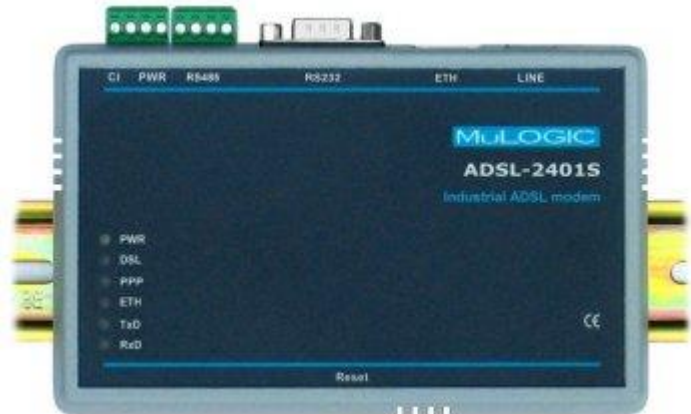


## ADSL-2401D.S

Industrial ADSL modem with integrated serial port server



### Introduction

The MuLogic ADSL-2401D.S is an ADSL2+ modem-router with Ethernet port and serial port. The serial port is connected with an integrated serial port server which can be accessed via the LAN and the DSL port.

The modem is designed for industrial applications and can be powered from any 9 to 36 Volts or 18 to 60 Volts power source. The ADSL-2401D.S operates over a wide temperature range.

### Features

- ADSL modem supports standards for ADSL, ADSL2 and ADSL2+
- Available for Annex A (for use on PSTN lines) and Annex B\* (for use on ISDN lines).
- Downstream rates up to 24 Mbit/s, upstream rates up to 1.4 Mbit/s.
- Upstream rates up to 3.5 Mbit/s in Annex M mode.
- DSL link supports PPPoA, PPPoE, MPoA and CLIP network protocols.
- 10/100baseT, Auto-MDI/MDIX Ethernet port.
- Ethernet port supports TCP/IP, Modbus TCP and other IP protocols.
- Built-in Serial Port server for remote serial data over TCP/IP or UDP/IP
- Serial ports (RS232 and RS485) for operation from 300 to 115200 bit/s.
- Serial port supports various SCADA protocols Modbus RTU/ASCII, DNP3, IEC 60870.5
- Secure access for Serial port server. (Access restrictions by IP address)
- Internal DHCP server, DNS gateway and Dynamic DNS client.
- NAT router for remote access to devices attached to Ethernet and Serial port.
- Configuration via Web browser, Telnet, SNMP and serial command port.
- Independent watchdog/reset controller.
- Isolated supply voltage input (both ac and dc) for industrial applications.
- Supply voltage ranges: 9-36Vdc/12-24Vac (Vr1) or 18-60Vdc/24Vac (Vr2).
- Extended operating temperature range: -30°C to +70°C.
- Din-Rail or panel mounting.

\* N.b: For public networks in Germany the mode is always Annex B.

## Application Areas

### Remote access applications

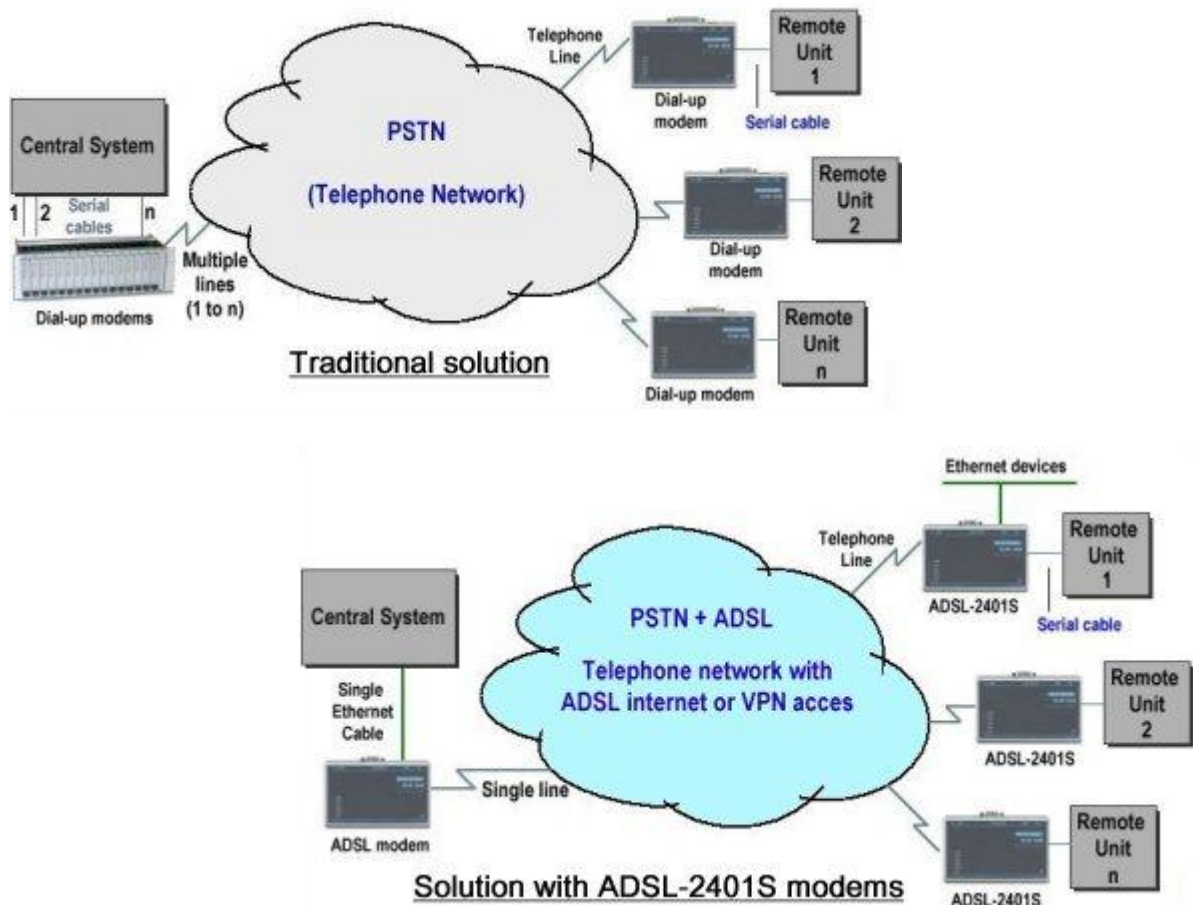
The ADSL-2401D.S is intended for remote access to terminal units with a serial port or Ethernet port.

