc. 900 Chelmsford St. Lowell, MA 01851 United States	HW & SW DE, SER, SC

Certificate Expires: January 04, 2026
Certificate Issued: January 05, 2023
Certified Since: January 10, 2001



Dr. Cem O. Onus
Managing Director

DEKRA Certification, Inc.
1945 The Exchange SE #300
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CERTIFICATE ADDENDUM

Certificate Number: 111045.000
ADDENDUM Page Two of Seven

The Quality Management System and implementation of:

CommScope, Inc.

meets the requirements of the standard:

ISO 9001:2015

Site Address	Site Activities
ARRIS Solutions, Inc. 2400 Ogden Ave., Suite 180 Lisle, IL 60532 United States	HW & SW DE, SAL, SER, SC
ARRIS 15 Sterling Drive Wallingford, CT 06492 United States	HW & SW DE, SER, SC
ARRIS Technology, Inc. 2450/2500 Walsh Avenue Santa Clara, CA 95051 United States	HW & SW DE, SAL, SER
Ruckus Wireless International Inc. 350 West Java Dr. Sunnyvale, CA 94089 United States	HW & SW DE, SER
Ruckus Wireless Network Technology (Shenzhen) Co. Ltd. Units C&D, 5th Floor, No. 2 Finance base, 8 KeFa Road, Shenzhen, China	SW DE, SC, HW DE

Certificate Expires: January 04, 2026
Certificate Issued: January 05, 2023
Certified Since: January 10, 2001



Dr. Cem O. Onus
Managing Director

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CERTIFICATE ADDENDUM

Certificate Number: 111045.000
ADDENDUM Page Three of Seven

The Quality Management System and implementation of:

CommScope, Inc.

meets the requirements of the standard:

ISO 9001:2015

Site Address	Site Activities
Site Address	Site Activities
CommScope Asia (Suzhou) Technologies Co., Ltd. 77 Qiming Road, Suzhou Industrial Park Suzhou, Jiangsu 215121 Peoples Republic of China	MFG, SC
Ruckus Wireless International Inc., Taiwan Branch @ Neihsu District, Taipei City, Rui Road 411, 10th floor, Taipei	SW DE
ARRIS Group India Pvt Limited (AGIPL) Salarpuria Supreme, Ground Floor West Wing & First Floor Munnekolalu Village, Varthur Hobli, Outer Ring Road, Bangalore-560037	SW DE
ARRIS Group de Mexico S.A. de C.V. Av. La Paz 11721 Parque Industrial Pacifico Tijuana, BC 22643 Mexico	MFG, REP, SC
ARRIS Communications Ireland Limited Building 4300, Cork Airport Business Park Kinsale Road Cork County Ireland	HW & SW DE
ARRIS Group India Private Limited "The Senate" No:33/1, Ulsoor Road, Bangalore - 560 042 India	HW & SW DE

Certificate Expires: January 04, 2026
Certificate Issued: January 05, 2023
Certified Since: January 10, 2001



Dr. Cem O. Onus
Managing Director

DEKRA Certification, Inc.
1945 The Exchange SE #300
Atlanta, GA 30339 USA
(215) 997-4519
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CERTIFICATE ADDENDUM

Certificate Number: 111045.000
ADDENDUM Page Four of Seven

The Quality Management System and implementation of:

CommScope, Inc.

meets the requirements of the standard:

ISO 9001:2015

Site Address	Site Activities
ARRIS Group, Inc. 50 Stranmillis Embankment Belfast, BT95FL Northern Ireland	SW DE
CommScope Czech Republic, s.r.o. Turanka 856/98B 627 00 Brno Czech Republic	HW DE,
CommScope CZ, spol. s.r.o. U Morusi 888, 53006 Pardubice Czech Republic Czech Republic	HW DE,
CommScope Connectivity UK Limited Units 1 and 4 Kinmel Park Industrial Estate Bodelwyddan, Denbighshire, LL18 5TZ United Kingdom	HW DE, MFG, SAL
CommScope Design & Integration UK Ltd. Unit 5 & 6 Eden Business Park Eden House Drive Old Malton, Malton, North Yorkshire YO17 6AE United Kingdom	HW DE, MFG, SC

Certificate Expires: January 04, 2026
Certificate Issued: January 05, 2023
Certified Since: January 10, 2001



Dr. Cem O. Onus
Managing Director

DEKRA Certification, Inc.
1945 The Exchange SE #300
Atlanta, GA 30339 USA
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CERTIFICATE ADDENDUM

Certificate Number: 111045.000
ADDENDUM Page Five of Seven

The Quality Management System and implementation of:

CommScope, Inc.

meets the requirements of the standard:

ISO 9001:2015

Site Address	Site Activities
CommScope Design & Integration UK Limited 412 The Quadrant, Birchwood Park Warrington, WA3 6FW United Kingdom	SER
CommScope EMEA Ltd. Corke Abbey Avenue Bray, Co. Dublin Ireland	MFG, SAL
CommScope EMEA Ltd. Diestsesteenweg 692 3010 Kessel-Lo, Belgium	HW DE, MFG, SAL
CommScope Italy Srl Via Archimede, 22/24 Agrate Brianza (MB) 20864 Italy	HW DE, REP, SW DE
Telecom Networks Americas AV. HIPOLITO YRIGROYEN 2999, DEPOSITO 6 EL TALAR, TIGRE Buenos Aires B1618AXD Argentine Republic	SAL, DIST
CommScope Networks India Private Limited Salarpuria Softzone, A Block, 1st Floor Survey No 80/1, 81/1, 81/2, B Wing, Belandur Village, Varthur Hobli, Outer Ring Bangalore – Karnataka 560103 India	SW DE
ADC India Communications Ltd. No 10 C , 2nd Phase Peenya Industrial Area Bangalore – Karnataka 560058 India	MFG, SC

Certificate Expires: January 04, 2026
Certificate Issued: January 05, 2023
Certified Since: January 10, 2001



Dr. Cem O. Onus
Managing Director

DEKRA Certification, Inc.
1945 The Exchange SE #300
Atlanta, GA 30339 USA
(215) 997-4519
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CERTIFICATE ADDENDUM

Certificate Number: 111045.000
ADDENDUM Page Six of Seven

The Quality Management System and implementation of:

CommScope, Inc.

