

# ADAM-4577 ADAM-4579

**1-port Universal Serial Device Gateway**

**2-port Universal Serial Device Gateway**



## Introduction

The ADAM-4577/ADAM-4579 are an universal serial device gateway to bring RS-232/422/485 to Ethernet. It allows nearly any device with serial ports to connect to the Ethernet and share networks quickly. The ADAM-4577/ADAM-4579 provides a quick, simple and cost-effective way to bring the advantages of remote management and data accessibility to thousands of devices that cannot connect to the network.

With the ADAM-4577/ADAM-4579, your existing serial devices can be used in the most popular operating systems. There is no need to write special drivers for specific operating system. Moreover, the ADAM-4577/ADAM-4579 allows the serial device to communicate with other devices peer-to-peer, without any intermediate host PCs. That saves a lot of cost and effort. In addition, you can actively request data or issue commands from the RS-232/422/485 side or Ethernet side. The data can be sent bilaterally. Thus, the ADAM-4577/ADAM-4579 is especially suitable for remote monitoring environments such as security systems, factory automaton, SCADA, transportation and more.

The ADAM-4577/ADAM-4579 also features powerful functions such as: high-speed data transfer, advanced security protection, auto-detection of all network-linked EDG series products, remote firmware download and more. The transmission speed of the ADAM-4577/ADAM-4579 is up to 230 Kbps, outperforming the competition to meet the demands for high-speed exchange. The ADAM-4577/ADAM-4579 also provides a security option that protects all configuration settings from being changed inadvertently, and blocks access to a specified ADAM-4577/ADAM-4579. The above functions are offered to enhance network security and reduce system malfunction due to unauthorized changes made to the system. Another benefit is the ADAM-4577/ADAM-4579 allows users to remotely download programs to a designated device via the Ethernet. This reduces the need for on-site maintenance and diagnostics.

For fulfilling the different applications that connect to networks, the ADAM-4577 provides 4 types of network architectures: Polling, Event-handling, peer-to-peer, multi-host access (UDP protocol); and the ADAM-4579 provides 4 types of network architectures: Polling, Event-handling, peer-to-peer, and Controlling.

## Features

- Supports 10/100 Base-T (ADAM-4579); 10 Base-T (ADAM-4577) Ethernet standard
- Supports standard networking API: WinSock, Socket
- Provides multiple networking architectures: polling, event handling, peer-to-peer, and controlling (ADAM-4579)
- Supports several AT-style commands to control ADAM-4579
- Supports any operating system with TCP/IP protocol: Windows, Linux etc.
- Auto-searching Windows configuration utility: Easy setting and security protection
- Download and testing utility: Easy to download firmware and self-diagnostic
- Easy to locate specific EDG series
- Surge protection for RS-485 line and power supply
- Mounts on DIN rail, panel or piggyback easily
- Allows most 8 host PC to access in UDP Protocol (ADAM-4577)

### **Compliant with any operating system**

In the polling mode, the specific host PC can request the serial devices, which are connected to the ADAM-4577/ADAM-4579, to send data via Ethernet. All the data will be gathered in host PCs. In addition, the ADAM-4577/ADAM-4579 supports standard networking application-programming interfaces (API) such as WinSock and Socket, making the ADAM-4577/ADAM-4579 a popular item in most operating systems such as Windows, Linux etc.

### **Actively event /alarm handle**

In the event-handling mode, if an event or alarm occurs from serial devices, it will be immediately sent to the designated device via Ethernet. Thus, it can reduce the load of the host PC and increase the performance of the Ethernet.

### **Peer-to-peer transmission of data without intermediate PC**

In peer-to-peer mode, data can be sent/received between two networking devices directly without intermediate PCs. Users can add two ADAM-4577/ADAM-4579's on both serial sides and transmit data from one serial device to another via Ethernet. Serial devices don't need to be bundled with PCs. To increase the performance of whole systems, the data can be sent to the devices that urgently need it.

### **Dynamically build up the connection from device to device (ADAM-4579 only)**

In controlling mode, the ADAM-4579 acts as a modem to the attached serial device. It provides several modem AT-style commands in order for serial devices to connect to different networking devices dynamically. This saves a lot of programming effort and increases the performance for data exchange.

### **Multi-host access (UDP protocol)**

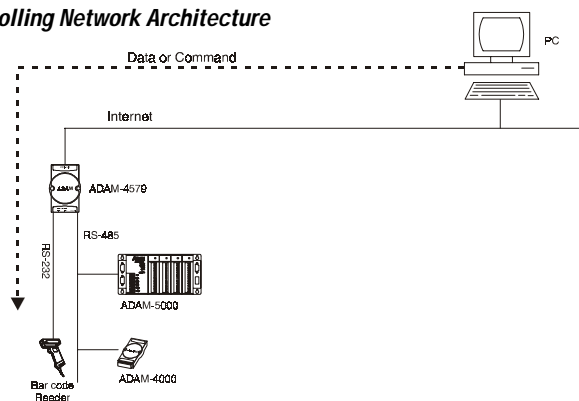
ADAM-4577 supports UDP protocol, it allows most 8 host PC accessing data simultaneously. Via polling networking architecture. You can use it according to your application.

