

ADAM-4570 ADAM-4571

2-port Ethernet to RS-232/422/485
Data Gateway

1-port Ethernet to RS-232/422/485
Data Gateway



Introduction

The ADAM-4570/4571 is a lightning fast and cost effective data gateway between RS-232/422/485 and Ethernet interfaces. This unit immediately upgrades your existing device into the Ethernet world. Functionally transparent and efficient, the ADAM-4570/4571 is specially designed for remotely controlling and monitoring devices via the Internet.

The ADAM-4570/4571 provides one or two RS-232/485/422 serial ports easily individually configured for your needs. And the transmission speed of the ADAM-4570/4571 is up to 230 Kbps, meeting the demand for high-speed exchange. In addition, users can use Windows utility to configure the ADAM-4570/4571 without further programming. The ADAM-4570/4571 is not only protecting your current hardware investment but also ensuring future network expandability. Since the protocol conversion is transparent, all your existing devices can be seamlessly integrated with the Ethernet network. Therefore, the ADAM-4570/4571 can be used in a security system, factory automation, SCADA, transportation and more..

The ADAM-4570/4571 integrates both your existing human-machine interface software (HMI) and the RS-232/422/485 system architecture with an Ethernet network. The result helps you save cabling space and software development cost. The ADAM-4570/4571 also provides a high-performance RISC CPU and real time operating system to reduce CPU load. These components make the ADAM-4570/4571 more stable and reliable. Another benefit is the ADAM-4570/4571 allows users to remotely download programs to a designated device via Ethernet. This reduces the need for on-site maintenance and diagnosis.

In addition, the ADAM-4570/4571 comes with a Windows configuration and port-mapping utility. The configuration tool can auto-detect all ADAM-4570/4571s on the local network. It also lets you adjust all settings easily. The port mapping utility helps you to set up 255 ports for one Windows NT and Windows 2000 platform. This helps users manage all ports to meet their needs.

Application:

1. Factory Automation
2. SCADA system
3. Telecommunication system
4. Building automation

Features

- Support 10/100 Mbps Base-T standard
- Expand up to 255 serial ports for one Windows NT and Windows 2000 host
- Supports high transmission speeds up to 230 Kbps
- Supports an advanced security mechanism to avoid unauthorized access
- Network broken handing
- Loopback test: Easy-to-diagnose
- Remote download firmware: Easy to maintain
- Auto-detecting Configuration Utility
- Easy managing Port Mapping Utility
- Surge protection for RS-485 line and power supply
- Automatic RS-485 data flow control

5. Transportation system
6. Wafer fabrication system

Benefits:

- Update your system for the Ethernet without changing hardware or software
- Control and monitor on-site devices via Ethernet
- Save maintenance time, cable installation space and money with one small unit

Specifications

- **Protocol:** TCP/IP, UDP
- **Network:** 10/100 BASE-T standard
- **Port:** 1/2 Independent RS-232/422/485 ports
- **Connector:**
 - Network:** RJ-45
 - Serial:** RJ-45 (RJ-45 to DB-9 cable provided)
- **Transmission speed:** 300 bps to 230 Kbps
- **Parity bit:** odd, even, none, space, mark
- **Data bit:** 5, 6, 7, 8
- **Stop bit:** 1, 1.5, 2
- **Signals:** Full Modem control signals
- **Diagnostic LEDs:**
 - Network:** Tx/Rx, Link, Speed (10/100 Mbps), Power
 - Serial:** Tx/Rx, Status
- **Surge protection:** 15,000 V_{ESD} (RS-232/422/485)
- **Utility Software:**
 - Auto-detecting configuration utility
 - Easy-to-manage port mapping utility
- **Driver Supported:** Windows NT 4.0 & Windows 2000 driver
- **Power Requirements:** unregulated 10 to 30 V_{DC}
- **Power Consumption:** 4 watt
- **Placement:** DIN-rail, panel mounting, piggyback stack
- **Operating Temperature:** 0 to 60°C
- **Storage Temperature:** -20 to 80°C
- **Operating Humidity:** 20 to 95% (non-condensing)
- **Storage Humidity:** 0 to 95% (non-condensing)



Configuration Utility

Auto-detecting ADAM-4570/4571/4572

The configuration utility can search all the ADAM-4570/ADAM-4571/ADAM-4572 devices on the network automatically and configure them according to the current network status, saving your effort to acquire the status information yourself.

