TECHNICAL SPECIFICATION SHEET

PROTEUS 2

Proteus 2 Features

Proteus 2 has a number of interfaces that can be combined as input/output mediums with Proteus Protocol stacks for a complete Communications System. This Technical Specification defines only one element of Proteus that should be read in conjunction with other interface specifications.

Proteus and Ethernet

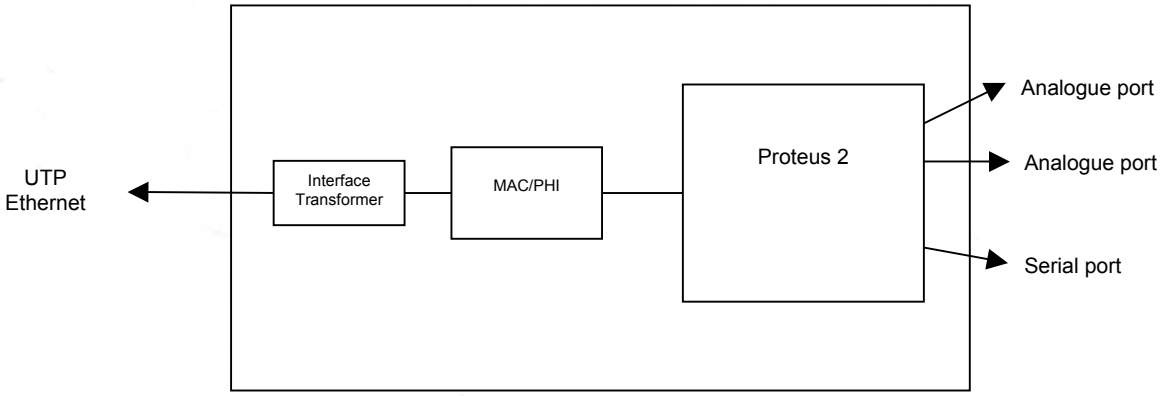
An Ethernet interface is one of the options available on Chiron's Proteus communications processor range.

This solution uses an industry standard MAC/PHI chip and makes a simple interface for equipment to be connected via an Ethernet link. Through an Ethernet interface the user gets access to the wider Internet Protocol (IP) environment connection, for example, to corporate IP networks, ADSL lines and local areas networks.

The Ethernet interface can carry both voice and data calls from the Proteus Serial Data and POTS/Voice interfaces. Protocol stacks are included for call signalling and for carrying the voice and data traffic.

This gives a compact implementation for Ethernet that is both cost effective and easy to integrate within your own product.

The Ethernet interface can be used by itself or with the other communications interfaces available on the Proteus range such as ISDN or GSM/GPRS.



Feature Overview

Within a single Integrated Circuit package, Proteus includes the functions required for an Ethernet interface:

- Ethernet protocol support – with external MAC/PHI 10/100 Mbps operation with auto negotiation is supported
- TCP/IP data stack for error-free transmission of data and flow control across an IP network
- Voice over IP (VOIP) support with call control and real-time protocols over the IP network
- Echo cancellation on VOIP calls
- Secure polling function for systems where regular checking of device integrity is required
- Application Programming Interface for user customisation

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Applications

Proteus Ethernet is ideal for converting any existing design of PSTN or ISDN equipment or for new Ethernet products, such as:

- Intruder alarm communicators
- Telephones
- Payphones
- Credit card terminals
- Telemetry devices

Cost Effectiveness

Proteus Ethernet gives a cost effective single processor solution for both voice and data over an Ethernet connection and over IP networks.

By incorporating the full range of functionality into a single device, Proteus is also ideal for designs where PCB area is restricted.

Ease of Use

The Proteus Ethernet interface is very easy to incorporate into product designs and does not require detailed knowledge of Ethernet or IP protocols. The user can interface to an Ethernet link using other Proteus interfaces, e.g.:

Data calls: Serial data interface with simple modem 'look and feel'.

Voice/analogue VOIP calls: Analogue interface with simple PSTN line 'look and feel'.

Technical Specification

Ethernet Interface • 10Mbps and 100Mbps (10/100BaseT) with auto-negotiation • UTP • Standard RJ45 socket • Auto-sensing of Ethernet 802.2, DIX and SNAP formats • ARP (Address Resolution Protocol) support • MAC address configurable **IP** • IP Version 4 • TCP stack for reliable data calls • TCP delayed ack timer • Packet sizes to 1520 • Echo request supported (PING) • Sub-netting with default gateway	**VOIP** • G.711 coding • Real Time Protocol transported over UDP • Echo cancellation • Call control protocol over UDP **Polling** • Secure polling using CHAP authentication • MD5 encryption • Polling interval from 10s to 40 minutes

Further Information Available

The following further information is available for Proteus with Ethernet

- Technical specification (see web site www.chiron.uk.com)
- Application Programming Interface Guide
- Reference Circuit Diagram
- Evaluation Board