

Quick Start Guide

720XP Series 2 RU Cognitive Campus Switches

Arista Networks

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Overview

This chapter includes the following sections:

- Scope
- Receiving and Inspecting the Equipment
- Installation Process
- Safety Information
- Obtaining Technical Assistance
- Specifications

1.1 Scope

This guide is intended for properly trained service personnel and technicians who need to install the following Arista Networks Cognitive Campus Switches:

CCS-720XP-96ZC2

Important:

Only qualified personnel should install, service, or replace this equipment.

Seul le personnel qualifié doit installer, service, ou remplacer cet équipement.

1.2 Receiving and Inspecting the Equipment

Upon receiving the switch, inspect the shipping boxes and record any external damage. Retain packing materials if you suspect that part of the shipment is damaged; the carrier may need to inspect them.

If the boxes were not damaged in transit, unpack them carefully. Ensure that you do not discard any accessories that may be packaged in the same box as the main unit.

Inspect the packing list and confirm that you received all listed items. Compare the packing list with your purchase order. Parts List provides a list of components included with the switch.

1.3 Installation Process

The following tasks are required to install and use the switch:

- 1. Select and prepare the installation site (Site Selection).
- 2. Assemble the installation tools (Tools and Parts Required for Installation).
- 3. Attach the mounting brackets (Attaching Mounting Brackets to the Chassis).
- 4. Install the switch in an equipment rack (Inserting the Switch into the Rack)
- 5. Connect the switch to the power source and network devices (Connecting Power Cables).
- **6.** Configure the switch (Configuring the Switch).
 - Important:

Class 1 Laser Product: This product has provisions to install Class 1 laser transceivers which provide optical coupling to the communication network. Once a Class 1 laser product is installed, the equipment is a Class 1 Laser Product (Appareil à Laser de Classe 1). The customer is responsible for selecting and installing the Class 1 laser transceiver and for insuring that the Class 1 AEL (Allowable Emission Limit) per EN/IEC 60825, CSA E60825-1, and Code of Federal Regulations 21 CFR 1040 is not exceeded after the laser transceiver have been installed. Do not install laser products whose class rating is greater than 1. Refer to all safety instructions that accompanied the transceiver prior to installation. Only Class 1 laser devices, certified for use in the country of installation by the cognizant agency are to be utilized in this product.

Appareil à laser de classe 1 Cet appareil comporte des dispositions permettant d'installer des émetteurs-récepteurs fournissant un couplage optique au réseau de communication. Une fois l'appareil à laser de classe 1 installé, l'équipement devient un appareil à laser de classe 1. Le client est responsable du choix et de l'installation de l'émetteur-récepteur à laser de classe 1 et il doit s'assurer que les limites d'émission admissibles pour la classe 1 régulées par les normes EN/IEC 60825 et CAN/CSA E60825-1 et par le Code of Federal Regulations 21 CFR 1040 ne soient pas dépassées après l'installation de l'émetteur-récepteur à laser. N'installez pas d'appareils à laser dont la classification est supérieure à 1. Avant l'installation, lisez attentivement les instructions de sécurité fournies avec l'émetteur-récepteur. Seuls les appareils à laser de classe 1 qui ont été certifiés par l'autorité agréée pour une utilisation dans le pays d'installation peuvent être utilisés dans ce produit.

Important:

Ultimate disposal of this product should be in accordance with all applicable laws and regulations.

Élimination définitive de ce produit devrait être en conformité avec toutes les lois et règlements applicables.

1.4 Safety Information

Refer to the Arista Networks document Safety Information and Translated Safety Warnings available at:https://www.arista.com/en/support/product-documentation.

1.5 Obtaining Technical Assistance

Any customer, partner, reseller or distributor holding a valid Arista Service Contract can obtain technical support in any of the following ways:

- Email: support@arista.com. This is the easiest way to create a new service request.
 Include a detailed description of the problem and the output of "show tech-support".
- Web:http://www.arista.com/en/support.

A support case may be created through the support portal on our website. You may also download the most current software and documentation, as well as view FAQs, Knowledge Base articles, Security Advisories, and Field Notices.

• **Phone:** +1 866-476-0000 or +1 408-547-5502.

Important:

No user serviceable parts inside. Refer all servicing to qualified service personnel.