With site at:

CommScope Asia (Suzhou) Technologies Co.,Ltd.

77 Qiming Road, Suzhou Industrial Park
Suzhou, Jiangsu 215121
Peoples Republic of China

meets the requirements of the standard:

ISO 9001:2015

The validity of this certificate depends on the validity of the main certificate.

Scope:

Production of network cable, fiber cable and communication equipment component (copper patch cords, copper panel, accessories etc.)

Certification Structure: Multi-site

Certificate Expires:	January 04, 2026
Certificate Issued:	January 05, 2023
Certified Since:	January 10, 2001



Dr. Cem O. Onus
Managing Director

DEKRA Certification, Inc.
1945 The Exchange SE #300
Atlanta, GA 30339 USA
(215) 997-4519
<https://www.dekra.us/en/audits/>



证书附录

证书编号: 111045.000

附录第7页,共7页

质量管理体系和实施:

CommScope, Inc.

其场所:

康普科技 (苏州) 有限公司

中国江苏省苏州工业园区启明路77号,邮编215121

符合以下标准要求:

ISO 9001:2015

本证书的有效性取决于主证书的有效性。

范围:

网络线、光缆、通信系统设备材料 (网络跳线、配线装置等) 的生产。

认证结构: 多场所

证书有效期: 2026.01.04

发证日期: 2023.01.05

首次发证日期: 2001.1.10



Dr. Cem O. Onus
Managing Director

DEKRA Certification, Inc.
1945 The Exchange SE #300
Atlanta, GA 30339 USA
(215) 997-4519
<https://www.dekra.us/en/audits/>



Certificate of Registration

ENVIRONMENTAL MANAGEMENT SYSTEM - ISO 14001:2015

This is to certify that:

CommScope, Inc. of North Carolina
1100 CommScope Place SE
Hickory
North Carolina
28603-0339
USA


Holds Certificate No:

EMS 648387

and operates an Environmental Management System which complies with the requirements of ISO 14001:2015 for the following scope:

The environmental management system to control the risks associated with the manufacture, distribution, field support and central function of telecommunication products and services.

For and on behalf of BSI:


Carlos Pitanga, Chief Operating Officer Assurance – Americas

Original Registration Date: 2016-03-01

Latest Revision Date: 2022-04-21

Effective Date: 2022-03-15

Expiry Date: 2025-03-14

Page: 1 of 5



...making excellence a habit.™

Certificate No: **EMS 648387**

Location	Registered Activities
Andrew Telecommunications de Reynosa S. de R.L. de C.V. Av. Industrial Reynosa Lte 2 al 5 Parque Industrial Center Reynosa Tamaulipas 88780 Mexico	Manufacture and distribution of telecommunication products including antenna and cable.
CommScope Asia (Suzhou) Technologies Co., Ltd. EPZ II, 77 Qiming Road Suzhou Industrial Park Suzhou Jiangsu 215121 China	Manufacture and distribution of telecommunication products, including cable.
Andrew Telecommunications India Pvt. Ltd. Plot No. N-2, Phase IV Verna Industrial Estate Verna Salcette Goa 403 722 India	Manufacture and distribution of telecommunication products, including antenna and cable.
CommScope EMEA Ltd. Corke Abbey Avenue Bray County Dublin A98FY03 Ireland	Manufacture and distribution of telecommunication products, including cable and connectors.
CommScope Telecommunications (China) Co., Ltd. 68 West Su Hong Xi Lu Suzhou Industrial Park Suzhou Jiangsu 215021 China	Manufacture and distribution of telecommunication products, including antenna and cables.

Original Registration Date: 2016-03-01

Latest Revision Date: 2022-04-21

Effective Date: 2022-03-15

Expiry Date: 2025-03-14

Page: 2 of 5

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Information and Contact: BSI, Kitemark Court, Davy Avenue, Knowlhill, Milton Keynes MK5 8PP. Tel: + 44 345 080 9000
BSI Assurance UK Limited, registered in England under number 7805321 at 389 Chiswick High Road, London W4 4AL, UK.
A Member of the BSI Group of Companies.

Certificate No: **EMS 648387**

Location	Registered Activities
Andrew Wireless Systems GmbH Industriering 10 Buchdorf 86675 Germany	Manufacture and distribution of telecommunication products, including amplifiers and antenna systems.
CommScope, Inc. of North Carolina 1100 CommScope Place SE Hickory North Carolina 28603-0339 USA	Corporate headquarters responsible for management system oversight of all locations listed on this certificate.
CommScope Inc. 6519 CommScope Road Catawba North Carolina 28609-0199 USA	Manufacture and distribution of telecommunication products, including cable.
CommScope Inc. 3642 US Hwy 70 East Claremont North Carolina 28610-0879 USA	Manufacture and distribution of telecommunication products, including cable.
CommScope Czech Republic s.r.o. Turanka 98B Brno 62700 Czech Republic	Manufacture and distribution of telecommunication products, including connectors and terminations.
CommScope Inc. of North Carolina 1100 CommScope Place SE Hickory North Carolina 28603-0339 USA	Customer care, facility maintenance, and administrative functions.
ADC de Delicias, S. de R.L. de C.V. Blvd. Fernando Baeza No. 1301 Sur Delicias Chihuahua 33000 Mexico	Manufacturing and distribution of telecommunication products.

Original Registration Date: 2016-03-01

Latest Revision Date: 2022-04-21

Effective Date: 2022-03-15

Expiry Date: 2025-03-14

Page: 3 of 5

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BSI Assurance UK Limited, registered in England under number 7805321 at 389 Chiswick High Road, London W4 4AL, UK.
A Member of the BSI Group of Companies.

