

Digitus DK-1843-005

DIGITUS Cat 8.1 LAN Cable User Manual

Model: DK-1843-005 | Brand: Digitus

[Introduction](#) [Features](#) [Setup](#) [Operation](#) [Maintenance](#) [Troubleshooting](#) [Specifications](#) [Support](#)

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your DIGITUS Cat 8.1 LAN Cable, Model DK-1843-005. Designed for high-speed data transmission, this cable ensures reliable network connectivity for demanding applications. Please read these instructions carefully to ensure optimal performance and longevity of your product.



Figure 1: The DIGITUS Cat 8.1 LAN Cable with RJ45 connectors. This image shows the overall design of the cable, highlighting its

2. PRODUCT FEATURES

The DIGITUS Cat 8.1 LAN Cable offers advanced features for superior network performance:

- **High-Speed Data Transmission:** Supports data rates up to 25Gbps or 40Gbps, ideal for fiber internet speeds in server rooms and high-bandwidth applications.
- **Exceptional Bandwidth:** Operates at a maximum bandwidth of 2000 MHz (2 GHz), ensuring excellent connection properties for Gigabit networks in data centers or corporate environments.
- **Broad Compatibility:** Equipped with RJ45 connectors, it is compatible with existing networks using CAT.5e, CAT.6, CAT.6A, and CAT.7 cables.
- **Power over Ethernet (PoE++) Support:** Supports PoE++ type 4 (IEEE 802.3bt), enabling power delivery up to 100W to compatible devices, backward compatible with PoE and PoE+.
- **Enhanced Signal Integrity:** Features a Printed Circuit Board (PCB) integrated into the RJ45 connector to minimize electromagnetic interference (EMI) and improve signal quality.
- **Durable and Safe Construction:** Features an LSZH (Low Smoke Zero Halogen) outer sheath for flame retardancy and low smoke emission. The inner conductor is made of copper (Cu). Connectors include tensile relief, folding protection, and a snap lever.

CAT 8.1 Patch Cable

Meet all requirements in the various application areas



Professional Use: Data Center and High-Bandwidth Cloud Computing



Gaming: High-speed connections



Streaming: 4K/8K UHD

Figure 2: Illustrates various applications for the Cat 8.1 cable, including data centers, high-speed gaming, and 4K/8K UHD streaming. This highlights the cable's versatility across different demanding environments.

Highest performance

Transmission rates of up to 40 Gbit/s at
2 000 MHz for maximum network performance