Aucune pièce réparable par l'utilisateur à l'intérieur. Confiez toute réparation à un technicien qualifié.

1.6 Specifications

The following tables list the specifications of switches covered by this guide

Table 1: Switch Specifications (Dimensions and Weights)

Switch	Size (W x H x D)	Weight
CCS-720XP-96ZC2	48.3 x 8.8 x 40.4 cm (19 x 3.5 x 15.9 inches)	14.1 kg (31 lbs.)

Table 2: Switch Specifications (Operational and Storage)

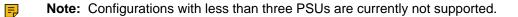
Switch	Operating Temperature	Storage Temperature	Operating Altitude	Relative Humidity
All	0° to 40°C (32°	-25° to 70°C	0 to 3,000 meters	5 to 90% (non-
	to 104°F)	(-13° to 158°F)	(0 to 10,000 feet)	condensing)

Table 3: Switch Specifications (Power Input)

Power Source	PSU Models	Ratings
Power Input (AC Power)	PWR-1021-AC-RED	100 - 240 VAC, 12.0 to 5.0 A, 50/60 H

Table 4: Switch Specifications (Power Draw)

Switch	Supported Power Supply	Power Draw (Typical / Maximum)	PoE Power Budget Three / Four PSUs
CCS-720XP-96ZC2	PWR-1021-AC-RED	245 W / 278 W	2255 W / 3077 W



Preparation

This chapter includes the following sections:

- Site Selection
- Tools and Parts Required for Installation
- Electrostatic Discharge (ESD) Precautions

2.1 Site Selection

The following criteria should be considered when selecting a site to install the switch:

Temperature and Ventilation: For proper ventilation, install the switch where there is ample airflow
to the front and back of the switch. The ambient temperature should not go below 0° or exceed
40°C.



Important:

To prevent the switch from overheating, do not operate it in an area where the ambient temperature exceeds 40°C (104°F).

Pour empêcher l'interrupteur de surchauffe, ne pas utiliser il dans une zone où la température ambiante est supérieure à 40°C (104°F).

- Airflow Orientation: CCS-720XP-96ZC2 supports only front-to-back airflow. If the airflow direction
 is not compatible with the installation site, contact your sales representative.
- Rack Space: Install the switch in a 19" rack or cabinet. The switch height is 2 RU. The accessory kit provides mounting brackets for two-post racks.

When mounting the switch in a partially filled rack, load the rack from bottom to top, with the heaviest equipment at the bottom. Load the switch at the bottom if it is the only item in the rack.

• **Power Requirements:** Power requirements vary by switch and power supply model. Refer to Table 4: Switch Specifications (Power Draw) for information regarding your specific system.

Two circuits provide redundancy protection. Connecting Power Cables describes power cable requirements.



Important:

The power input plug-socket combination must be accessible at all times; it provides the primary method of disconnecting power from the system.

La combinaison de la puissance-prise d'entrée doit être accessible en tout temps ; Il fournit le principal moyen de coupure d'alimentation du système.

- Other Requirements: Select a site where liquids or objects cannot fall onto the equipment and foreign objects are not drawn into the ventilation holes. Verify these guidelines are met:
 - Clearance areas to the front and rear panels allow for unrestricted cabling.
 - All front and rear panel indicators can be easily read.
 - Power cords can reach from the power outlet to the connector on the rear panel.

(!)

Important:

All power connections must be removed to de-energize the unit.

Toutes les connexions d'alimentation doivent être enlevées pour hors tension l'appareil.

This unit is intended for installation in restricted access areas.

Cet appareil est prévu pour une installation dans les zones d'accès restreintes.

2.2 Tools and Parts Required for Installation

The following tools and equipment are required to install the switch:

Two-Post Rack

- · Screws or rack mounting nuts and bolts.
- Screwdriver

The accessory kit does not include screws for attaching the switch to the equipment rack. When installing the switch into an equipment rack with unthreaded post holes, nuts are also required to secure the switch to the rack posts.

2.3 Electrostatic Discharge (ESD) Precautions

Observe these guidelines to avoid ESD damage when installing or servicing the switch.

- Assemble or disassemble equipment only in a static-free work area.
- Use a conductive work surface (such as an anti-static mat) to dissipate static charge.
- Wear a conductive wrist strap to dissipate static charge accumulation.
- Minimize handling of assemblies and components.
- Keep replacement parts in their original static-free packaging.
- Remove all plastic, foam, vinyl, paper, and other static-generating materials from the work area.
- Use tools that do not create ESD.