Certificate No: **EMS 648387**

Location	Registered Activities
ADC de Juarez S. de R.L. de C.V. Parque Industrial Antonio J Bermudez Ciudad Juarez Chihuahua 32470 Mexico	Manufacturing and distribution of telecommunication products.
CommScope Connectivity Belgium bvba Diestsesteenweg 692 Kessel-lo 3010 Belgium	Manufacture and distribution of telecommunication products.
CommScope Technologies de Juarez S. de R.L. de C.V. Santiago Troncoso 331 Praderas del Sur, Ciudad Juarez Chihuahua 32575 Mexico	Manufacture of Fiber Optic Splice Closures (FOSC), Fiber Guide Systems (FGS), Hardened Connectivity and Molding-Gel Filling, including: plastic injection molding, plastic extrusion, plastic and metal machining, and assembly operations.
CommScope Connectivity UK Limited Unit 1 Kinmel Park Bodelwyddan Rhyl, Denbighshire LL18 5TZ United Kingdom	Fibre optic cable manufacturing, termination and design of other telecommunication products and services.
CommScope 11312 S. Pipeline Road Eules Texas 76040 USA	Manufacture, distribution, field support and central function of telecommunication products.
ARRIS GROUP DE MEXICO SA DE CV Av. De la Paz, #11721 Parque Industrial Pacifico Tijuana Baja California 22643 Mexico	Manufacture, repair, support, repair service, distribution of products and components for telecommunications that provide integrated solutions for voice, video and data through the processes of SMT, manual and mechanical assembly, soldering (manual, selective, printed, wave) electrical testing and packaging.

Original Registration Date: 2016-03-01

Latest Revision Date: 2022-04-21

Effective Date: 2022-03-15

Expiry Date: 2025-03-14

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BSI Assurance UK Limited, registered in England under number 7805321 at 389 Chiswick High Road, London W4 4AL, UK.

A Member of the BSI Group of Companies.

Certificate No: **EMS 648387**

Location	Registered Activities
CommScope Design & Integration UK Ltd Unit 5 & 6, Eden Business Park Edenhouse Drive Old Malton Malton YO17 6AE United Kingdom	Manufacture and distribution of telecommunications products including cabinets.
Arris Indústria Eletrônica do Brasil Ltda. CNPJ: 09.154.836/0001-15 Avenida Torquato Tapajós, 9475 Tarumã Manaus Amazonas 69041-025 Brasil	Manufacturer and distribution of Receivers, Television signal Decoders and Modulator/Router.
CommScope Design and Integration UK Ltd. Lovell House, 412 The Quadrant Birchwood Park Warrington WA3 6FW United Kingdom	Telecommunications project management, site surveys, installations commissioning and rigging.

Original Registration Date: 2016-03-01

Latest Revision Date: 2022-04-21

Effective Date: 2022-03-15

Expiry Date: 2025-03-14

Page: 5 of 5

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A Member of the BSI Group of Companies.

LIMITED WARRANTY



1. **Definitions.** For purposes of this Warranty, (i) "Buyer" shall mean the individual or entity identified on the applicable purchase order or supply agreement (or, if different, on Seller's quotation, order acknowledgement or statement of work), (ii) "Seller" shall mean the CommScope entity identified on such entity's quotation, order acknowledgement, statement of work or supply agreement, (iii) "Hardware" means equipment designed and manufactured by or on behalf of Seller, or any third-party manufacturer's equipment offered for sale by Seller to Buyer, (iv) "Product" shall mean a product manufactured by or on behalf of Seller pursuant to the applicable supply agreement, quotation or order acknowledgement, and includes any combination of Hardware and Software, (v) "Services" means site engineering, system integration, product installation, implementation, training, maintenance and technical support services for Products, or other professional services provided by Seller to Buyer. Services exclude managed services and hosted cloud services provided by Seller, (vi) "Software" means Seller-licensed software, either embedded or standalone, including any updates provided, and any other enhancements, modifications, and bug fixes provided thereto, in object code form only (unless otherwise specified), and any full or partial copies thereof. Software does not include software created or owned by third parties, including but not limited to MediaKind Software, Google's Android Software or any third party application software, and (vii) "Warranty Period" means, unless a different time period is set forth in **Exhibit A**, (a) for Hardware, one year from date of original shipment from Seller's facility, (b) for Software-only Products, ninety (90) days from the date such Software is first made available to Buyer, or for Software embedded in a Hardware Product, ninety (90) days from date of original shipment of the Product from Seller's facility, and (c) for Services, thirty (30) days from the date the performance of such Services has been rendered.

2. **Limited Warranty.** Seller warrants that, as of the date of delivery, Seller has good title to the Product, free from any lawful security interest or other lien or encumbrance unknown to Buyer. In addition, during the Warranty Period, the Product and Services will be free from defects in materials or workmanship arising under proper and normal use. This Warranty shall apply only to the Products and Services and shall not apply to any other goods or materials, parts or components of a system or any system as a whole. This Warranty does not cover ordinary wear and tear. Seller does not warrant (i) Products not purchased from Seller or its authorized resellers; (ii) that the operation of the Product will be uninterrupted or error-free; (iii) that the Product will operate in combination with other third-party products selected by Buyer; or (iv) any products manufactured by third parties; provided that Seller will, to the extent permitted by the manufacturer, assign third-party warranties to Buyer. Seller gives no warranty for, and shall have no liability with respect to, any defects arising from any software (other than the Software), including, but not limited to MediaKind Software, Android Software or any third-party application software, downloaded to or otherwise used in conjunction with the Product. Seller further warrants to Buyer that during the Warranty Period, all Services performed by Seller for Buyer will be provided in a workmanlike manner.

3. **Disclaimers.** EXCEPT AS EXPRESSLY SET FORTH IN THIS LIMITED WARRANTY OR IN A SEPARATE, APPLICABLE SOFTWARE LICENSE AGREEMENT, ALL SOFTWARE IS LICENSED ON AN "AS IS" BASIS WITHOUT WARRANTY.

4. **Inspection and Return Authorization.** Buyer must promptly notify Seller of any claimed defect in the Product and/or Services. If Buyer claims that a Product is defective in materials or workmanship, Seller shall have the right to either examine the Product where it is located or, in its sole discretion, issue shipping instructions for return of the Product. Seller's inspection in response to a warranty claim shall not constitute acceptance or acknowledgment of the claim's validity. Except as otherwise agreed to in writing, Products may not be returned to Seller without prior authorization. Buyer must contact Seller to obtain an authorization number and return the Products to the location designated by Seller. Any Products returned to Seller without proper authorization will be returned to Buyer at Buyer's expense. Risk of loss, damage and insurance responsibilities for the Products shall not pass from Buyer to Seller until delivery of the Products to Seller's designated location. Buyer shall prepay all transportation charges for such return.