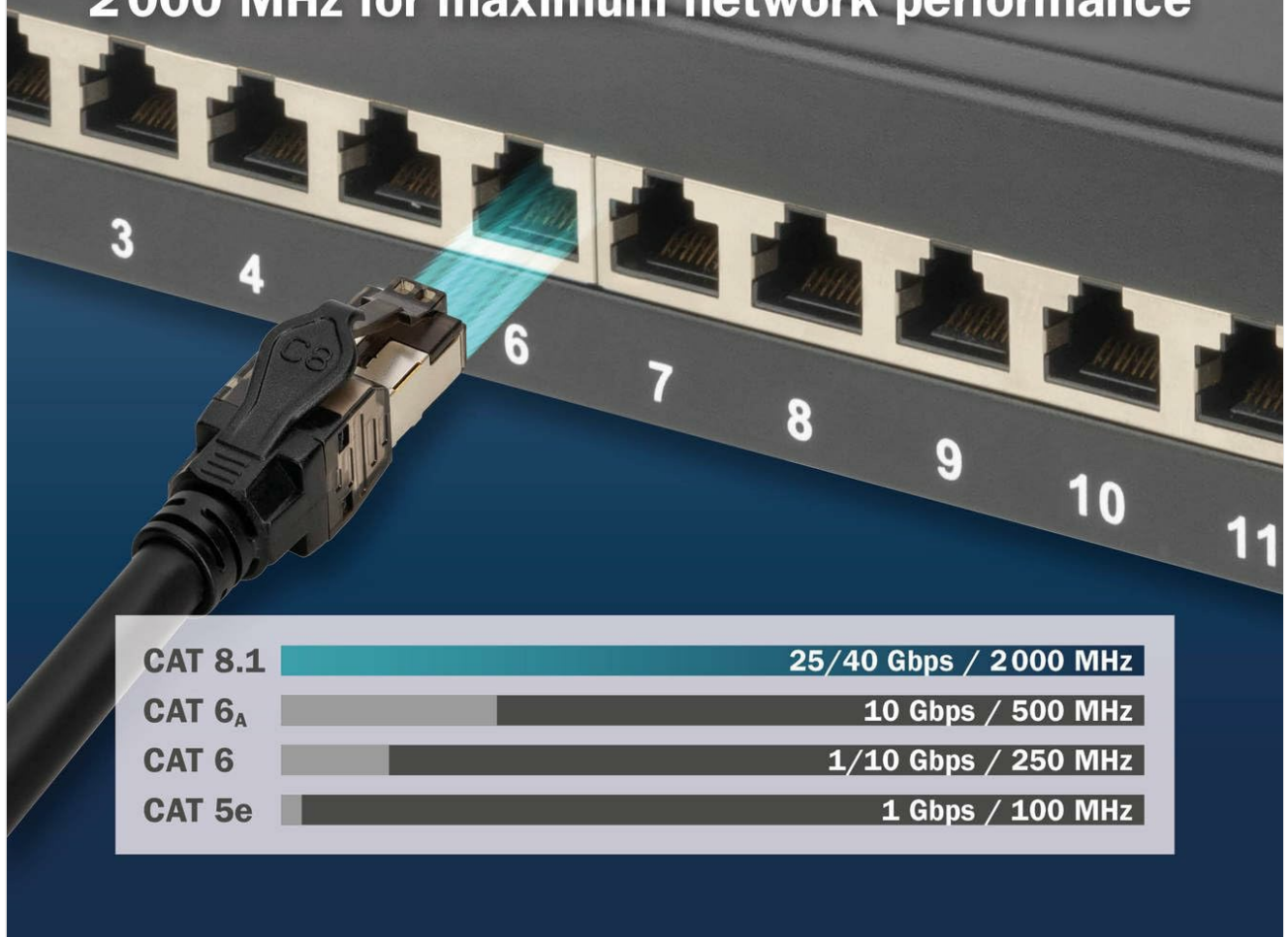


Figure 3: A comparison chart showing the superior transmission rates and bandwidth of Cat 8.1 cables compared to older categories like Cat 6A, Cat 6, and Cat 5e. This visually represents the "Highest Performance" feature.

3. SETUP INSTRUCTIONS

Follow these steps to properly connect your DIGITUS Cat 8.1 LAN Cable:

1. **Identify Ports:** Locate the Ethernet ports on your network devices (e.g., router, switch, computer, server, gaming console, Smart TV). These are typically RJ45 ports.
2. **Connect First End:** Gently insert one end of the DIGITUS Cat 8.1 LAN Cable into the Ethernet port of your first device until you hear a click, indicating it is securely latched.
3. **Connect Second End:** Insert the other end of the cable into the Ethernet port of your second device. Ensure it also clicks into place.
4. **Verify Connection:** Most network devices have indicator lights next to the Ethernet port. A solid or blinking light typically indicates a successful connection and data activity.
5. **Cable Routing:** Route the cable carefully to avoid sharp bends, kinks, or excessive tension, which can damage the cable and degrade performance.

The cable's RJ45 connectors are designed for secure and reliable connections, featuring a snap lever protection to prevent accidental disconnections.



Figure 4: A detailed close-up of the Cat 8.1 RJ45 connectors, showing the robust shielding and the integrated PCB for improved signal integrity. This image highlights the quality and design of the connection points.

4. OPERATING THE CABLE

Once connected, the DIGITUS Cat 8.1 LAN Cable operates passively to facilitate data transfer between your network devices. No specific user interaction is required for its operation beyond proper connection.

4.1. High-Speed Networking

This cable is engineered to support extremely high data transfer rates, making it suitable for:

- Data centers and server rooms requiring 25/40 Gigabit Ethernet.
- High-performance computing and cloud environments.
- Gaming setups where low latency and high bandwidth are critical.
- Streaming 4K/8K UHD content without buffering.

4.2. Power over Ethernet (PoE++)

If your connected devices and network equipment support PoE++ (IEEE 802.3bt), this cable can transmit both data and power up to 100W. This eliminates the need for separate power cables for compatible devices such as IP cameras, VoIP phones, and wireless access points.

