THE TANDATA Tm512 & PC CARD 512 MODEMS

NOW THERE ARE TWO WAYS FOR PROFESSIONAL, RELIABLE COMMUNICATIONS.

Tandata's family of 512 modems now offers Hayes compatible, multi-baud rate, error-corrected communications in two forms.

The **Tm 512** is a stand-alone boxed modem, designed for use with a micro computer, terminal or host computer, with the modem's own microprocessor and operating system allowing completely automatic operation.

The **PC Card 512,** is a card modem designed specifically for the PC – whether IBM or compatible – giving flexible data communications whilst remaining concealed inside the PC itself. This neatly avoids the inconvenience of extra boxes, cables and power supplies.

Both the Tm 512 and PC Card 512 modems have auto-dial/auto-answer and can operate at the following baud rates:

V21 – 300/300 bps
V23 – 1200/75 bps
75/1200 bps
1200/1200 half duplex
1200/1200 pseudo full duplex (EPAD version)

AUTOMATIC OPERATION

The modem automatically senses the speed and parity at which its computer/terminal is talking to the modem – all you have to do is leave the computer/terminal at a convenient setting. It will then listen to the telephone line to determine whether to use pulse or tone dial.

Three different auto-dial modes allow very quick and easy control. When the host computer answers, the modem automatically selects the correct line speed.

The 512 will log-on automatically to the host computer. IDs and Passwords can be stored in the modem's own Directory, or be incorporated into the command string.

ERROR CORRECTION

Error correction (either EPAD or VASSCOM) is standard, allowing error-free communication between two 512s or with a service running the same protocol. EPAD is used by PSS while VASSCOM is being added to the Prestel network.

MAIN FEATURES & TECHNICAL SPECIFICATION

AUTO-DIAL

A telephone number may be dialled automatically using one of three modes. If a number is unobtainable, it will be redialled after a delay (with the exception of the Hayes command set). Dial progress is monitored by an LED (on Tm 512), the internal loudspeaker and status messages.

- *Hayes AT Command mode:*

A telephone number can be sent to the Tm 512 or PC Card 512 as part of a string and it will then be dialled automatically.

Hayes AT or V25 (bis) commands give easy control and clear status reporting.

- *Directory mode:*

The Tm 512 and PC Card 512 have their own battery-supported, non-volatile memory. This can store up to 8 telephone numbers, IDs and other parameters.

The Directory can be viewed, and a number dialled with a single keystroke.

- *Store select mode:*

A telephone number in the Tm 512's or PC Card 512's Directory can be edited or dialled with a short command, without viewing the Directory. V25 (bis) commands are used for convenience and standardisation.

MANUAL DIAL

A telephone call can be made manually, using a telephone handset connected either to the same line in parallel or to the telephone socket on the rear of the Tm 512 and PC Card 512. This allows a voice conversation between two parties prior to exchanging data between two micros or terminals.

MODEM BAUD RATE

When a called computer's modem answers, the Tm 512 and PC Card 512 listen to the answering modem and EITHER automatically select the right baud rate OR, in the case of intelligent answering modems, tell the other modem what baud rate to use. Different computers using different baud rates, can therefore be called without reconfiguring the modem.

The Tm 512 and PC Card 512 operate at V21 or V23: i.e.
300/300 bps
1200/75 or 75/1200 bps
1200/1200 half duplex
1200/1200 pseudo full duplex (EPAD version)

AUTO LOG-ON

An identity number, password or log-on string can be stored against each telephone number in the Tm 512's and PC Card 512's own Directory, or be sent to the modem as part of a command string. This allows completely automatic logging-on by the modem, even through PSS. The log-on string is sent either if an ENQ is received, or after a short pause. The string can contain any character and incorporate pauses, up to a total of 80 characters.

FLOW CONTROL

Data control from computer/terminal to the modem is controlled by CTS, supported by an internal buffer. However, the buffer can be disabled when using XON/XOFF flow control.

CALL TERMINATION

A call is terminated by the Tm 512 and PC Card 512 if the called computer does not respond, or if carrier is lost. An inactivity "time out" can also be set. In addition, the user may terminate a call at any moment.

AUTO-ANSWER

The Tm 512 and PC Card 512 can be programmed to answer an incoming call immediately, after a delay, or after consulting the host computer. When it answers, the modem first sends a reply tone and then listens. If the calling modem sends carrier, the Tm 512 and PC Card 512 will answer in the correct forced mode; otherwise it will answer at the pre-determined baud rate.

TELEPHONE LINE INTERFACE

The Tm 512 and PC Card 512 can be connected to any conventional telephone line. A telephone lead is provided with a BT 600 series PST plug. The Tm 512 and PC Card 512 can be used with a traditional pulse (or loop-disconnect) exchange or a modern digital exchange using multi-frequency tones. The Tm 512 and PC Card 512 can automatically detect the correct dial type to use.

USES

The Tandata Tm 512 and PC Card 512 are so powerful, they can be used by micros or terminals to access a database, transfer files between two computers, auto-answer a mini or mainframe or a private bulletin service. And yet, they are both extremely easy to install and use – because they operate automatically, quickly and accurately.

Tm 512

A stand-alone modem designed for use with micro computers, PCs, terminals and host end applications, and when some portability is required.

FRONT PANEL

An on/off switch is conveniently situated on the front panel together with 5 LEDs that show the status of the modem and the call:

PWR = Power
Line = Line and Dial
RxD = Data being received
TxD = Data being transmitted
CDT = Carrier present

REAR PANEL

The rear panel has the following interfaces:

- Mains cable, with plug.
- Telephone cable, with plug.
- RS 232 25-way socket.
- TTL 6-pin DIN.
- Telephone socket for a handset.

INTERFACE TO MICRO/TERMINAL

The Tm 512 can be connected to a micro or terminal by either of the following:
25-way connector (RS 232)
6 pin DIN – TTL

Sockets are located on the rear panel. Signals are:
RxD = Receive data
TxD = Transmit data
CTS = Clear to send
DTR = Data terminal ready
DSR = Data set ready (not TTL)
CDT = Carrier detect (not TTL)
GND = Ground

The minimum requirements are:
RxD TxD GND

The micro or terminal can transmit and receive data to and from the Tm 512 at 300, 1200, 2400, 4800 or 9600 baud.

The Tm 512 can automatically sense the baud rate and parity of the micro or terminal. It is therefore not necessary to reconfigure the computer/terminal between operations.

PC CARD 512

The PC Card 512 is designed for dedicated PC use, giving flexible data communications, without the inconvenience of extra boxes, power supplies and cables.

INTERFACE TO THE PC

The Card fits into standard full length IBM PC type slots. The signals available to the on-board 8250A (parallel to serial converter) are as follows:

RxD = Receive Data
TxD = Transmit Data
CTS = Clear to send
DTR = Data terminal ready
DSR = Data set ready
CDT = Carrier detect (may be forced true if required, by means of a link)
RI = Ring Indicate (not standard – may be supplied without validation by fitting a link)

The Card may be set to work as a Comm Port 1 or 2, by means of on-board jumpers. It can autosense the following comm port baud rates: 300, 1200, 2400, 4800 and 9600.

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