

Modem WS3000

DATA
STREAM 2

V22 1200bps

Professional

A fully intelligent data modem conforming to CCITT standards 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 are standard.

- * HAYES protocols
- * Full soft control
- * Microprocessor based
- * V22 plus V21 & V23 operation
- * Upgradeable to V22bis
- * Autodial/autoanswer
- * Data security option



MULTIPLE DATA RATES

An intelligent speed buffered RS232 port and wide range of available data rates make this one of the most powerful multi-speed modems available. The WS3000 V22 Professional operates at the CCITT standards for 300/300bps, 600/600bps, 75/1200bps, 1200/75bps and 1200/1200bps full duplex, 600bps and 1200bps half duplex, and the BELL standard for 300bps full duplex. Its applications range from graphics and text database access, high-speed telex, user to user, and user to mainframe computer links. Models are available for use on leased lines.

MICROPROCESSOR BASED DESIGN

Three microprocessors are used in the WS3000 V22 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 with databases like 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.

UPGRADEABLE TO V22bis

The Miracle Technology WS3000 V22 Professional modem may be upgraded to the 2400bps full duplex CCITT V22bis standard. After upgrade, all the features of the WS3000 V22 and V2123 modems are retained, giving a single, compact modem unit capable of data rates from 75bps to 2400bps.

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 0.86Kg (30oz) 0.73Kg (26oz)
Weights		
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	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 V22LL	
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	
Standards	CCITT V21, V22, V23, BELL 103	
Data format	V22 mode: 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	

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, or 600bps for 600bps modem operation. DTE may also operate at split baud rates

Signals at DTE interface

Pin no.	Input to modem/ output from modem	Function	CCITT circuit
1	—	Modem frame ground	101
2	I	Send Data (SD)	103
3	O	Received Data (RD)	104
4	I	Request to Send (RS)	105
5	O	Clear to Send (CS)	106
6	O	Data Set Ready (DR)	107
7	—	Signal Ground	102
8	O	Data Carrier Detect (CD)	109
9	O	Test (+5Vdc)	—
10	O	Test (-12Vdc)	—
15	O	Transmit clock	114
17	O	Receive clock	115
20	I	Data Terminal Ready	108
22	O	Ring Indicator	125
23	O	Data Signalling Rate	111
24	I	External transmit clock	113
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 V22 mode. Selectable fixed amplitude equalisation in V23 mode

Activity indicators

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

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