5. **Remedies.** Seller's sole and exclusive obligation and Buyer's exclusive remedy under this Warranty is Seller's repair or replacement of the defective Product or re-performance of Services or issuance of a credit for the net book value of the purchase price of the defective Product. Seller shall have sole discretion as to which of these remedies Seller will provide. Seller is not liable for any repair or maintenance costs incurred by Buyer, unless Seller authorizes such charges in writing in advance of the commencement of the work. If Seller elects to replace or repair the defective Product, the replaced or repaired Product will be warranted for the remainder of the Warranty Period applicable to the originally shipped Product, but the Warranty shall not be extended beyond the original Warranty Period. Replacement Products may be new, refurbished or contain refurbished materials.

6. **Notice and Waiver.** If Buyer discovers any defect in the Product, Buyer must provide prompt (and in no case later than thirty (30) days after discovery) written notice to Seller of the claimed defect. Such notice shall describe, in reasonable detail, the symptoms of such defect. The notice must be received by Seller during the Warranty Period for such Product. Failure to give timely notice of a claim shall result in Buyer's waiver of such claim.

7. **Transfer of Ownership.** This Warranty is not transferable unless Buyer is expressly authorized by Seller in writing to resell the Product. In addition, Buyer must notify Seller on or before the fifteenth (15th) day after the date on which it transfers ownership of the warranted Product. Any transfers in violation of this Section shall invalidate this Warranty. Notice of the transfer of ownership must be in writing and shall include the name and address of the new owner.

8. **Exclusions from Warranty.** This Warranty shall not apply to problems attributable to, or as a result of:

- (a) improper installation or misapplication of parts;
- (b) chain or system failures induced by other products or components;
- (c) lack of proper inspection or maintenance or failure to provide a suitable operating environment;
- (d) any consumables provided with the Product, including but not limited to batteries and other accessories, and any other materials, components or products manufactured by a third party;
- (e) power surges, fire, unusual mechanical, physical or electrical stress, severe weather conditions or acts of nature, including but not limited to, lightning or floods;
- (f) usage or operation not in accordance with published ratings, specifications or instructions, including but not limited to environmental specifications identified by Seller;
- (g) any adjustment, modification, alteration, removal or repair of any part of the Product, including but not limited to removal or alteration of serial numbers or other identifying marks not expressly authorized by Seller in writing;
- (h) accidental damage, misuse, abuse, neglect or unauthorized access of the Product or of any system of which the warranted Product is a part;
- (i) any type of aesthetic changes due to oxidation or corrosion occurring on stainless steel or galvanized steel parts installed in unusually corrosive marine and industrial atmospheres (in which case Seller's only obligation shall be to ensure that Product complies with Seller's published material specifications);
- (j) use of the Product for purposes other than that for which it was designed; or
- (k) mishandling during shipment of the Product.

LIMITED WARRANTY

This Warranty is for Products installed and used in accordance with Seller's design, installation and operating parameters. Buyer's failure to ensure conformity with such parameters will void all warranties. Under no circumstance shall Seller have any liability or obligation with respect to expenses, liabilities or losses associated with the installation or removal of any Product or the installation or removal of any components for inspection, testing or redesign occasioned by any defect or by any repair or replacement of a Product.

9. **Limitation on Liability.** THE WARRANTIES SET FORTH IN SECTION 2 HEREOF ARE EXCLUSIVE AND ARE MADE ONLY TO BUYER. SELLER MAKES NO OTHER REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, AND SPECIFICALLY DISCLAIMS AND EXCLUDES ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY, NONINFRINGEMENT OR FITNESS FOR A PARTICULAR PURPOSE AND ANY REPRESENTATION OR WARRANTY ARISING BY USAGE OF TRADE, COURSE OF DEALING OR COURSE OF PERFORMANCE. No person is authorized to give any additional warranties on Seller's behalf or to assume for Seller any other liability, except in a writing signed by an authorized officer of Seller. SELLER'S TOTAL LIABILITY FOR ANY CLAIM OR DAMAGE ARISING OUT OF AND/OR IN CONNECTION WITH THE MANUFACTURE, SALE, DELIVERY OR USE OF THE PRODUCTS OR SERVICES WILL BE LIMITED TO PROVEN DIRECT DAMAGES, NOT TO EXCEED (I) FOR PRODUCTS, THE DEPRECIATED VALUE OF THE PURCHASE PRICE OF SUCH PRODUCTS OR (II) FOR SERVICES, THE ACTUAL AMOUNT PAID TO SELLER FOR SERVICES DURING THE 12 MONTH PERIOD IMMEDIATELY PRIOR TO THE EVENT (OR SERIES OF EVENTS) GIVING RISE TO THE LIABILITY. IN NO EVENT WILL SELLER BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, INCLUDING, WITHOUT LIMITATION, ANY CLAIM FOR LOSS OF ACTUAL OR ANTICIPATED DATA, USE, REVENUES OR PROFITS. The Products are not specifically designed, tested, manufactured or intended for operation or use in any inherently dangerous, life endangering or life support applications where any failure of the Products could lead to death, personal injury or significant physical or environmental damage (High Risk Activities). If Buyer uses the Products in High Risk Activities, including but not limited to nuclear facilities or the flight, navigation or communication of aircraft, Buyer agrees that neither Seller nor its third party licensors are liable in whole or in part, for any claims or damages arising from such use, and that Buyer shall indemnify and hold Seller and its third party licensors harmless from any and all claims for loss, cost, damage, expense or liability arising out of or in connection with any use of the Products in High Risk Activities. These limitations on liability will apply regardless of the form of action, whether in contract, tort, strict liability or otherwise, and whether damages were foreseeable and will survive failure of any exclusive remedies provided in Section 4 hereof.

10. **Choice of Law.** The terms and conditions contained herein and the rights of the parties to any transaction to which they relate shall be governed by and construed in accordance with the laws of the State of North Carolina, U.S.A. The United Nations Convention on Contracts for the International Sale of Goods shall not apply.

