



MAPPLEX - 28800 BPS ANALOGUE MODEMS FOR PSTN AND 2 AND 4 WIRES LEASED LINES

General Description

The model MAPPLEX is a modem that encompasses the latest technology in PSTN and leased lines modems. It follows the CCITT standards V.34(*), V.32bis, V.32, V.22bis, V.23, V.22 y V.21, operating at speeds between 300 and 14.400 bps or 28800 bps(*). It operates in full-duplex mode in PSTN and leased lines of 2 and/or 4 wires. The modulation, demodulation and adaptative equalization processes are made through Rockwell DSP VLSI circuits. The MAPPLEX also includes a 8 bits micro controller, a 8Kbytes RAM memory and a 256 bytes E2ROM. This last memory space can be used to store user profile, security access and fast dial directories. D.A.A (Digital access to line) by VAYRIS allows the access to 2 and 4 wire leased lines as well as PSTN and It's specially designed for applying different PTT country approvals. This circuitry performs the following tasks:

- 4 wires/2 wires conversion.
- Impedance adaptation.

- Incoming call signal detection.
- Automatic pulse dialling.

The **MAPPLEX** family is specially designed for its usage in aggressive and unattended environments due to its robust design and provided protections as follows:

- High isolation in the power and telephone ports
- Specific protections on the RS-232 port
- Optical isolation in the RS-485 port
- Internal watchdog mechanism
- Programmable periodic 'autoreset'

Features

- Compatible with CCITT recommendations V.34 28800 bps (*), V.32bis 14400 bps, V.32 9600 bps and 4800 bps, V.22bis 2400 bps and 1200 bps, V.22 1200 bps, V.23 1200 bps and V.21 300 bps.

- ❑ Operation over PSTN and 2 and 4 wires leased lines.
- ❑ Synchronous and asynchronous operation (direct and buffered).
- ❑ Mode bufferized with 11 bit data format
- ❑ Automode (Originating and answering).
- ❑ Secured access, callback and transparent remote configuration.
- ❑ Voice/Data front button.
- ❑ Leds for monitoring V.24 circuits and power supply.
- ❑ V.25 bis commands in asynchronous and synchronous format.
- ❑ AT Hayes commands compatible.
- ❑ RS-485 full duplex interface to the DTE (MAPPLEX-485 models)
- ❑ Modem configuration by hardware (microswitches and/or internal jumpers) and software (AT commands).
- ❑ Independent transmission levels for PSTN and leased lines.
- ❑ Standalone format, with internal power supply (220V-50Hz, and 48/24 VDC (on demand)) and Eurocard format suitable for 19" rack systems.
- ❑ Power supply filter to eliminate radiated electro-magnetic interferences.

Specifications

Operation lines:

Full duplex over PSTN and leased lines 2 and 4 wires.

Modulation types:

28800 bps: V.34, TCM (*)
 14400 bps: V.32 bis, TCM of 128 st.
 9600 bps: V.32, TCM of 32 st.
 V.32, QAM of 16 st.
 V.32 bis, TCM of 32 st.
 4800 bps: V.32, QAM of 4 st.
 V.32 bis, QAM of 4 st.
 2400 bps: V.22bis, QAM of 16 st.
 1200 bps: V.22, DPSK of 4 st.
 V.23, FSK of 2 st.
 600 bps: V.22, DPSK of 2 st.
 300 bps: V.21, FSK of 2 st.

DTE baud rates: 38400, 28800, 19200, 14400, 9600, 4800, 2400, 1200, 600, 300 bps \pm 2.5%, V.14.

Transmission rates: 28800, 26400, 24000, 21600, 19200, 16800, 14400, 9600, 4800, 2400, 1200, 300 bps

Operation modes:

PSTN:

Dialing:

- Automatic (pulse or DTMF).
- Manual (through auxiliary telephone and/or front panel switch).

Answering:

- Manual (through front panel switch).
- Automatic (CCITT V.25).

Leased lines: 2 wires or 4 wires.

Fallback/fallforward negotiation based on line quality.

Data format: synchronous, asynchronous (direct and buffered).

Digital interface: CCITT V.24/V.28 (RS-232-C)

Transmission section:

Output level: -10 dBm

Tolerance: \pm 1 dB

Output impedance: 600 Ω

Reception section:

Dynamic range: from -9 to -43 dBm

Hysteresis cycle level: minimum 2 dB

Input impedance: 600 Ω

Power supply:

220 VAC, 6W

12, 24, 48 VDC (on demand)

Format:

Standalone

Single Eurocard (3U) for 19" rack.

Dimensions:

Standalone: 155 x 246 x 65 mm.

Eurocard: 3U (100mm)x160mmx5TE (25.4 mm).

Temperature: 0 ° to 60 °C.

Humidity range: 0 - 95%, non condensating.

Note: options marked with (*) are only available in the 288 model.

Models

There are the following models available:

| | |
|----------------|---|
| MAPPLEX-232-AC | RS-232 interface. Power supply 90-230 AC |
| MAPPLEX-232-48 | RS-232 interface. Power supply -48DC |
| MAPPLEX-485-AC | S-485(x2) interface. Power supply 90-230 AC |
| MAPPLEX-485-48 | S-485(x2) interface. Power supply -48DC |