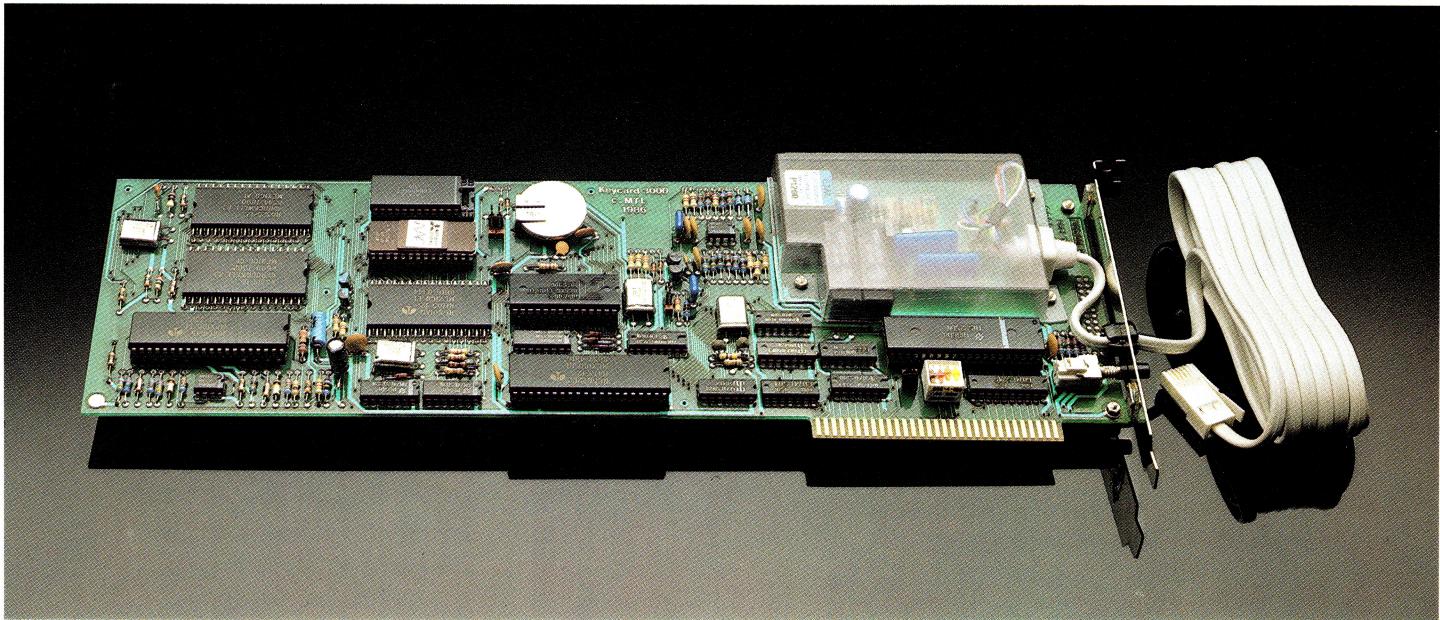


# Internal modems for IBM PC users



Three fully intelligent, dedicated data modems for the IBM PC and clones. They offer speeds in the range of 300 bps to 2400 bps full duplex, and conform to CCITT and Bell standards. Simple to operate, they are controlled by 'plain English' commands entered from the computer or terminal keyboard. All these modems come complete with built-in data security and free communications software.

#### Keycard 3000 Series modems

The Keycard 3000 Series represents the most powerful multi-speed modems available. The family comprises:

**V2123:** operates at CCITT standards for 300 bps, 75/1200 bps, 1200/75 bps full duplex and 600 bps and 1200 bps half duplex.

Also on the Bell standard for 300 bps full duplex.

**V22:** all the above plus 1200 bps full duplex.

**V22bis:** all the above plus 2400 bps full duplex.

Models are available for use on leased lines.

enormous range of well-proven communications software. Yet the user with no previous knowledge of the Hayes commands will find this modem simple to use through the sensible command structures and the comprehensive instruction manual.

#### Fully upgradeable

The Miracle Technology Keycard 3000 is easily upgraded from V2123 to V22 or V22bis (see panel). After upgrade, all the original features are maintained. This gives a modem capable of data rates from 75 bps up to 2400 bps.

#### Built-in data protection

Miracle Technology Keycard 3000 modems come complete with a high-security data access protection system. The system used makes it practically impossible for unauthorised callers to access protected computer data.

#### Free software package

Keycard 3000 modems are supplied with a full communications software package providing access to such facilities as electronic mail, telex, Prestel, graphics and text databases, file handling, user to user and user to mainframe computer links. It even contains word processing functions.

#### Hayes protocol capability

International Hayes command protocols are implemented in the Keycard 3000 Series. These allow the use of an

# TECHNICAL DATA

<b>Card size:</b>	Full-size IBM card format.
<b>Power requirements:</b>	All necessary power supplied by host computer.
<b>Speed capabilities:</b>	
<b>Keycard 3000</b>	CCITT V21 300/300 bps
<b>V2123:</b>	CCITT V23 1200/75 & 75/1200 bps Bell 103 300/300 bps
<b>Keycard 3000</b>	As above PLUS
<b>V22:</b>	CCITT V22 1200/1200 bps full duplex.
<b>Keycard 3000</b>	As above PLUS
<b>V22bis:</b>	CCITT V22bis 2400/2400 bps full duplex.
<b>Upgrade capabilities:</b>	Keycard 3000 V2123 may be upgraded at any time to V22 or V22bis standards.
<b>PSTN connection:</b>	UK plug type 431A.
<b>Leased line connection:</b>	UK plug type 431A with pins 1 and 6 only wired.
<b>Line termination characteristics:</b>	PSTN lines 600 ohms with bell tinkle suppression provided. Private Wires (leased lines) 2-wire non-current carrying.
<b>Network addressing capabilities:</b>	Autodial by DTMF (Touch Tone) or open-loop pulse, with Hayes command protocols. Autoanswer to CCITT V25 standards.
<b>Line disconnection on:</b>	loss of carrier, loss of data activity, user request from keyboard.
<b>Transmitted signal level:</b>	Maximum -9dBm into 600 ohms.
<b>Received signal minimum level:</b>	-43dBm.

**Computer-modem interface:** IBM direct interface from computer bus. Keycard 3000 is seen as a standard IBM serial interface by the computer.

**Software requirements:** Any IBM-compatible communications software with at least dumb terminal modes may be used. Keycard 3000 accepts most Hayes-type commands.

**Poor line compensation:** Keycard 3000 has software selectable filtering to compensate for certain poor line conditions.

**Security features:** Keycard 3000 has built-in passworded security features to protect against unauthorised access of the modem or host computer. These features are software selectable when required.

**Approvals:** Keycard 3000 is approved by the British Approvals Board for Telecommunications (BABT) for both PSTN and Private Wire connections when used according to the instructions for use. It is designed and constructed in accordance with the standards laid down in British Standards BS415, BS6301, BS6305, BS6320. Keycard 3000 is designed and manufactured in England by Miracle Technology (UK) Ltd.

Miracle Technology (UK) Ltd (the Company) reserves the right to alter the specification of the product described herein at any time in the interest of continuing product development and without prior notice. Keycard 3000 is supplied only in accordance with the Company's Terms and Conditions of Sale, no variation of which will be accepted. A copy of the Terms and Conditions of Sale will be supplied on request.

Hayes and Prestel are trademarks of the organisations concerned.



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