Features

- PCM modulation in the downstream direction at the rate of 8000 symbols/s.
- Channel separation by echo cancellation.
- Synchronous data signaling rates in the downstream direction from 28000 bps to 56000 bps in increments of 8/6 Kbps.
- V.34 modulation in the upstream direction.
- Adaptive techniques are used so that the modems can achieve the maximum data signaling rates that the channel can support.
- Negotiate full duplex V.34 operation if a connection doesn't support V.90 operation.
- Automoding to V.series modems supported by V.32bis automode procedure.
- Exchange of rate sequences during start up to establish the data signaling rate.
- Uses V.8 procedure during modem start up or selection.

Product Description

The GAO V.90 software module implements the V.90 ITU recommendation for modems that can connect at data rates of up to 56 Kbps. The standard specifies a pair of high-speed modems, one digital and the other analog, which are designed for Internet use.

Most ISPs are digitally connected both to the Internet and to a telephone company's central office (CO). When this is the case, there is a clear digital connection downstream from the ISP's modem to the CO's line card that serves the user and contains a digital to analog converter. The result of having this digital connection is that an analog to digital conversion, and therefore quantization noise, is avoided between the ISP and CO. Without the limits imposed by quantization noise, it is possible to achieve downstream connection speeds of up to 56 Kbps downstream. Because most users are not digitally connected to the CO, an analog to digital conversion and the associated quantization noise cannot be avoided in the upstream direction. This means that V.34 modulation techniques must be used and upstream speeds are still limited to 33.6 Kbps.

Leadership in Embedded Communications Software

With nearly two decades of experience, GAO leads the embedded communications software market by providing comprehensive modem, fax, speech, and telephony technologies; broad technical expertise; and unsurpassed support to our world-class customers including electronics, communications, and semiconductor companies across the globe. GAO's software integrates easily with MP3, MPEG, TCP/IP, and most popular real-time operating systems.

Rigorous Testing

AO's testing facilities are equipped with state-of-the-art test equipment. Our modem and fax software is rigorously tested on TAS, Consultronics, Rochelle, Advent and Telegra equipment under various channel models according to the relevant ITU or TIA standards. All GAO's speech software has passed the test vectors specified by the ITU. Our telephony software meets all appropriate TIA, EIA, BellCore, and Mitel standards. GAO also adheres to stringent quality control procedures, which is reflected in our well structured code, detailed design documentation, and well-defined design and test plans. This ensures ease of integration into the customer's system, easy maintenance, and a smooth upgrade path for next-generation customer products.

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