LIMITED WARRANTY

Exhibit A

Product Categories	Warranty Period from Original Shipment Date*
Category A Products E6000® Converged Edge Router (CER); E6000n™ Remote PHY Devices (RPDs); E6000r™ Remote PHY Shelves; E6000n™ Remote MACPHY Devices (RMDs); vManager; Remote OLT (R-OLT); associated power supplies and accessories. FLX PON OLT portfolio including vOLT. CherryPicker products, Encoder products including ME-7000, SE-6000; DSR-4xxx, DSR-6xxx and DSR-7xxx series IRD products, and Uplink systems including TME-2020, VDP-1000, BNC, DEM, and SEM; All APEX Universal EQAM including APEX1000 and APEX3000; All Aloha interactive products including OM2000, ARPD, ADM4000 and NC1500 4.0. All SDM products. All VUE and VTM Software Products. All STDC products.	Hardware One (1) Year Software Ninety (90) Days
Category B Products All High and Standard Definition Transport Adapter MS4000™ Media Streamer	Hardware One (1) Year Software Ninety (90) days ** For certain CPE, option for 1% overship in lieu of Hardware warranty is standard
Category C Products Intentionally left blank.	
Category D Products All Third Party OEM Products: power meters; All VUE and VTM hardware platforms; NC1500 4.0 hardware platform; LQA256 Legacy QAM Adapter; Elemental Products including Live, Server, Delta, Conductor and StatMux; DC2180 Cabinet Node, Cooling Systems	Pass Through from OEM: Hardware One (1) Year Software Ninety (90) Days
Category E Products Intentionally left blank	
Category F Products All OM and SG optical node platforms, Flex Max® and Starline® amplifier platforms, RF Taps & Passives, and Optical Passives	Hardware Five (5) Years within the United States and Canada Hardware Three (3) Years outside United States and Canada Software Ninety (90) Days
Category F1 Products All CHP Headend Optical (HEO) Elements	Hardware Three (3) Years Software Ninety (90) Days
Category G1 Products All NC optical node platforms and Optical Passives, including OP/NP/DP/DC models.	Hardware Five (5) Years Software Ninety (90) Days
Category G2 Products All CH3 Headend (HEO) Elements	One (1) year
Category G3 Products All EPON and GPON ONUs, RFoG/HPON R-ONUs, including, CP8 models and associated power supplies and accessories	Hardware Three (3) Years Software Ninety (90) Days

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Category H Products All ConvergeMedia™ Distribution Platforms and Management Suite, AdManager™ including SkyVision Ad Management and EMP solutions CVEx™, SVA, all Vertasent products including SVOM, SVM and ERM, AdEdge™ COM and AdEdge APS,VMS, Manifest Delivery Controller (MDC), ARRIS Video Content Manager (AVCM) and Next Generation Insertion (NGI) and Multicast ABR.	Hardware One (1) Year Software Ninety (90) Days
Category I Products ServAssure® Advanced, ServAssure® NXT - Alarm Central, ServAssure® NXT - Analyze, ServAssure Domain Manager and EventAssure™. WorkAssure™® Workforce Management, Mobile TV, SecureMedia and Titanium	Hardware One (1) Year Software Ninety (90) Days
Category J Products Intentionally left blank	
Category K Products Intentionally left blank.	
Category L Products Intentionally left blank	
Category M Products Intentionally left blank.	
Category N Products Intentionally left blank.	
Category O Products All CAS Products including DAC, CASMR (and associated plug-ins), CAST, Advisor, CSS, OLL, CSS-Lite, KLS, DKS, CPMS	DAC, CASMR, CAST, Advisor, CSS Hardware Three (3) Years OLL, CSS-Lite, KLS, DKS, OLES, CPMS Hardware One (1) Year Software Ninety (90) Days
Category P Products Intentionally left blank.	
Category P1 Products Intentionally left blank	
Category Q Products Intentionally left blank	
Category R Products Intentionally left blank	
Category R1 Products Intentionally left blank	
Category S Products Intentionally left blank	
Category S1 Products Intentionally left blank	

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<p>Category T Products RUCKUS Wi-Fi</p>	<p>Hardware:</p> <ul style="list-style-type: none"> - Indoor Access Points and Wall Plate Access Points – Limited Lifetime Warranty,** except for access points with an “e” suffix (e.g., R350e), for which the HW warranty period is one (1) year. - Outdoor Access Points – One (1) Year - Controllers – One (1) Year, except ZoneDirector controllers are covered by the Limited Lifetime Warranty** <p>Software Ninety (90) Days</p>
<p>Category T1 Products RUCKUS ICX Switches</p>	<ul style="list-style-type: none"> - ICX Switches (including switch modules, PSUs, and Fans, but excluding removable optics/transceivers and LEDs) – Limited Lifetime Warranty,** except for ICX 7150- C08PT, for which the HW warranty period is 13 months. - LEDs – 12 months - Removable Optics/Transceivers – 60 months (13 months if shipped from Seller prior to June 1, 2021) <p>Software: Limited lifetime access to defect repairs, and software maintenance updates through end of support date of product</p>
<p>Category T2 Products Intentionally left blank</p>	
<p>Category U Products</p> <p>Other OSP Cable Products (P3®, Drop Coax, Fiber Cable, Fiber Drop Cable, CIC)</p> <p>NovuX Products</p> <p>Prodigy</p> <p>Products FDH</p> <p>Products</p> <p>Multiservice terminals (MST), Open Terminals (OTE) and Hardened Drop Cable</p> <p>Assemblies OSP “Box” Products</p> <p>Mini-RDTs and RDTs</p> <p>FOSC™, FIST™ and</p> <p>Tenio™</p> <p>OSP Copper Connect and Closure Products</p> <p>HELIAX® FiberFeed® Products, including FiberFeed® hybrid and fiber cables and assemblies, power cables and junction boxes</p> <p>Fiber Optic Panels, including Accessories, Mounting Hardware, Modules</p> <p>Fiber Optic Field Terminated Connectors, Kits, Tools, Consumables,</p> <p>Accessories Indoor Fiber Cable, Patch Cords, Cable Assemblies, Fiber Trunks</p> <p>Passive Optical Components and Value Added Modules (VAMs)</p> <p>FiberGuide® : Fiber cable Management System</p> <p>Optical Distribution Frames, including Modules, Blocks, Accessories and</p> <p>Hardware Cabinets Cable and Apparatus Products</p> <p>Alifabs™ Cabinets & Ancillary Products</p> <p>Alifabs™ Telecommunications Towers and Accessories</p> <p>Metro Cell Products, including Enclosures; Integrated Pole; Standard Poles; Accessories; and Wood Pole Brackets</p>	<p>One (1) year</p>