Optimal signal stability

PCB technology minimizes signal loss
and ensures reliable data transmission

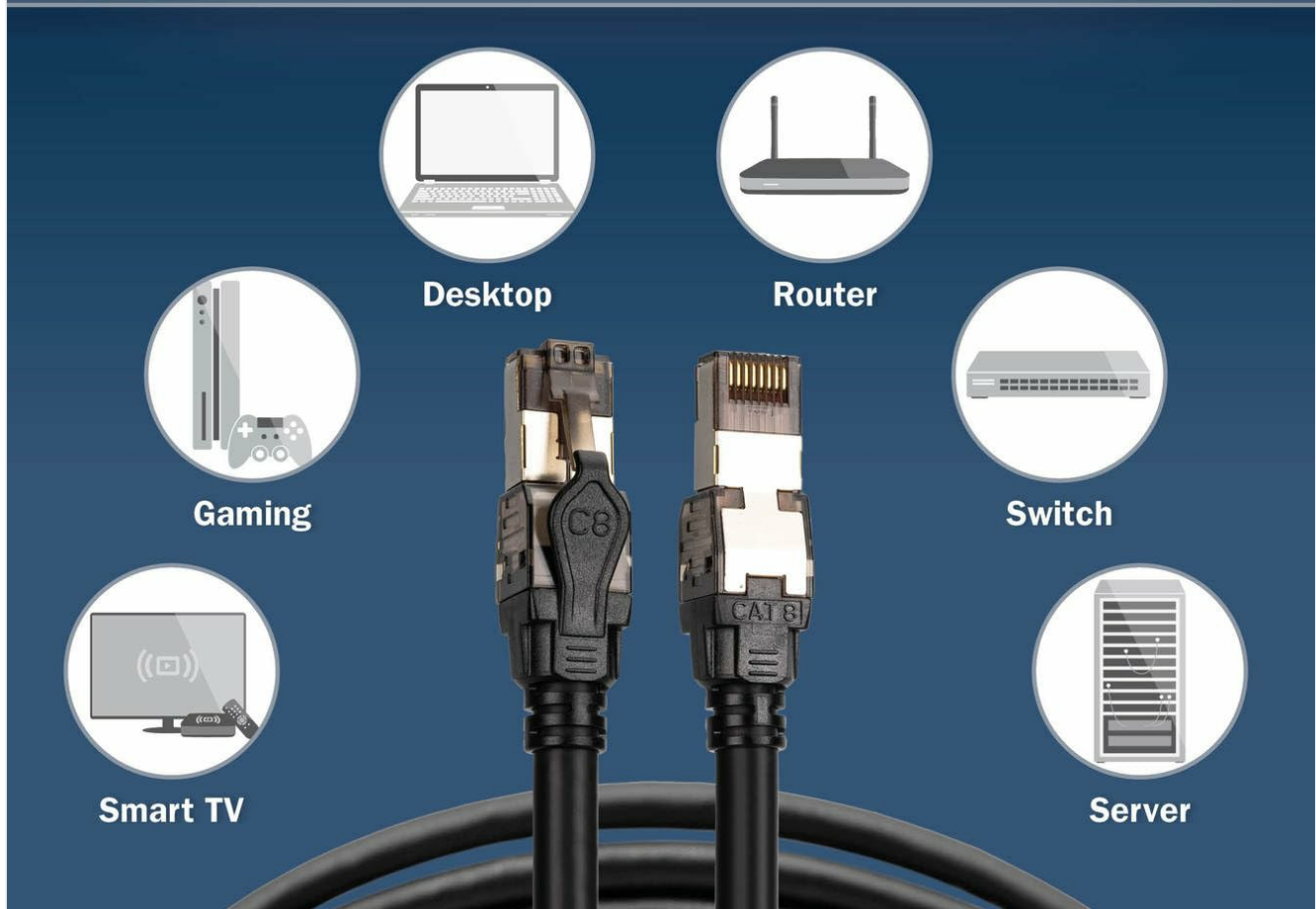


Figure 5: Depicts various devices that can benefit from the Cat 8.1 cable's optimal signal stability, including desktops, routers, gaming consoles, switches, Smart TVs, and servers. This illustrates the wide range of compatible applications.