Rack Mounting the Switch

This chapter includes the following sections:

- · Rack Mounting the Switch
- Two-Post Rack Mount

3.1 Rack Mounting the Switch

Important:

The rack mounting procedure is identical for all switches covered by this guide. Illustrations in this chapter depict the mounting of a DCS-7050SX-128 switch.

Les procédure de montage du bâti est identique pour tous les commutateurs visés par ce guide. Illustrations dans ce chapitre montrent le montage d'un interrupteur de DCS-7050SX-128.

Two-Post Rack Mount provides instructions for mounting the switch in a two-post rack.

After completing the instructions for your rack type, proceed to Connecting Power Cables.

3.2 Two-Post Rack Mount

To mount the switch onto a two-post rack, assemble the mounting brackets to the chassis, then attach the brackets to the rack posts. Two-post accessory kits include two, three-hole mounting brackets.

Each chassis side has attachment pins that align with bracket holes; the number of pins (six or seven) varies by switch model. Pin orientation is symmetric and equidistant, supporting bracket placement where the flange is either flush with the front and rear panels, or not flush with the panels. Each bracket hole includes a key-opening for placing the bracket flush with the chassis and then locking it into place.

Important:

Attachment pins must engage all three upper bracket holes.

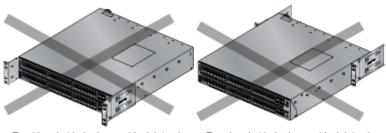
Goupilles de fixation doivent s'engager tous les trois trous de la bride supérieure..

Figure 1: Bracket Mount Examples for Two-Post Rack Mount displays proper bracket mount configuration examples. Figure 2: Improper Bracket Mount Examples for Two-Post Rack Mount displays improper bracket mount configuration examples.

Figure 1: Bracket Mount Examples for Two-Post Rack Mount



Figure 2: Improper Bracket Mount Examples for Two-Post Rack Mount



Front bracket hole does not lock into pin

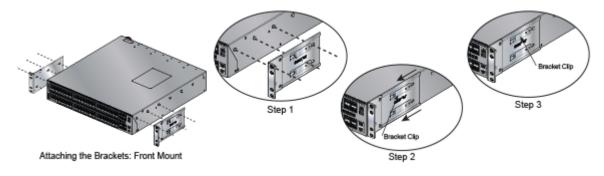
Rear bracket hole does not lock into pin

3.2.1 Attaching Mounting Brackets to the Chassis

This procedure attaches mounting brackets to the switch chassis (Figure 3: Attaching the Mounting Brackets to the Switch Chassis).

- 1. Align the mounting brackets with the attachment pins to obtain the desired mounting position.
- 2. Place the bracket flush on the chassis with attachment pins protruding through key-openings.
- 3. Slide the bracket toward the front flange until the bracket clip locks with an audible click.

Figure 3: Attaching the Mounting Brackets to the Switch Chassis



To remove the mounting bracket from the chassis, lift the front edge of the mounting bracket clip with a flathead screwdriver and slide the bracket away from the front flange (opposite from the installation direction).

3.2.2 Inserting the Switch into the Rack

This procedure attaches the switch to the rack.

=

Note: Front mount shown.

1. Lift the chassis into the rack. Position the flanges against the rack posts.

Figure 4: Inserting the Switch into the Rack



- 2. Select mounting screws that fit your equipment rack.
- **3.** Attach the bracket flanges to the rack posts.

After completing the two-post rack mount, proceed to Connecting Power Cables.

Cabling the Switch

This chapter includes the following sections:

- Connecting Power Cables
- Connecting Serial and Management Cables

4.1 Connecting Power Cables

Directions for connecting the power cables.



Installation of this equipment must comply with local and national electrical codes. If necessary, consult with the appropriate regulatory agencies and inspection authorities to ensure compliance.

Read all installation instructions before connecting the system to the power source.

This equipment must be grounded. Never defeat the ground conductor.

This unit requires overcurrent protection.

Installation de cet équipement doit être conformes aux codes électriques locaux et nationaux. Si nécessaire, consulter les organismes de réglementation appropriés et des autorités de contrôle pour assurer la conformité.

