Serial Device Servers

High Performance Serial-to-Ethernet with PowerPC®, Low Latency and Easy Installation

100 Series: RS-232 to Ethernet (LAN)
400 Series: RS-232/422/485 (MEI) to Ethernet (LAN)

Quatech, the performance leader in device networking, makes it easy to get started

When you need unmatched performance, ease of use and reliability, ask for Quatech. We feature the highest throughput and lowest latency available in device server technology.

An intuitive Installation Wizard gets you up and running quickly, automatically searching local and remote subnets for installed device servers within seconds of inserting the installation CD-ROM.

Network settings automatically assigned by DHCP networks are displayed for confirmation, or change to a static IP address easily using the Installation Wizard - you won't have to bother with telnet sessions, MAC address data entry or special cables.

Quatech Device Servers may be managed through the Windows® Device Manager interface or a Web browser, so you can count on trouble-free configuration and maintenance long after the initial installation is completed.

Available in 1, 2, 4 and 8-port configurations, options include +5V at pin 9 to power external devices and industrial surge suppression. Every model is designed to use the same drivers, simplifying the process to add to or upgrade your system.

Overcome the limitations of serial protocols by network-enabling your devices

Serial (RS-232/422/485) devices are used in diverse industries such as:

- CNC/DNC Applications
- Energy Management
- Security & Access Control
- Government & Defense
- Material Handling & Logistics
- Intelligent Traffic Systems

Yet while serial protocols have proven to be reliable and robust, there are drawbacks - cable lengths are limited and expensive, COM ports are often in short supply on the host PC and the attached serial devices are not remotely accessible for monitoring or support.

A Quatech Device Server overcomes these limitations. Its hardware and drivers are invisible to connected serial devices and their software applications, routing data through an IP network to "virtual" COM ports installed on the host by the Installation Wizard.

The 400 Series Device Server models introduce the software-selectable RS-232/422/485 Multi-Electrical Interface (MEI). Unlike many competing device servers in the marketplace, Quatech offers MEI capabilities on all ports at the click of a mouse. LEDs tell you which ports are using which protocol, so go ahead, mix and match. Already the performance leader, Quatech has become the flexibility leader as well.

Embedded Device Servers for custom enclosures

Embed a high performance ethernet to serial converter in your product. Ideal for OEM solutions, custom enclosures and other situations where the external shell is not needed, Quatech Embedded Device Servers offer all the industryleading features as our external line.

KEY FEATURES

- Includes the fastest and easiest Installation Wizard available

- A built-in Web server makes configuration and support available via Web browser

- Freescale™ architecture is the industry standard in networking solutions

- PowerPC® processor eliminates data bottlenecks and common latency issues

- Serial baud rates to 921 kbps and auto-negotiating 10/100 Ethernet support means fast serial and network data transfers

- Operating modes such as serial tunneling, IP multicast, virtual COM ports and other protocols provide true flexibility and easy integration

- SNMP support for simple network management

- Surge suppression and +5V out options

- 802.11 Wireless Device Servers also available

- Industrial grade AirborneDirect models also available

- Backed by a 5 year limited warranty

DEVICE SERVER SPECIFICATIONS

Ordering Information

Model	Ports	Connector
SSE-100D	1	DB-9 Male
SSE-100D-EMB	1	DB-9 Male
SSE-100D-5V	1	DB-9 Male
SSE-400D	1	DB-9 Male
DSE-100D	2	DB-9 Male
DSE-100D-5V	2	DB-9 Male
DSE-100D-EMB	2	DB-9 Male
DSE-400D	2	DB-9 Male
QSE-100D	4	DB-9 Male
QSE-100M	4	RJ-45 Female
QSE-400D	4	DB-9 Male
QSE-400M	4	RJ-45 Female
ESE-100D	8	DB-9 Male
ESE-100M	8	RJ-45 Female
ESE-400D	8	DB-9 Male
ESE-400M	8	RJ-45 Female

LAN Interface
10/100 Base T (IEEE 802.3) auto-negotiation, auto MDI/MDIX and RJ-45 Ethernet connector

Receiver inputs (RS-232)
Input Voltage Rating: -15V to +15V
Receiver Skew: 120 ns (typ), 250 ns (max)