The integrated Serial Port Server allows for direct connection with the remote serial port, either by means of a "com port redirector" a direct IP socket connection (e.g. "WinSock") or another ADSL-2401D modem.

For secure operation, access to the serial port via the internet can be restricted to pre-defined IP addresses, making it impossible to access the port from unknown locations.

The ADSL-2401D can be used to replace Dial-up and leased line modems and offers high speed Ethernet communications while maintaining support of serial communication. This allows for easy migration to the use of remote terminal units with Ethernet interface and other devices such as remote surveillance cameras while maintaining the serial port connection.

Replacing Dial-up modems for the ADSL-2401D.S cuts the costs for the telephone calls made for each session. The ADSL-2401D.S can be installed without the need for replacing the telephone line. Just add ADSL service on the existing line.



## Configuration and access control

The ADSL-2401D.S can be controlled and/or configured in multiple ways:

- Local serial command port.
- Web browser via local Ethernet port.
- Web browser via the DSL network.
- Telnet via local Ethernet port.
- Telnet via the DSL network.
- SNMP via local Ethernet port.
- SNMP via the DSL network.

Access restrictions can be set for each protocol for both local LAN port or access via the DSL network.

## Power supply

The ADSL-2401D.S modems are equipped with an internal galvanic isolated power supply. Two voltage ranges are available:

- 9-36Vdc/12-26Vac.
- 18-60Vdc/24-30Vac.

For mains power operation (100..240Vac) an external power adapter or power supply is used.

## Extended temperature range

The modem can be used in many environments. It is suitable for operating at ambient temperatures ranging from -30°C to +70°C.

## Technical Specifications

### ADSL Standards

- ANSI T1.413 Issue 2 (ADSL)
- ITU-T G.992.1 (G.dmt)
- ITU-T G.992.2 (G.lite)
- ITU-T G.992.3/4 (ADSL2)
- ITU-T G.992.3 Annex L (RE-ADSL)
- ITU-T G.992.5 (ADSL2+)
- ITU-T G.992.5 Annex M (ADSL2+M)
- Modem versions for: Annex A, Annex B or Annex C

### Encapsulation protocols

- PPP Over ATM (PPPoA, RFC 2364)
- PPP Over Ethernet (PPPoE, RFC 2516)
- Ethernet Over ATM (MpoA, RFC 2684 Bridge Mode)
- Ethernet Over ATM (MpoA, RFC 2684 Router Mode)
- IP Over ATM (CLIP, RFC 1577)

## Ethernet port

- 10/100baseT
- Half and Full duplex
- Auto-MDI/MDIX

## Serial port

- RS232 DB9 Male connector (DTE)
- RS485/RS422 at 4-pin screw term. connector.
- Port rates: 300-115200 bit/s
- Access restrictions by source IP address.

## Versions

- ADSL-2401D.S/Vr1-n: 9-36Vdc/12-24Vac (4.1W)
- ADSL-2401D.S/Vr2-n: 18-60Vdc/24Vac (3.6W)  
n=A(Annex A), B(Annex B)

## Dimensions and weight

- Dimensions ADSL-2401D.S: 95x145x30mm LxWxD, Weight: 240 gr.

## Environment

- Operating temperature range: -30°C to +70°C, Humidity:5..95%
- Storage temperature range: -50°C to +75°C, Humidity:5..95%

## Compliances

- CE directives: 2004/108/EC and 2006/95/EC.
- EMC: EN 55022, EN55024: Emission limits for residential environments.
- EMC: EN 61000-6-2: Immunity for industrial environments.
- Network: Compatible with 1TR112 for U-R and U-R2 interfaces.
- Safety: EN 60950.