## Specifications

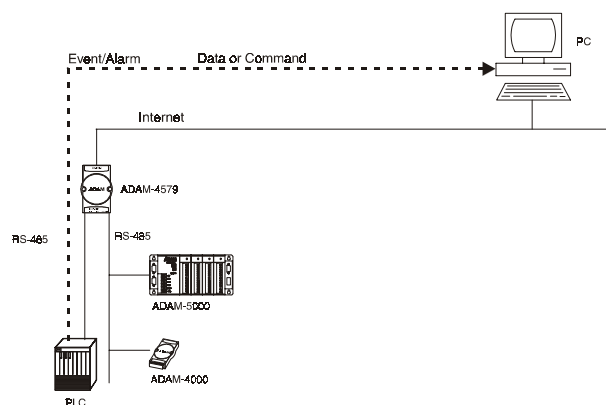
- **Protocol:** TCP/IP (ADAM-4579)  
TCP/IP, UDP (ADAM-4577)
- **Standard networking API:** WinSock, Socket
- **Network type:**  
ADAM-4577: Polling, event handling, peer-to-peer, multi-host access  
ADAM-4579: Polling, event handling, peer-to-peer, controlling
- **Network Port:** IEEE 802.3, IEEE 802.3u
- **Interface:**  
Network: 10Base-T (ADAM-4577); 10/100Base-T (ADAM-4579)  
Serial: 3-wire RS-232, RS-422, RS-485
- **Port:**  
ADAM-4577: 1 independent RS-232/422/485 port  
ADAM-4579: 2 independent RS-232/422/485 ports
- **Connector:**  
Network: RJ-45  
Serial: ADAM-4577: DB-9  
ADAM-4579: RJ-48 (RJ-48 to DB-9 cable provided)
- **Transmission speed:** 300 bps to 230 Kbps
- **Parity bit:** odd, even, none, space, mark
- **Data bit:** 5, 6, 7, and 8
- **Stop bit:** 1, 1.5, and 2
- **Diagnostic LEDs:**  
Network: TX/RX, Link, Speed (10/100 Mbps), Power  
Serial: TX/RX, Status
- **Utility Software:**  
Auto-detecting configuration utility  
Easy-to-diagnose download & testing utility  
UDP testing utility (ADAM-4577)
- **Power Requirements:** unregulated 10 to 30 Vdc with surge protection
- **Power Consumption:** 2 Watt (ADAM-4577); 4 Watt (ADAM-4579)
- **Placement:** DIN-rail, panel mounting, piggyback stack
- **Operating Temperature:** 0 ~ 60° C (32° ~ 140° F)
- **Storage Temperature:** -20 ~ 80° C (-4° ~ 176° F)
- **Operating Humidity:** 20 ~ 95% (non-condensing)
- **Storage Humidity:** 0 ~ 95% (non-condensing)

## Network Architectures

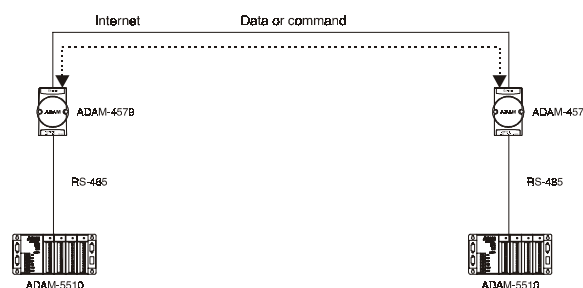
### Polling Network Architecture



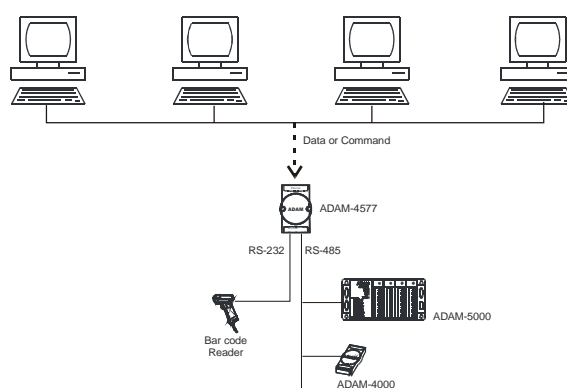
### Event-handling Network Architecture



### Peer-to-peer Network Architecture



### Multi-host access (UDP Protocol)



## Ordering information

- **ADAM-4577**  
1-port universal serial device gateway
- **ADAM-4579**  
2-port universal serial device gateway  
(RJ-48 to DB9 cable, 1 m)
- **Opt1A (ADAM-4579 only)**  
RJ-48 to male RS-232/422/485 male cable, 1 m