High security protection

The utility provides a security option that protects all configuration settings from being changed inadvertently. When this option is enabled, only the corresponding PC can set the configuration. In addition, if you want to block access to a specific ADAM-4570, the utility can optionally restrict the access right to 32 PCs at most. The above functions are often done to enhance network security and reduce system malfunction due to unauthorized changes made to the system.

Port Mapping Utility

Easy to manage all ports

The purpose of the port mapping utility is to help you manage all ports which are in one Windows NT or Windows 2000 platform. The utility displays three types of ports: used ports, unused ports and the ports which are mapped to specific ADAM-4570/4571s.

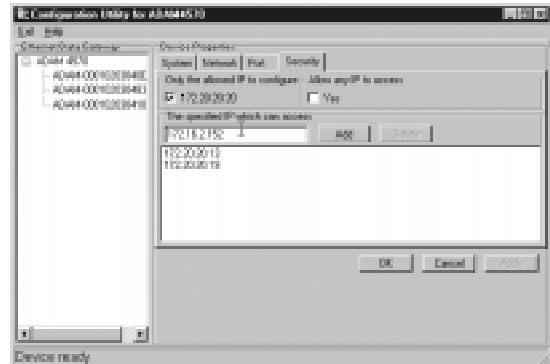
Self diagnostic

If this test item is selected an internal test will be done on the RS-232 serial port, and the result (successful or failed) will be displayed when the test is completed. If this test item is selected, an external test will be done to check that the connection signals for each port are working properly. For the external test, you will need to connect each port to a loopback tester. The test is divided into two parts: Signal test and Communication Parameters test. If the result is OK, you can make sure that the communication quality between host PC and ADAM-4570/4571 is OK.

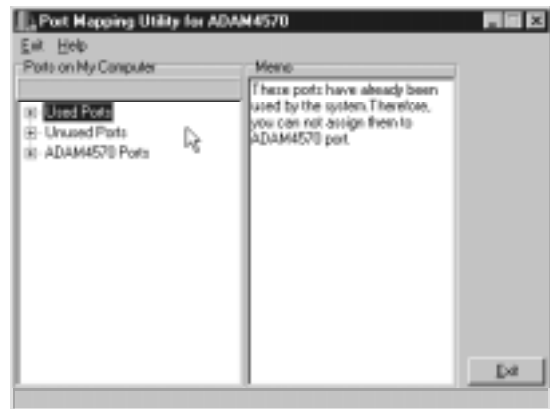
Remote download firmware

Advantech continually upgrades ADAM-4570/4571's firmware to keep pace with the ever-expanding world of computing. You can use the Download function located on Port Mapping utility to carry out the upgrade procedure. Please access Advantech's Web site to download the required computer file and then follow these instructions.

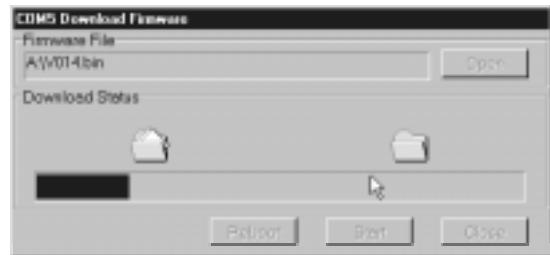
Configuration utility- High security



Port Mapping utility- Manage all ports



Port Mapping utility- Download firmware



Ordering Information

- ❑ **ADAM-4571**
1-port Ethernet to RS-232/422/485 Data Gateway
(RJ45 to DB9 cable, 1 m)
- ❑ **ADAM-4570**
2-port Ethernet to RS-232/422/485 Data Gateway
(RJ45 to DB9 cable, 1 m)
- ❑ **Opt1A**
100 cm RJ45 to male RS-232/422/485 cable