

French Independent Switch NRZ



Overview

Learn what Non-Return-to-Zero (NRZ) is, how NRZ works, its applications, advantages, and limitations. Click for more information now! The binary signal is encoded using rectangular pulse-amplitude modulation with polar NRZ (L), or polar non-return-to-zero-level code. In telecommunications, a non-return-to-zero (NRZ) line code is a binary code in which ones are represented by one significant condition, usually a positive voltage. NRZ, NRZI, and Manchester are popular serial encoding mechanisms. Find out how they differ from each other. This article is part of the Communication Series: What's the Difference: Serial Communications 101 Members can download this article in PDF format. What Is NRZ and How Does It Work?

This article compares RZ (Return-to-Zero) and NRZ (Non-Return-to-Zero) line coding techniques, highlighting the differences between their pulse shapes. NRZ is implemented with two levels: A VOH Mark state, which represents a '1' data bit, and a VOL Space state, which represents a '0' data bit.



Article Content

May 28, 2026

RZ vs NRZ: Understanding the Differences in Line ...

Explore the key differences between RZ and NRZ line coding, including unipolar, polar, and bipolar variations, with a focus on pulse shapes and their applications ...

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What is Non-Return-to-Zero (NRZ)?

The main pros of NRZ compared to PAM4 are better tolerance to noise, higher error correction capability, and lower power consumption. Besides, since the signal quality of NRZ is ...

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NRZ, NRZI, Manchester Encoding, What Does it Mean?

NRZ (Non-Return-to-Zero), NRZI (Non-Return-to-Zero Inverted), and Manchester Encoding are terms for the shapes and voltage levels of digital electronic signals.

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What Is Non-Return-to-Zero (NRZ) and How Does It Work?

Learn what Non-Return-to-Zero (NRZ) is, how NRZ works, its applications, advantages, and limitations. Click for more information now!

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34.2 UART Asynchronous Modes

NRZ implies that consecutively transmitted data bits of the same value stay at the output level of that bit without returning to a neutral level between each bit transmission. An NRZ transmission port idles in ...

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RZ vs NRZ: Understanding the Differences in Line Coding Techniques

Explore the key differences between RZ and NRZ line coding, including unipolar, polar, and bipolar variations, with a focus on pulse shapes and their applications in digital communication.

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Differences Between NRZ, NRZI, and Manchester Serial ...

NRZ, NRZI, and Manchester are popular serial encoding mechanisms. Find out how they differ from each other.

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What is NRZ (Non-Return-to-Zero)? | Definition from TechTarget

Learn how return-to-zero (RZ) and non-return-to-zero (NRZ) modulation and encoding work, how they compare and their ideal uses in telecommunications.

May 03, 2026

Understanding Non-Return-to-Zero (NRZ) in Digital Communication

Non-Return-to-Zero (NRZ) is a digital encoding method using two voltage levels for binary data, offering simplicity and efficiency in digital communication.

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Non-return-to-zero

In telecommunications, a non-return-to-zero (NRZ) line code is a binary code in which ones are represented by one significant condition, usually a positive voltage, while zeros are represented by ...

Aug 08, 2025

NRZ (Non-Return-to-Zero) | Glossary

NRZ (Non-Return-to-Zero) is a binary signaling method used in PCIe and Ethernet for efficient, low-complexity data transmission over serial links.

Contact Us

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