

Modem WS3000

V22bis 2400 bps

Professional

DATA
STATION 3

A fully intelligent data modem conforming to CCITT standards V22bis, V22, V21 and V23, and BELL 103. Simple to operate, it is controlled by 'plain English' commands entered from the computer or terminal keyboard. Full autodial and autoanswer facilities.

- * HAYES protocols
- * Full soft control
- * Microprocessor based
- * Speed buffered
- * V22bis + V21, V22, V23
- * Autodial/autoanswer
- * Data security option



MULTIPLE DATA RATES

Operation at 2400bps in full duplex on public telephone lines, plus availability of a large range of lower data speeds, make this probably the most powerful multi-speed modem available. The WS3000 V22bis Professional operates at the CCITT standards for 300/300bps, 75/1200bps, 1200/75bps, 600/600bps, 1200/1200bps and 2400/2400bps full duplex, 600bps and 1200bps half duplex, and the BELL standard for 300bps full duplex. Its applications range from very high speed data communications, user to user and user to mainframe, communications to graphics and text databases, and telex services. Models are available for use on leased lines.

MICROPROCESSOR BASED DESIGN

Three microprocessors are used in the WS3000 V22bis Professional to implement its sophisticated functions in a user-friendly manner. The speed buffered RS232 port makes intelligent decisions on creating "split" data rates for use on low-speed database links such as PRESTEL, in cases where the user terminal or computer only has a full duplex modem port. This brings all major database services within the capability of nearly every computer.

HAYES PROTOCOL COMPATIBILITY

International HAYES Microcomputer Corporation command protocols are implemented in the WS3000 range. These allow the use of an 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.

2400bps DOWN TO 75bps IN ONE UNIT

The Miracle Technology WS3000 V22bis Professional modem is unique in its wide range of data speeds and other facilities. Normally, users of high-speed V22bis modems are limited to that speed and its fall-back rates only. But with this modem, speeds down to 75bps, including the widely-used PRESTEL-type graphics split speeds, are included as standard.

HIGH-SECURITY DATA PROTECTION

Miracle Technology WS3000 modems may be factory-fitted with an optional high-security data access protection system. The system used makes it impossible in practical terms for unauthorised callers to access protected computer data. Fuller details are available on application to Miracle Technology (UK) Ltd.



**MIRACLE
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Technical Data

Dimensions	Width 245mm Footprint modem power adaptor	182mm (7.2") (9.6") 044 sq m (1.5") (0.48 sq ft) 0.86Kg (30oz) 0.73Kg (26oz)	Modem DTE interface speed capability	Intelligent speed buffering allows DTE operation at 1200bps full duplex for modem operation at 1200/75. 75/1200, 1200, 1200/1200bps. DTE may also operate at 300bps full duplex for 300/300bps, 600bps for 600bps or 2400bps for 2400/2400bps modem operation. DTE may also operate at split baud rates
Case type	High impact ABS, wipe-clean textured surface			
Power requirements	240 V~50/60Hz single phase +2% -8% 15 watts. Separate power adaptor			
Environmental conditions	Operational ambient temperature range +5°C to +30°C			
Modulation method	16 point synchronous DPSK at V22bis, 4 point synchronous DPSK at V22. Other standards asynchronous Frequency Shift Keying			
Transmission path	2 or 3-wire public switched telephone network, Leased line modem WS3000 V22bisLL			
Line Terminating Characteristics	Terminating impedance 600 ohms			
Line termination type	British Telecom series 600 modular plug type 431A. Modem rear-panel 600 series telephone socket, paralleled with PSTN line			
Line connection mode	Manual or autodial by open-loop pulse dial, or by DTMF touch-tone. Internal modem store for 60 names and telephone numbers, in battery-backed memory. Manual or autoanswer to CCITT V25			
Line disconnection on:	Loss of DTR Loss of Carrier Loss of Data Activity			
Transmitted signal level	-9dBm maximum into 600 ohms			
Received signal minimum level	-43dBm			
Data signalling rates	300/300bps, 600bps, 1200bps, 1200/75bps, 75/1200bps 1200/1200bps, 2400/2400bps			
Standards	CCITT V21, V22, V22bis, V23, BELL 103			
Data format	V22bis and V22 modes: Asynchronous start-stop with 8-11 bits per character. V21 & V23 modes asynchronous 7 or 8 bits, odd, even or no parity			
Guard Tone	1800Hz			
Mode selection	Operating modes software selectable by HAYES-compatible command strings entered from the DTE. Command set broadly compatible with HAYES protocols, except where UK regulations or enhanced modem operations require differences			
Modem DTE interface	EIA RS232C/CCITT V24 compatible DTE interface			
Modem DTE interface connector	DB-25 female 25-pin socket			
		Signals at DTE interface		
		Pin no.	Input to modem/ output from modem	Function
				CCITT circuit
		1	—	Modem frame ground
		2	I	Send Data (SD)
		3	O	Received Data (RD)
		4	I	Request to Send (RS)
		5	O	Clear to Send (CS)
		6	O	Data Set Ready (DR)
		7	—	Signal Ground
		8	O	Data Carrier Detect (CD)
		9	O	Test (+5Vdc)
		10	O	Test (-12Vdc)
		15	O	Transmit clock
		17	O	Receive clock
		20	I	Data Terminal Ready
		22	O	Ring Indicator
		23	O	Data Signalling Rate
		24	I	External transmit clock
		25	O	Test (+12Vdc)
				142
				Internal pull-up resistors enable DTR and RTS if these control signals are not available from the DTE.
				Control port
				Configurable control port with 26-way 2-row 0.1" male bump polarised socket. 8-bit port factory custom configurable to both input and output for process control applications involving direct sensor inputs and remote data logging via modem link
				Line noise filtering
				Automatic adaptive equalizer in V22bis and V22 modes. Selectable fixed amplitude equalisation in V23 mode
				Activity indicators
				Front-panel LED indicators for: Power (ON) Online (OL) Terminal Ready (TR) Request to Send (RS) Clear to Send (CS) Carrier Detect (CD) Send Data (SD) Receive Data (RD) Auto Answer (AA) Speed (HS)
				Safety
				WS3000 modems are designed and constructed to comply with the relevant requirements of the following British Standards: BS 415, BS 6301, BS 6305, BS 6320
				Miracle Technology (UK) Limited reserves the right to alter the above specifications in part or all at any time, in the interests of continuing product development. Availability of products is subject to the Company's Terms and Conditions of Sale. HAYES and PRESTEL are trademarks of the organisations concerned



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