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DIGITUS DN-82124

Digitus Professional DN 82124 Gigabit Multi-Mode to Single-Mode Media Converter

Model: DN-82124

1. INTRODUCTION

The Digitus Professional DN 82124 is a Gigabit Multi-Mode to Single-Mode Media Converter designed to facilitate seamless conversion between multi-mode and single-mode fiber optic signals. This device allows for network signal transmission over extended distances without requiring a complete overhaul of existing network infrastructure. It supports SC/SC connectors and operates at wavelengths of 850 nm for multi-mode and 1310 nm for single-mode connections.

This manual provides essential information for the proper installation, operation, and maintenance of your media converter.



2. KEY FEATURES

- Converts between multi-mode and single-mode fiber optic signals.
- Supports Gigabit Ethernet speeds.
- Equipped with SC/SC connectors.
- Wavelengths: 850 nm (Multi-Mode) & 1310 nm (Single-Mode).
- Multi-mode range: Up to 0.5 km.
- Single-mode range: Up to 20 km.
- Diagnostic LEDs for status and activity monitoring.
- Compatible with various fiber optic cable types (50/125 μm , 62.5/125 μm , 100/140 μm for multi-mode; 8.3/125 μm , 8.7/125 μm , 9/125 μm , 10/125 μm for single-mode).

3. SETUP AND INSTALLATION

Follow these steps to set up your Digitus Professional DN 82124 Media Converter:

1. **Unpack the Device:** Carefully remove the media converter and its power supply from the packaging. Verify that all components listed in the package contents are present.
2. **Power Connection:** Connect the provided external power supply to the DC 5V input port on the media converter. Plug the power adapter into a standard electrical outlet. The Power LED (PWR) on the front panel should illuminate, indicating the device is receiving power.
3. **Fiber Optic Connection (Multi-Mode):** Connect your multi-mode fiber optic cable (e.g., 50/125 μm , 62.5/125 μm) to the multi-mode SC ports (TX/RX) on the converter. Ensure the connectors are clean and properly seated.
4. **Fiber Optic Connection (Single-Mode):** Connect your single-mode fiber optic cable (e.g., 9/125 μm) to the single-mode SC ports (TX/RX) on the converter. Again, ensure clean and secure connections.
5. **Network Device Connection:** Connect the other end of the multi-mode fiber optic cable to your multi-mode network device (e.g., switch, router). Connect the other end of the single-mode fiber optic cable to your single-mode network device.
6. **Verify Connections:** Once all cables are connected, check the LINK/ACT LEDs on the front panel. A solid LINK LED indicates a successful fiber optic link, and a blinking ACT LED indicates data activity.



Figure 2: Front panel with LED indicators.



Figure 3: Rear panel with power input.

4. OPERATING THE MEDIA CONVERTER

The Digitus Professional DN 82124 operates automatically once properly connected and powered. It transparently

converts signals between the multi-mode and single-mode fiber segments.

LED Indicators:

- **PWR (Power):** Illuminates when the device is powered on.
- **LINK A / LINK B (Link/Activity):**
 - Solid Green: Indicates a valid fiber optic link connection.
 - Blinking Green: Indicates data activity (data transmission/reception).
 - Off: No link detected or connection issue.

Ensure that the LINK LEDs are solid green for both connected fiber segments to confirm proper operation. Blinking activity LEDs confirm data flow.

5. MAINTENANCE

To ensure optimal performance and longevity of your media converter, follow these maintenance guidelines:

- **Cleaning:** Keep the device clean and free from dust. Use a soft, dry cloth for cleaning. Do not use liquid or aerosol cleaners.
- **Fiber Optic Connectors:** Always keep fiber optic connectors clean. Dust or dirt on the connector end-faces can significantly degrade performance. Use appropriate fiber optic cleaning tools if necessary.
- **Ventilation:** Ensure the device has adequate ventilation. Do not block the ventilation slots on the sides of the converter.
- **Environmental Conditions:** Operate the device within the specified temperature range (-10 to 55°C) and humidity levels. Avoid exposing it to extreme temperatures or moisture.
- **Power Supply:** Use only the original power adapter provided with the device.

6. TROUBLESHOOTING

If you encounter issues with your media converter, refer to the following troubleshooting tips:

Problem	Possible Cause	Solution
No Power (PWR LED Off)	Power adapter not connected or faulty; power outlet issue.	Check power adapter connection. Try a different power outlet. Ensure the power adapter is functional.
No Link (LINK LED Off)	Incorrect fiber optic cable connection; dirty or damaged fiber connectors; incompatible fiber type; faulty fiber cable; issue with connected network device.	Ensure fiber cables are securely connected to the correct ports (TX to RX, RX to TX). Clean fiber connectors. Verify fiber cable type (multi-mode/single-mode) matches the converter and connected devices. Test with a known good fiber cable. Check the status of the connected network devices.
No Data Activity (ACT LED not blinking)	No data being transmitted; network configuration issue; faulty network device.	Ensure data is being sent from the connected network devices. Check network device configurations. Verify the network devices are functioning correctly.

Problem	Possible Cause	Solution
Intermittent Connection	Loose fiber connection; dirty fiber connectors; environmental interference.	Secure all fiber connections. Clean fiber connectors. Ensure the device is not exposed to excessive vibration or electromagnetic interference.

7. TECHNICAL SPECIFICATIONS

Feature	Detail
Model Number	DN-82124
Manufacturer	DIGITUS
Dimensions (L x W x H)	95 mm x 70 mm x 26 mm (7 x 9.5 x 2.6 cm)
Weight	300 grams
Material	Metal
Connectors	SC/SC
Wavelength (Multi-Mode)	850 nm
Wavelength (Single-Mode)	1310 nm
Multi-Mode Range	Up to 0.5 km
Single-Mode Range	Up to 20 km
Power Consumption	3.5 Watts (Max. 1 A at 5V DC)
Operating Temperature	-10 to 55°C
Compliance	CE, IEC 60669-2-1:2002, RoHS, FCC Part 15

8. WARRANTY INFORMATION

The Digitus Professional DN 82124 Media Converter comes with a 1-year availability of spare parts. For specific warranty terms and conditions, please refer to the documentation provided with your purchase or contact Digitus customer support.

9. CUSTOMER SUPPORT

For technical assistance, troubleshooting, or further information regarding your Digitus Professional DN 82124 Media Converter, please visit the official Digitus website or contact their customer support. You can find more solutions and support resources at [Assmann Solutions Overview](#).