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Category V Products ValuDAS® Passive Products, including Air Directional Couplers, Hybrid Couplers, High Power Splitters, and Cell-Max™ Antennas Standard Tower Mounted Amplifier, Bias Tee and Power Distribution Unit Products Standard Filter & Combiner Products Electronic Enclosure Products (Cabinets) Alifabs™ Free Cooling Products and Accessories and Spare Parts, including Monitor All-In-One FLX (Active Passive Cabines) PowerShift™ & Power Products	Two (2) years
Category W Products ValuSite® Products I-Line Accessory Products Microwave Antennas Terrestrial Microwave System Products (including Microwave System Flex-Twist, Coupler, Filter and Diplexer Products)	Three (3) years
Category X Products Broadband RF Connectivity Products Premium Passive Products, including In-Building Directional Couplers, Hybrid Matrices, Tappers, Power Splitters, Terminations, Attenuators and CMAX Antenna Products	Five (5) years
Category Y Products QR® Coaxial Cable	Five (5) years
Category Z Products Standard RADIAX® Cable, Connector, Accessory and Cable Assembly* Products * RADIAX® Cable Assembly Product means any RADIAX® coaxial cable that has been fitted with Seller's connectors in accordance with the installation instructions.	One (1) year
Category AA Products Standard CNT® Cable, Connector, Accessory and Cable Assembly* Products * CNT® Cable Assembly Product means any CNT® coaxial cable that has been fitted with Seller's connectors by Seller or its certified distributor	Five (5) years; except that the Warranty Period for Products purchased for resale purposes shall be one (1) year.
Category BB Products Standard HELIAX® Cable, Connector, Accessory and Cable Assembly* Products * HELIAX® Cable Assembly Product means any HELIAX® coaxial cable or elliptical waveguide that has been fitted with Seller's connectors by Seller or its certified distributor.	Ten (10) years; except for the following: (i) three (3) years for weatherproofing kits (including SureGuard boots); (ii) one (1) year for cable preparation tools (excluding blades); (iii) one year for single click-on hanger kits; and (iv) two (2) years for surge arrestors.
Category CC Products Standard ERA/ION-E®, ION-M®, ION-U®, MR, CMR, i-POI®, e-POI™, and Node Repeater Products	Hardware, the earlier of: (i) one (1) year from the date of installation; or (ii) fifteen (15) months from the date of shipment. Software Ninety (90) Days
Category DD Products In- Building and Fixed Subscriber Antennas	The earlier of: (i) three (3) years from the date of installation or (ii) thirty-nine (39) months from the date of original shipment

LIMITED WARRANTY

Category EE Products OneCell® Powered Fiber Cable Solution: Hybrid Copper and Fiber Cables, Class 2 Power Supplies, Indoor/Outdoor POE Extenders, Field Terminated Outlets, Consolidation Boxes and Related Passive Components	Hardware, the earlier of: (i) one (1) year from the date of installation; or (ii) fifteen (15) months from the date of original shipment Software Ninety (90) Days
Category FF Products Small Cell Device Management System (DMS) Software DAS Device Management System (AIMOS) Software	Ninety (90) days
Category GG Products Base Station Antenna, Small Cell Antenna & Mosaic™ Products	Two (2) years for all base station antennas except base station antennas incorporating N-type connectors, which shall have a warranty of one (1) year
Category HH Products DryLine® Dehydrator Systems and Line Monitoring Systems	Three (3) years or 3,000 hours of actual run time, whichever occurs first; except the Warranty Period for the compressor is only one (1) year or 1,000 hours of actual run time, whichever occurs first.
Category II Products SiteRise™ Solutions	One (1) year on workmanship for the Solution.
Category JJ Products Copper Structured Cabling Products Other Enterprise Products (Coax, Automotive Cables, Enterprise Enclosures and miscellaneous items) (excluding software)	One (1) year from the date of Installation
Category KK Products Alifabs™ Services (power upgrades, enablements, installation and decommission work, rigging, and fault management)	One (1) year from the date of completion of the work.
Category LL Products imVision Overlays and Controllers	Three (3) years

** For Category H and Category I Products only, if Seller is engaged by Buyer to provide Services for the implementation of the purchased Products, warranty period for such Products shall commence upon Buyer's acceptance of the Products and Services.*

*** For Category T Products only, "Limited Lifetime Warranty" means the period beginning on the Product shipment date and continuing for as long as the original end user of the Product continues to own and use the Product. For Category T1 Products only, "Limited Lifetime Warranty" means the period beginning on the Product shipment date and continuing (i) for as long as the original end user of the Product continues to own and use the Product or (ii) through the End of Support date, as defined in the RUCKUS End of Life Policy, whichever is earlier.*

RoHS Certificate of Compliance



Product Name: CS30Z3 BLU C6 4/24 U/UTP RIB 305M ANATEL

Product Number: 5-1427070-6

Company Name: CommScope
3642 E US Highway 70
Claremont, NC 28610 USA

Contact: ProductCompliance@Commscope.com

Generated on: May 02, 2024

Certified by:

Vinatha Viswanathan, Director Product Compliance

Disclaimer

This information is provided based on reasonable inquiry of our suppliers and represents our current actual knowledge based on the information they provided and our analysis and assessment of the risks. This information is subject to change and if a change occurs which affects compliance, then this Statement will be updated. Compliance to EU ROHS 2011/65 amended by EU RoHS 2015/863 means the part numbers have a maximum concentration of no more than 0.1% by weight in homogenous materials for lead, hexavalent chromium, mercury, PBB, PBDE, and 0.01% for cadmium, or qualify for an exemption to these limits as defined in the Annexes of Directive 2011/65/EU (RoHS2). These parts also have a maximum concentration of no more than 0.1% by weight in homogenous materials for DEHP, BBP, DBP and DIBP (substances that are restricted starting from July 22, 2019). Finished electrical and electronic products will be CE marked as required by Directive 2011/65/EU. Components may not be CE marked.

