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> Qiilu Industrial Grade Isolated USB to 4-Channel RS232 Converter User Manual

Qiilu Qiilu4a27tudq0n

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1. INTRODUCTION

The Qiilu Industrial Grade Isolated USB to 4-Channel RS232 Converter provides a robust solution for connecting multiple RS232 serial devices to a computer via a single USB port. Designed for industrial environments, it features advanced isolation and protection mechanisms to ensure stable and reliable data communication. This manual provides detailed instructions for the proper setup, operation, and maintenance of your device.



Figure 1: Top-down view of the Qiilu USB to 4-Channel RS232 Converter, showing USB, power, and RS232 ports with LED indicators.

2. PRODUCT FEATURES

- **High-Speed Performance:** Utilizes the original FT4232HL chip for stable and high-speed telecommunication, ensuring compatibility with various RS232 industrial devices.
- **Advanced Isolation:** Incorporates digital and power isolation mechanisms, offering low power consumption and strong anti-interference capabilities.
- **Surge Voltage Protection:** Equipped with Transient Voltage Suppression (TVS) design to effectively mitigate surge and transient spike voltages, providing superior thunder and static protection.
- **Current and Voltage Guard:** Features a self-resetting fuse and diode to maintain stable output current and voltage, safeguarding the device from overcurrent and overvoltage conditions.
- **User-Friendly Indicators:** Includes external LED indicators for power supply and data transmission statuses (TXD/RXD), simplifying operation and monitoring.

3. PACKAGE CONTENTS

The package includes the following items:

- 1 x USB to RS232 Converter
- 1 x Power Adapter (for DC 5-36V input)
- 1 x USB Cable



Figure 2: The converter unit shown with its accompanying power adapter and USB cable.

4. SPECIFICATIONS

Feature	Description
Item Type	Industrial Grade Isolated USB to RS232 Converter
Material	Aluminium Alloy
Host Interface	USB
Device Interface	RS232 (4-channel)
Telecommunication Range	300bps ~ 921600bps

Feature	Description
USB Interface Working Level	5V
USB Connector Type	USB B Port
USB Interface Guard	200mA Self-Restoring Fuse, Isolated Output
USB Output Distance	Approximately 5m (16.4ft)
Power Supply Voltage	5 to 36V DC
Power Supply Terminals Interface Guard	Reverse Connection Protection
RS232 Interface Form	DB9 Female Head
RS232 Interface Guard	TVS Tube Guard, Static Protection
RS232 Distance	Approximately 15m (49.2ft)
Operating Temperature Range	-40°C ~ 85°C
Operating Humidity Range	5% ~ 95%RH
Operating System Compatibility	For OS X, for Linux, for Android
Brand	Qiilu
Model Number	Qiilu4a27tudq0n
Item Weight	293 Grams

5. SETUP INSTRUCTIONS

- Connect Power:** Connect the provided power adapter to the DC 5-36V power input terminal on the converter. Ensure the power source matches the specified voltage range.
- Connect USB Host:** Connect one end of the USB cable to the USB B port on the converter and the other end to an available USB port on your computer (host device).
- Install Drivers:** Your operating system may automatically install necessary drivers. If not, please refer to the manufacturer's website for driver downloads specific to the FT4232HL chip.
- Connect RS232 Devices:** Connect your RS232 serial devices to the DB9 female head ports (PORT1, PORT2, PORT3, PORT4) on the converter.



Figure 3: Angled view highlighting the USB, power input, and RS232 ports for connection.

6. OPERATING INSTRUCTIONS

Once connected and powered, the converter will begin operation. Monitor the LED indicators for status:

- **PWR (Power Indicator):** This LED turns red when the USB is connected and voltage is detected, indicating the device is powered on.
- **TXD (Send Indicator):** This LED turns green when data is being sent from the RS232 interface.
- **RXD (Receiving Indicator):** This LED turns blue when data is being received by the RS232 interface.



Figure 4: Close-up view of the PWR, TXD, and RXD LED indicators on the converter.

7. MAINTENANCE

- Keep the converter in a clean, dry environment.
- Avoid exposing the device to extreme temperatures or humidity outside the specified operating range.
- Do not attempt to open the casing or modify the internal components, as this will void the warranty and may damage the device.
- Clean the exterior with a soft, dry cloth. Do not use liquid cleaners.

8. TROUBLESHOOTING

- **No Power (PWR LED off):**
 - Check if the USB cable is securely connected to both the converter and the host device.
 - Verify that the host device's USB port is functional.
 - Ensure the power adapter is correctly connected and providing power within the 5-36V range.
- **No Data Transmission (TXD/RXD LEDs off during communication):**

- Confirm that the RS232 devices are properly connected to the converter's DB9 ports.
 - Verify that the RS232 devices are powered on and configured correctly.
 - Check your software settings on the host computer to ensure the correct COM port is selected and communication parameters (baud rate, data bits, parity, stop bits) match those of the RS232 device.
 - Ensure the drivers for the FT4232HL chip are correctly installed.
- **Intermittent Connection:**
 - Check all cable connections for looseness.
 - Ensure the USB and RS232 cable lengths do not exceed the recommended distances (5m for USB, 15m for RS232).
 - Minimize electromagnetic interference from other electronic devices.

9. WARRANTY INFORMATION

This product comes with a manufacturer's warranty for 90 days from the date of purchase. Please retain your proof of purchase for warranty claims. The warranty covers defects in materials and workmanship under normal use. It does not cover damage caused by misuse, accident, unauthorized modification, or improper installation.

10. SUPPORT

For further assistance or technical support, please contact Qiilu customer service. When seeking support, please refer to the product model number **Qiilu4a27tudq0n**.