Lire toutes les instructions d'installation avant de brancher le système à la source d'alimentation.

Cet équipement doit être mis à la terre. Ne jamais modifier le conducteur de terre.

Cet appareil requiert une protection contre les surintensités.

The following AC power supply is supported. The switch can be powered by up to four power supplies.

PWR-1021-AC-RED

Power requirements vary by switch. Refer to Table 4: Switch Specifications (Power Draw) for information regarding your specific system. Connect each AC power supply to a circuit that provides the required power.

Rear Panel displays the location of the power supplies on the rear panel of the switch.



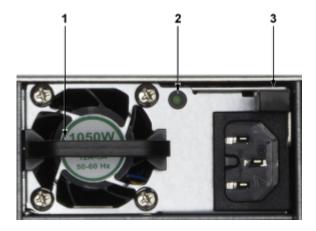
To Power down the Switch, remove all power cords and wires from the power supplies.

Input Power and Power Supply redundancy is dependent on the actual system power draw.

For maximum Input Power redundancy, each power supply should be connected to its own input overcurrent protection.

For power supply redundancy, at least one more power supply should be installed than is required to power the system. Figure 5: AC Power Supply displays the AC power supply.

Figure 5: AC Power Supply



- 1 PSU handle
- 2 PSU status LED
- 3 Release

The accessory kit provides IEC-320 C15 to C16 power cables.

4.2 Connecting Serial and Management Cables

The accessory kit includes the following cables:

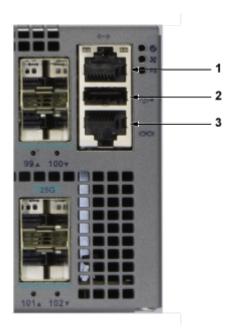
- RJ-45 to DB-9 serial adapter cable.
- RJ-45 Ethernet cable.

The following RJ-45 to DB-9 Connections table lists the pin connections of the RJ-45 to DB-9 adapter cable.

Table 5: RJ-45 to DB-9 Connections

RJ-45		DB-9		RJ-45		DB-9	
RTS	1	8	CTS	GND	5	5	GND
DTR	2	6	DSR	RXD	6	3	TXD
TXD	3	2	RXD	DSR	7	4	DTR
GND	4	5	GND	CTS	8	7	RTS

Figure 6: Front Panel Ports



- 1 Ethernet management port
- 2 USB port
- 3 Console serial port

Connect the front panel ports as follows:

- Console (Serial) Port: Connect to a PC with the RJ-45 to DB-9 serial adapter cable. The switch uses the following default settings:
 - 9600 baud
 - No flow control
 - 1 stop bit
 - · No parity bits
 - 8 data bits
- Ethernet Management Port: Connect to 10/100/1000 management network with RJ-45 Ethernet cable.
- **USB Port:** The USB port may be used for software or configuration updates.

Important:

Excessive bending can damage interface cables, especially optical cables.

Flexion excessive peut endommager les câbles d'interface, notamment des câbles optiques.

Configuring the Switch

Arista switches ship from the factory in Zero Touch Provisioning (ZTP) mode.

ZTP configures the switch without user intervention by downloading a startup configuration file or a boot script from a location specified by a DHCP server. To manually configure a switch, ZTP is bypassed. The initial configuration provides one username (admin) accessible only through the console port because it has no password.

When bypassing ZTP, initial switch access requires logging in as admin, with no password, through the console port. Then you can configure an admin password and other password protected usernames.

This manual configuration procedure cancels ZTP mode, logs into the switch, assigns a password to admin, assigns an IP address to the management port, and defines a default route to a network gateway.

- 1. Provide power to the switch (Connecting Power Cables).
- 2. Connect the console port to a PC (Connecting Serial and Management Cables).