Compliance Status	Regulation	Revision	RoHS exemptions if any
Compliant	ROHS	EU RoHS - 2011/65/EU	



CommScope Network Infrastructure System

25 Year Extended Product and Application Warranty
("System Warranty")

Terms and Conditions

Extended Product Warranty. CommScope warrants, for a period of twenty-five (25) years from the Certification Date (the “Warranty Period”), that Products in the Registered System shall be free from defects in materials or workmanship subject, to the terms and conditions below and the terms, conditions and limitations of CommScope’s Limited Product Warranty in effect at the date of sale (available at <http://www.commscope.com/Resources/Warranties/>).

Application Warranty. During the Warranty Period, the Registered System will meet or exceed the specifications set forth in the System Specification and support Applications as documented therein.

System Warranty Requirements. The System Warranty applies only to Products that are: (i) installed by an Authorized Partner, at the location listed on the System Warranty Certificate; (ii) installed in compliance with CommScope’s written design, engineering and installation procedures, and the specifications for the Application and the System Specification; (iii) designed, installed, and maintained in compliance with the applicable industry standards as set forth in the System Specification; (iv) not subject to conditions that exceed the individual Product Specification(s); (v) used at the original site of installation; (vi) tested pursuant to industry standards and applicable CommScope testing requirements and satisfactorily pass such tests; and (vii) not otherwise expressly excluded or invalidated under the System Warranty Terms and Conditions. To qualify for a System Warranty, all documents, including the prescribed System test results, must be submitted to CommScope for review within sixty (60) days of installation, and registration for the System Warranty must be applied for with CommScope within ninety (90) days from the date the installation is complete. CommScope, in its sole judgment, shall determine if the System Warranty Requirements have been met. CommScope’s approval of a System Warranty shall be evidenced by a numbered registration System Warranty Certificate issued by CommScope. In the event a System Warranty Certificate is issued and CommScope subsequently discovers that any of the System Warranty requirements were not met, then the System Warranty shall be void.

Beneficiary and Warranty Transfer. CommScope will only honor System Warranty claims made by the person or entity to which the System Warranty Certificate is issued. The System Warranty may, upon prior written approval from CommScope, be transferred to a successor in interest to the site where the Registered System was originally installed.

Modifications. Moves, repairs, alterations, additions, or changes to the Registered System (“Change(s)”) are only covered by the System Warranty if: (i) performed by an Authorized Partner; (ii) installed in compliance with CommScope’s written design, engineering and installation procedures, and the specifications for the Application and the System Specification, and (iii) designed, installed, and maintained in compliance with the applicable industry standards as set forth in the System Specification. Day-to-day administration and maintenance of the Registered System by the End-Customer will not void the System Warranty if performed in compliance with applicable CommScope system design and installation guidelines using CommScope approved products. All test results shall be sent for approval to CommScope along with a detailed description of the Change(s) and bill of materials within thirty (30) days of installation. If the Change(s) are approved, CommScope shall update the System Warranty registration to indicate the Change(s). Failure to comply with the foregoing relating to Change(s) shall void the System Warranty.

Exclusions from Warranty and Limitations on Liability. The “Exclusions from Warranty” and “Limitations on Liability” in the Limited Product Warranty shall apply to the System Warranty. The occurrence of an Exclusion from Warranty in the Limited Product Warranty shall void the System Warranty. The System Warranty shall also be void if any Product in the Registered System has been (i) removed from the original site of installation, (ii) altered, repaired or disassembled by a non-Authorized Partner, or (iii) exposed to, or has outside materials applied to it, including but not limited to paint, water, chemicals, solutions, cleaning supplies and lubricants (“Contamination”). End-Customer must notify an Authorized Partner or CommScope within 24 hours of any Contamination.

Outside Plant Cable is excluded from and will void the System Warranty when installed above ground and exposed to the outside environment, including but not limited to, an aerial installation. Outside Plant Cable installed underground, either by direct burial or in conduit, is not excluded from the System Warranty.

Failure of the End-Customer to submit any System Warranty claim to the authorized CommScope office as designated by CommScope within thirty (30) days following expiration of the System Warranty shall be an admission by the End-Customer and conclusive proof that the Registered System and Product(s) are in every respect as warranted and shall release CommScope and the Authorized Partner from any and all claims for damage or loss sustained by the End-Customer.

Any violation or non-compliance with the System Warranty Terms and Conditions will void the System Warranty.

Remedies. If during the Warranty Period, the End-Customer experiences problems with a Registered System or a Product in a Registered System ("Problem") and suspects there is a potential warranty claim hereunder, the End-Customer must first reasonably investigate potential causes of the suspected Problem that are not CommScope related and reasonably determine that none of these potential causes were responsible for the Problem. Once the End-Customer reasonably believes that all non-CommScope causes for the Problem are ruled out, but in no event more than thirty (30) days after the End-Customer knew or should have known of the Problem, the End-Customer must contact the Authorized Partner that installed the Registered System to report the Problem. If the Authorized Partner is unable to resolve the Problem, then the Authorized Partner will contact CommScope and make a claim under the System Warranty for further investigation and resolution.

If CommScope determines that a Problem is due to a breach of the System Warranty, CommScope will repair or replace Product as CommScope deems necessary to correct the Problem, including the provision of reasonable labor and removal and reinstallation of such Product at CommScope's discretion. CommScope shall only be responsible for costs that have received the prior written authorization of CommScope. If CommScope chooses to repair Product, CommScope may use new or reconditioned replacement parts. If CommScope chooses to replace Product, CommScope may replace with new or reconditioned products of the same or similar design. Any repair or replacement will be warranted for either (a) 90 days or (b) the remainder of the original Warranty Period, whichever is longer. If the Problem is found by CommScope or an Authorized Partner not to be related to a Product or any warranty exclusions, then End-Customer will be responsible for any costs incurred related to the Problem claim.