5. MAINTENANCE

The DIGITUS Cat 8.1 LAN Cable is designed for durability and requires minimal maintenance. Adhering to the following guidelines will help ensure its long-term performance:

- **Avoid Physical Stress:** Do not bend the cable sharply, crimp it, or place heavy objects on it. Excessive bending can damage the internal conductors and shielding, leading to performance degradation.
- **Proper Handling:** When disconnecting, always press the release tab on the RJ45 connector before pulling. Never pull directly on the cable itself, as this can damage the connector or the cable's internal wiring.
- **Cleanliness:** Keep the connectors free from dust and debris. If necessary, gently clean the metal contacts with a dry, lint-free cloth or compressed air.
- **Environmental Conditions:** Store and operate the cable in a dry environment, away from extreme temperatures and direct sunlight. The LSZH jacket provides protection, but proper environmental conditions are still recommended.

- **Inspection:** Periodically inspect the cable and connectors for any signs of wear, damage, or corrosion. Replace the cable if any damage is observed.



Figure 6: The Cat 8.1 LAN cable coiled, demonstrating its flexibility while emphasizing the importance of proper handling and storage to prevent damage.

6. TROUBLESHOOTING

If you encounter issues with your network connection, consider the following troubleshooting steps:

- **No Network Connection:**
 - Ensure both ends of the cable are securely plugged into their respective ports. Listen for the "click" sound.
 - Check the indicator lights on your network devices. If they are off, try a different port or device.
 - Test the cable with another known working device or replace it with a different Ethernet cable to rule out a faulty cable.
 - Restart your router/modem and the connected device.
- **Slow Network Speed:**
 - Verify that all network components (router, switch, network adapter) support the desired speed (e.g., 10Gbps or 40Gbps). A Cat 8.1 cable will only perform at the speed of the slowest component in the chain.
 - Ensure the cable is not bent, kinked, or damaged. Physical damage can significantly reduce performance.
 - Check for sources of electromagnetic interference (EMI) near the cable, although the S/FTP shielding and PCB in the connector are designed to mitigate this.
 - Update network adapter drivers on your computer.

- **Intermittent Connection:**
 - Ensure connectors are clean and free of debris.
 - Check for loose connections.
 - If possible, test with a different cable to determine if the issue is with the cable or other network hardware.

For persistent issues, refer to the documentation for your network devices or contact technical support.

7. TECHNICAL SPECIFICATIONS

Feature	Detail
Model Number	DK-1843-005
Brand	Digitus
Cable Type	Cat 8.1 Ethernet (S/FTP)
Connector Type	RJ45
Data Transfer Rate	Up to 40 Gbps
Bandwidth	2000 MHz (2 GHz)
Conductor Gauge	AWG 24/7
PoE Support	PoE++ Type 4 (IEEE 802.3bt) up to 100W
Jacket Material	LSZH (Low Smoke Zero Halogen)
Inner Conductor Material	Copper (Cu)
Special Features	Integrated PCB in RJ45 connector for EMI reduction, tensile relief, folding protection, snap lever.
Compatible Devices	Docking Station, Printer, Router, Server, Gaming Consoles, Smart TVs, Switches
Compatibility	Backward compatible with Cat 5e, Cat 6, Cat 6A, Cat 7 networks.

8. WARRANTY AND SUPPORT

For warranty information, technical support, or further inquiries regarding your DIGITUS Cat 8.1 LAN Cable, please refer to the official Digitus website or contact their customer service department. Details can typically be found on the product packaging or the manufacturer's official online resources.

Ensure you have your product model number (DK-1843-005) available when contacting support for faster assistance.

Related Documents - DK-1843-005

[illegible]

DIGITUS

Tester kabli sieciowych
i komunikacyjnych, RJ45 i BNC



Przegląd instrukcji obsługi
wersja 1.0

[DIGITUS DN-14001-1 Network and Communication Cable Tester RJ45 BNC Quick Start Guide](#)

Quick start guide for the DIGITUS DN-14001-1 network and communication cable tester, covering RJ45 and BNC connections, features, operation, and technical specifications. Includes safety instructions and troubleshooting.