As the switch boots without a startup-config file, it displays the following through the console:

The device is in Zero Touch Provisioning mode and is attempting to download the startup-config from a remote system. The device will not be fully functional until either a valid startup-config is downloaded from a remote system or Zero Touch Provisioning is cancelled. To cancel Zero Touch Provisioning, login as admin and type 'zerotouch cancel' at the CLI.

```
localhost login:
```

3. Log into the switch by typing admin at the login prompt.

```
localhost login: admin
```

4. Cancel ZTP mode by typing zerotouch cancel.

IMPORTANT: This step initiates a switch reboot.

```
localhost>zerotouch cancel
```

5. After the switch boots, log into the switch again by typing admin at the login prompt.

```
Arista EOS localhost login:admin Last login: Fri Mar 15 13:17:13 on console
```

6. Enter global configuration mode.

```
localhost>enable
localhost#config
```

7. Assign a password to the admin username with the username secret command.

```
localhost(config) #username admin secret pxq123
```

8. Configure a default route to the network gateway.

```
localhost(config) #ip route 0.0.0.0/0 192.0.2.1
```

9. Assign an IP address (192.0.2.8/24 in this example) to an Ethernet management port.

```
localhost(config) #interface management 1
localhost(config-if-Ma1/1) #ip address 192.0.2.8/24
```

10. Save the configuration by typing write memory or copy running-config startup-config.

```
localhost#copy running-config startup-config
```

When the management port IP address is configured, use this command to access the switch from a host, using the address configured in step 9:

```
ssh admin@192.0.2.8
```

Refer to the **Arista Networks User Manual** for complete switch configuration information.

Status Indicators

This chapter includes the following sections:

- Front Indicators
- Rear Status Indicators

A.1 Front Indicators

System and port status LED indicators are located on the front of the switches.

This section includes the following topics:

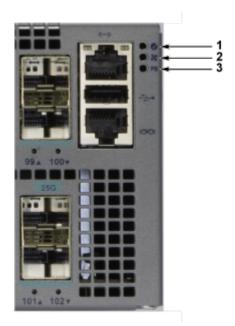
- Switch Indicators
- Port Indicators

A.1.1 Switch Indicators

Front panel LEDs are located on the right side of the chassis and display system, fan, and power supply status. Front Panel displays the front panels of all switches covered by this guide.

Figure 7: System Status Indicators displays the CCS-720XP-96ZC2 front panel LEDs.

Figure 7: System Status Indicators



- 1 System status LED
- 2 Fan status LED
- 3 PSU status LED

Table 6: Switch Indicators LED States

LED Name	LED State	Device Status
System Status	Blinking Green	System powering up.
	Green All power supplies and fans are operating no	
	Blue The locator function is active.	
	Red	A power supply or fan is missing or in a failed state.
Fan Status	Green All fans are operating normally.	
	Red	One or more fans are not inserted or have failed.
Power Supply Status Off Power supply is not inserted or is not pow		Power supply is not inserted or is not powered.
Green Power supply operating normally.		Power supply operating normally.
	Red	Power supply has failed.

A.1.2 Port Indicators

Port LEDs, located in the vicinity of their corresponding ports, provide link and operational status. Figure 8: Port LEDs displays the Port LED location on the CCS-720XP-96ZC2 switch. Front Panel displays the port LED locations of all switches covered by this guide.

Figure 8: Port LEDs



- 1 Port status LED (upper port)
- 3 Port status LED (upper port)
- 2 Port status LED (lower port)
- 4 Port status LED (lower port)

Table 7: Port LED States provides status conditions that correspond to port LED states. Port LED behavior for QSFP+ and SFP+ ports is consistent.

Table 7: Port LED States

LED State	Status
Off	Port link is down.

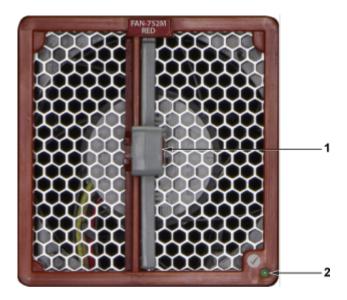
Green	Port link is up.
Yellow	Port is software disabled.
Flashing Yellow	Port failed diagnostics.

A.2 Rear Status Indicators

Fan and power supply modules are accessed from the rear panel. Each fan and power supply module contains an LED that reports the module status. Rear Panel displays the rear panel of all switches covered by this guide.

Fan Status LEDs are on the fan modules, as displayed in Figure 9: Fan Status LED.

Figure 9: Fan Status LED



- 1 Release
- 2 Fan module status LED

Note: Bezel color indicates airflow direction.

The module installation indicator is green when the fan module is properly installed or red when the module is not fully installed. Table 8: Fan Status LED States provides status conditions that correspond to fan status LED states.