Choice of Law. The System Warranty shall be governed by and construed in accordance with the laws of the State of North Carolina, U.S.A. The United Nations Convention on Contracts for the International Sale of Goods shall not apply. The End-Customer acknowledges that as a condition to receiving the System Warranty, End-Customer unconditionally submits to the jurisdiction of the North Carolina state and federal courts. If any portion of the System Warranty is not enforceable due to local legal requirements, then such specific language shall be modified to meet local legal requirements consistent with CommScope's intent.

Definitions

The following definitions shall apply to the System Warranty:

CommScope shall mean CommScope Technologies LLC.

Application shall mean a standardized set of network technologies, protocols, and hardware for enabling communication over the prescribed System as documented by CommScope.

Authorized Partner shall mean a party that is certified by CommScope as a CommScope installation partner and that is in good standing with CommScope at the time of installation.

Authorized Reseller shall mean a party that is authorized in writing by CommScope to sell Products and that is in good standing with CommScope at the time of sale.

Certification Date shall mean the earlier of the registration date on the face of the System Warranty Certificate or the Original Installation Completion Date.

End-Customer shall mean the end-user who has the Products installed at its premises by an Authorized Partner.

Original Installation Completion Date shall mean the date that the Authorized Partner completed the installation and testing of the Registered System at the End-Customer's site being submitted for System Warranty eligibility.

Outside Plant Cable shall mean all cabling located between demarcation points in buildings, switching and data centers and the demarcation point in another such facility.

Passive shall mean signal-carrying components that exhibit no gain or contribute no energy.

Product(s) shall mean Passive products manufactured by CommScope that are contained in the bill of materials, for an end-to-end SYSTIMAX®, UNIPRISE®, or NETCONNECT® system, which were filed with the registration for the System Warranty and which were purchased from an Authorized Reseller.

Product Specification shall mean CommScope's published specification(s), in effect at the time of sale, which defines the optical and/or electrical capabilities of the individual Products.

Registered System shall mean the System designated on the System Warranty Certificate.

System refers to the end-to-end SYSTIMAX®, UNIPRISE®, or NETCONNECT® system, comprised entirely of Products approved by CommScope for the respective System and that meet all of the conditions in the "System Warranty Requirements" Section of these System Warranty Terms and Conditions.

System Specification shall mean CommScope's published specification(s) in effect at the time of sale, which describes the optical and/or electrical capabilities of the System as a whole.

System Warranty shall mean the Extended Product and Application Warranty.

System Warranty Certificate shall mean the certificate issued by CommScope evidencing CommScope's approval and issuance of a System Warranty and identifying the covered System.

Precedence. In the event of any conflict between the terms of the System Warranty and CommScope's Limited Product Warranty and/or a System Specification, the terms of the System Warranty shall control.



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Use of CommScope NETCONNECT cabling for PoE applications

Early versions of the IEEE 802.3 standard covered the powering of remote devices over Type 1 (IEEE 802.3af) and Type 2 (IEEE 802.3at) systems. The IEEE 802.3bt standard covering the use of Type 3 and Type 4 power sourcing equipment (PSE) was published in January of 2019. A Type 4 PSE provides the maximum power to remote devices by supporting 0.86 Amps per pair (0.43 Amps per conductor) across all four pairs of the cabling. The standard recommends that Class D cabling (or better) be used to support Type 4 remote powering. In addition to the IEEE standard, the EN 50174-2: 2018 standard provides guidance on the bundling of cables supporting remote powering and recommends limiting bundle sizes to 24 cables taking care to include air gaps between bundles. These recommendations are consistent with those from CommScope and are in line with those contained in TIA TSB-184A aimed at limiting the temperature rise in bundled cabling¹.

In addition to the structured cabling standards, there are additional requirements imposed on the connector contacts that ensure they do not corrode or suffer degradation due to arcing when unplugged while under load. The applicable test standard for Types 1 and 2 is IEC 60512-99-001 while Types 3 and 4 are covered by the IEC 60512-99-002 standard.

CommScope has performed the full complement of IEC 60512-99-001/002 testing on its products and can assure customers that the NETCONNECT connectivity including the KJ, SL and SLX family of modular jacks, NPP panels, NPC, NCC, MiNo6, and MiNo6A patch cords, fully comply with the requirements set forth in the IEC 60512-99-001 and IEC 60512-99-002 standards.

Further, CommScope has carried out extensive testing confirming that existing and legacy NETCONNECT Class D (Cat 5e) or higher cable fully complies with the recommendations contained in the IEEE 802.3af, IEEE 802.3at, and IEEE 802.3bt standards.

CommScope recommends that customers follow the CommScope installation guidelines when installing their cabling products. These guidelines were developed to ensure that the temperature rise of cable bundles used for PoE applications is limited to 15 °C. This is most easily accomplished by limiting the number of cables in a bundle to 24 for horizontal cable and to 12 for 28 AWG cords.

References

IEEE P802.3bt-2018 Standard for Ethernet Amendment 2: Power over Ethernet over 4 Pairs

EN 50174-2: 2018 Information technology - Cabling installation - Part 2: Installation planning and practices inside buildings

IEC 60512-99-001:2012 Connectors for electronic equipment - Tests and measurements - Part 99-001: Test schedule for engaging and separating connectors under electrical load - Test 99a: Connectors used in twisted pair communication cabling with remote power

IEC 60512-99-002:2019 Connectors for electrical and electronic equipment - Tests and measurements - Part 99-002:

Endurance test schedules - Test 99b: Test schedule for unmating under electrical load

TIA TSB-184-A Guidelines for Supporting Power Delivery Over Balanced Twisted-Pair Cabling

Visit our website or contact your local CommScope representative for more information.

For technical assistance or customer service, visit us at:

<http://www.commscope.com/SupportCenter>

The products referenced by this bulletin may be covered by U.S. patents or their foreign equivalents. For patents, see

www.commscope.com/ProductPatent/ProductPatent.aspx

¹ CommScope does not endorse the use of 30 AWG cables for use in PoE applications.