



# ZXSDR R8119

## Pico Remote Radio Unit

### Hardware Description

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## **Revision History**

<b>Revision No.</b>	<b>Revision Date</b>	<b>Revision Reason</b>
R1.2	2016-03-30	Modified the way of description
R1.1	2016-01-06	Updated “ 3 Indicators”. Updated the functions of the indicators in accordance with crrent version.
R1.0	2015-09-18	First edition

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# About This Manual

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## Purpose

This manual describes the hardware architecture of the ZXSDR R8119, including the overview, interfaces, indicators, and cables.

## Intended Audience

This manual is intended for:

- Network planning engineers
- Commissioning engineers


## What Is in This Manual

This manual contains the following chapters.

Chapter 1, Overview	Describes the overview and dimensions of the ZXSDR R8119.
Chapter 2, External Interface	Describes the external interface of the ZXSDR R8119.
Chapter 3, Indicators	Describes the indicators of the ZXSDR R8119.
Chapter 4, Cables	Describes the external cables of the ZXSDR R8119.

## Conventions

This manual uses the following conventions.

	Note: provides additional information about a topic.
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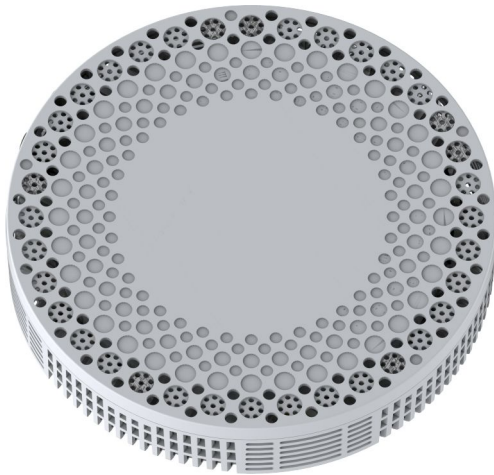
# Chapter 1

# Overview

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The ZXSDR R8119 is round, see [Figure 1-1](#).

**Figure 1-1 Overview of the ZXSDR R8119**



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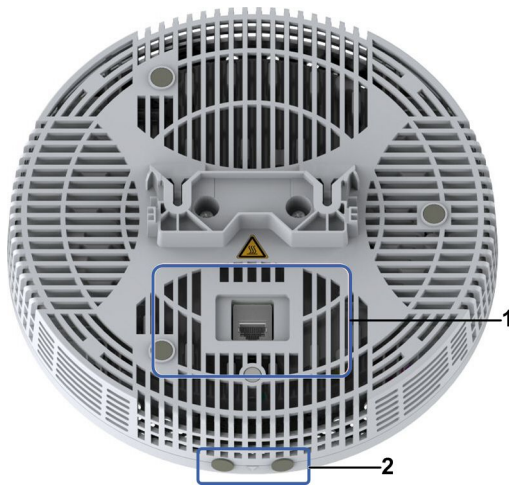


# Chapter 2

## External Interface

The external interfaces on the back of the ZXSDR R8119, see [Figure 2-1](#).

**Figure 2-1 External Interface of the ZXSDR R8119**



1. ETH Interface                      2. ANT Interface

For a description of the external interface of the ZXSDR R8119, refer to [Table 2-1](#).

**Table 2-1 External Interface Description**

Interface	Type	Data Transmission Rate	Usage
ETH	RJ45 interface, supports the PoE function.	2.5 Gbps	Connects to the remote convergence unit Pbridge. Receives and transmits digital signals. Provides power for the ZXSDR R8119.
ANT	SMA interface	-	External antenna interface.

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# Chapter 3

## Indicators

The indicators of the ZXSDR R8119 are hidden in the inside of the front panel, see [Figure 3-1](#). When the indicators are flashing, you can see them lit in colors through the device panel. The indicators indicate the operational status and alarm status of the device.

**Figure 3-1 Indicators of the ZXSDR R8119**



For a description of the indicators of the ZXSDR R8119, refer to [Table 3-1](#).

**Table 3-1 Indicator Description**

Indicator	Function	Color	Operational Mode
RUN	Operating indicator	Green	<ul style="list-style-type: none"> <li>● Off: The device is not powered on.</li> <li>● On: The device is in startup state.</li> <li>● Fast flashing (0.3 s on, 0.3 s off): The device completes the startup procedure and could be operating properly.</li> </ul>
ALM	Alarm indicator	Red	<ul style="list-style-type: none"> <li>● Off: There is no alarm.</li> <li>● On: The device is faulty.</li> <li>● Flashing once: There are connection errors, for example, a high interface bit error rate.</li> <li>● Flashing twice: There are man-machine operation errors, for example, the device type or parameters are different from</li> </ul>

Indicator	Function	Color	Operational Mode
			<p>those configured in the network management system.</p> <ul style="list-style-type: none"> <li>Flashing three times: There are other errors, for example, over temperature.</li> </ul>

- Flash once: The ALM indicator is on for 0.125 s, off for 0.125 s, and then off for 2 s. After that, the period is repeated.
- Flashing twice: The ALM indicator is on for 0.125 s, off for 0.125 s, on for 0.125 s, off for 0.125 s, and then off for 2 s. After that, the period is repeated.
- Flashing three times: The ALM indicator is on for 0.125 s, off for 0.125 s, on for 0.125 s, off for 0.125 s, on for 0.125 s, off for 0.125 s, and then off for 2 s. After that, the period is repeated.

**Note:**

- It takes the device 4 minutes to complete the startup procedure after being powered on. After startup, the ALM and RUN indicators turn off in 15 minutes and do not flash again.
- If the device is still in startup state five minutes after being powered on, the device is faulty.

# Chapter 4

## Cables

### Function

The ZXSDR R8119 uses CAT5e Ethernet cables, CAT6 Ethernet cables and STP Ethernet cables to connect to a remote convergence unit Pbridge, and implements the following functions:

- Provides physical transmission channels for signals between the Pbridge and the ZXSDR R8119.
- Provides power supplies from the Pbridge to the ZXSDR R8119.

### Overview

Figure 4-1 shows an overview of the Ethernet cable of the ZXSDR R8119.

Figure 4-1 Ethernet Cable



### Signal Description

For a description of the Ethernet cable signals, refer to Table 4-1.

Table 4-1 Ethernet Cable Signals

End-A Pin	Definition	Cable Color	End-B Pin
1	ETH-TR1+	White/Orange	1
2	ETH-TR1-	Orange	2
3	ETH-TR2+	White/Green	3
4	ETH-TR3+	Blue	4
5	ETH-TR3-	White/Blue	5
6	ETH-TR2-	Green	6
7	ETH-TR4+	White/Brown	7
8	ETH-TR4-	Brown	8

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## Connection

One end of the Ethernet cable is connected to the ETH interface of the remote convergence unit Pbridge, and the other end of the Ethernet cable is connected to the ETH interface of the ZXSDR R8119.

# Figures

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Figure 2-1 External Interface of the ZXSDR R8119..... 2-1

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# Glossary

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CAT5

PoE