Table 8: Fan Status LED States

LED State	Status
Off	The fan module is inserted but not receiving power – it may not be properly seated.
Green	The fan is operating normally.
Red	The fan has failed.

The Power Supply Status LEDs are on the power supply modules, as displayed in Figure 10: AC Power Supply Status LED.

Figure 10: AC Power Supply Status LED



1 PSU module status LED

Table 9: AC Power Supply Status LED States provides status conditions that correspond to power supply status LED states.

Table 9: AC Power Supply Status LED States

Power Supply State	PWR-1021-AC-RED
Input power present Normal operation	Green
Input power present Power Supply fault	ON/OFF: ON when PSU output is ON, OFF when PSU Output is OFF
Input power present Power Supply FAN fault	FLASH 800 ms ON / 800 ms OFF
No Input power Supply installed in chassis	OFF
Input power present Supply not installed in chassis	Green



Note: You can narrow down the error condition by logging in to the switch to view the specific device state. Refer to the Arista User Manual's Switch Environment Control chapter, under the topic Viewing Environment Status, for further information on the **show environment** commands.

Parts List

Each switch provides an accessory kit that contains parts that are required to install the switch. This appendix lists the installation parts contained in the switch accessory kit.

This section includes the following topics:

- Rack Mount Parts
- Cables

B.1 Rack Mount Parts

Two-post rack mount parts are provided in the accessory kit.

Figure 11: Two-Post Rack Mount Parts





Mounting Brackets (Three Hole)

B.2 Cables

List of provided cables.

Quantity	Description
2	Power cables: IEC-320/C15-C16, 13 A, 250 V, 2 meter
1	RJ-45 Patch Panel Cable, 2 meter
1	RJ-45 to DB9 Adapter Cable, 2 meter

F

Note:

All provided power cables are for use only with Arista products.

警告

すべての電源コードは提供する製品で使用するためだけを目的としている。

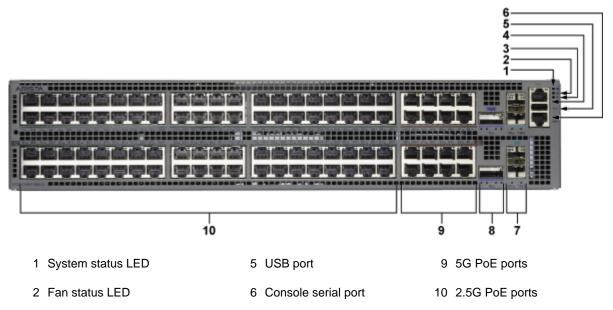
電源コードの他の製品での使用の禁止 Aristaが提供するすべての電源コードは、Aristaの製品でのみ使用してくださ

Appendix C

Front Panel

This appendix displays the front panel of all switches covered by this guide.

Figure 12: CCS-720XP-96ZC2



3 PSU status LED

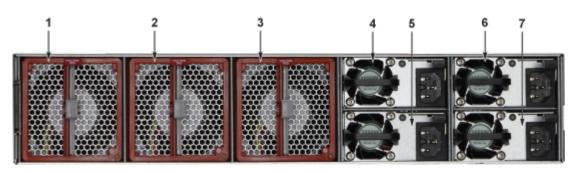
- 7 25G ports
- 4 Ethernet management port
- 8 100G ports

Appendix D

Rear Panel

This appendix displays the rear panel of all switches covered by this guide. Depending on the power supply modules installed, the rear panel on your switch may appear slightly different.

Figure 13: All Models



- 1 Fan Module 1
- 4 Power Supply Module 1
- 7 Power Supply Module 4

- 2 Fan Module 2
- 3 Fan Module 3
- 5 Power Supply Module 3
- 6 Power Supply Module 2

Appendix E

Regulatory Model Numbers

This appendix lists the Regulatory Model Numbers (RMNs) for the product models for the switches described in this document.

Table 10: Regulatory Model Numbers and Product Numbers

Regulatory Model Number (RMN)	Product Name(s)
AN1733	CCS-720XP-96ZC

Appendix F

Taiwan RoHS Information

This appendix provides Taiwan RoHS information for switches covered by this guide.

For Taiwan BSMI RoHS Table, go to https://www.arista.com/assets/data/pdf/AristaBSMIRoHS.pdf.