Receiver inputs (RS-422/485)
Input Voltage Rating: -15V to +15V Common Mode Input Voltage
Receiver Skew: 13 ns (typ)

Transmitter Outputs (RS-232)
High Level Output: +5V (min), +5.4V (typ)
Low Level Output: -5V (min), -5.4V (typ)
Transmitter Skew: 50 ns (typ), 200 ns (max)

Transmitter Outputs (RS-422/485)
Transmitter Outputs: 2V (min) for 100 ohms load
Transmitter Skew: 5 ns (typ), 10 ns (max)
Distance: 4000 feet

Parity, Stop Bits:
Parity configurable as: None, Even, Odd
Data bits configurable as: 5, 6, 7, 8
Stop bits configurable as: 1, 1.5, 2

Speed:
Each serial port supports data transfer speeds of up to 921.6 Kbps, depending on flow control protocols used, cable length and condition, and other factors
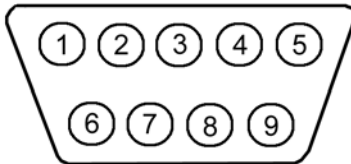
Surge Suppression (SS) Option:
Surge suppression is capable of sustaining up to 40-A peak, 8x20 Joules transient surges, a clamping voltage of 30V (RS-232) or 15.5V (RS-422/485), and a peak energy dissipation of 0.1 Joules

Serial Protocols
xxx-100 series: RS-232
xxx-400 series: software selectable RS-232/422/485

DB-9 Male, External View

Signal Information

RS-232	DB-9 Pin #	RS-422/485 4 wire mode
DCD	1	AuxIn-
RxD	2	RxD+
TxD	3	TxD+
DTR	4	AuxOut-
GND	5	GND
DSR	6	RxD-
RTS	7	AuxOut+
CTS	8	AuxIn+
RI	9	TxD-

Protocols and software

Management: UDP, TCP/IP, HTTP, DHCP, ARP, ICMP, SNMP (MIB II)

Initial IP address configuration: DHCP, static IP set within the Installation Wizard) or a custom UDP datagram utility (with command line interface) for unattended installations

Quatech provides several ways to manage, monitor and configure wireless device servers after installation:
- Windows® Device Manager (Quatech Device Manager in Windows NT)
- On-board HTML pages accessible from a standard web browser
- Simple Network Management Protocol(SNMP)
- Intellisock™ TCP socket services

Communication modes: Normal, Tunneling, Raw TCP, Auto TCP, Raw UDP or Intellisock TCP advanced socket services

OS support
Device drivers provided for Windows NT, Windows 2000, Windows XP, and Linux
Raw TCP, Raw UDP, Tunneling, AutoTCP and Intellisock™ modes are O/S independent
Please check Quatech's website for the latest O/S driver support information

Hardware
Processor: Freescale™ PowerPC®
SDRAM: 8 MB
FLASH Memory: 2 MB
Firmware stored in FLASH may be upgraded via LAN interface

Power Supply
+5V, 2A (10 W) max DC, with auto-sensing AC adapter provided for 100VAC–240VAC, 50Hz–60Hz operation
Typical power consumption: +5V, 0.8A(4W)

Environment
Operating: 0° C to 70° C
Storage: –40° C to 70° C
Relative Humidity: 10% to 90% non-condensing

Dimensions
SSE/DSE
Height: 1.18" (2.99 cm)
Width: 3.33" (8.46 cm)
Depth: 4.69" (11.91 cm)

SSE-100D-EMB
Height: .61" (1.54 cm)
Width: 3.50" (8.89 cm)
Depth: 4.50" (11.43 cm)

QSE
Height: 1.50" (3.40 cm)
Width: 9.96" (25.30 cm)
Depth: 4.69" (11.91 cm)

ESE
Height: 1.96" (4.97 cm)
Width: 9.96" (25.30 cm)
Depth: 5.40" (13.72 cm)

Certifications
FCC, CE

Accessories
Surge Suppression
DB-9 to RJ-45 Adapters
DB-9 to Screw Terminal Adapters
International Power Cords
DIN Rail Mounting Kit