

## 1. GENERAL

# 1

This User's Manual is valid for the Digicom's modems SNM49, SNM50 and SNM54. Commands set and register configuration are common for the three models, in case of particular information, valid only for a specific modem, a notice indicates the right reference.

### 1.1. DESCRIPTION

The Digicom's modems SNM49, SNM50 and SNM54 are: voice grade, multistandard, high speed, asynchronous-synchronous modems for professional applications over PSTN and Leased Line.

Main Features Table

	SNM49 (External)	SNM50 (External)	SNM54 (Rack)
Autobaud up to 115.200bit/s	*	*	*
Compatibility ITU V.21,V.23	*	*	*
Compatibility ITU V.22,V.22bis	*	*	*
Compatibility ITU V.32,V.32bis	*	*	*
Compatibility ITU V.34,V.34plus	*	*	*
Autologon	*	*	*
Call-Back	*	*	*
Data Compression MNP5 and V.42bis	*	*	*
10 factory configurations by AT command	*	*	*
5 factory configurations by front pannel	*	*	*
10 user configuration by AT command	*	*	*
5 user configurations by front pannel	*	*	*
Diagnostic V.54	*	*	*
Asynchronous at 8,9,10,11 bits	*	*	*
Synchronous and asynchronous	*	*	*
Switched Line	*	*	*
Leased line (2 and 4 wires)		*	*
Inactivity timer	*	*	*
C105/C106 delay	*	*	*
Half-duplex simulation (V.13)	*	*	*
Extended AT commands set	*	*	*
Internal phone book up to 100 users	*	*	*
Autocall V.25bis in asynchronous and synchronous	*	*	*
Network Management			*
Clock/calendar		*	*

## 1.2. TECHNICAL SPECIFICATIONS

### 1.2.1. Conformity

The Digicom's modems SNM49, SNM50 and SNM54 are in compliance with following norms or documents:

**Safty:** EN 41003, EN 60950

**EMC:** EN 50082-1, EN 55022

**Telephone Network:** NET 4

### 1.2.2. Dimensions

	SNM49	SNM50	SNM54
<b>Wide</b>	190mm	190mm	30mm
<b>High</b>	44mm	44mm	174mm
<b>Deep</b>	146mm	146mm	240mm
<b>Weight</b>	1,3Kg	1,3Kg	0,28Kg

### 1.2.3. Electrical

#### **Main Power**

Power Source: AC 187V to 240V

Frequency: 47Hz to 63Hz

Consumption: max 5VA

Protection: thermal fuse inside the power transformer

#### **DTE Interface**

Interface: ITU V.24/V.28

Connector: D-25pins (ISO 2110)

Data Speed in asynchronous 300, 1200, 2400, 4800, 7200, 9600, 14.400, 19.200, 38.400, 57.600, 115.200 bit/s

in synchronous 1200, 2400, 4800, 7200, 9600, 12.000, 14.400, 16.800, 19.200, 21.600, 24.000, 26.000, 28.800, 31.200, 33.600 bit/s

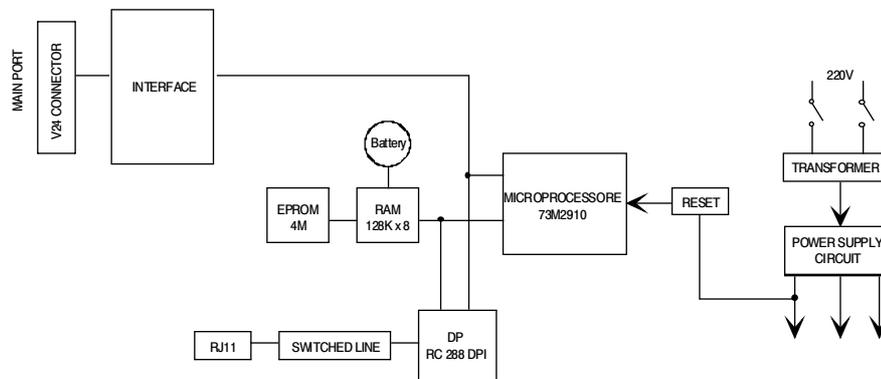
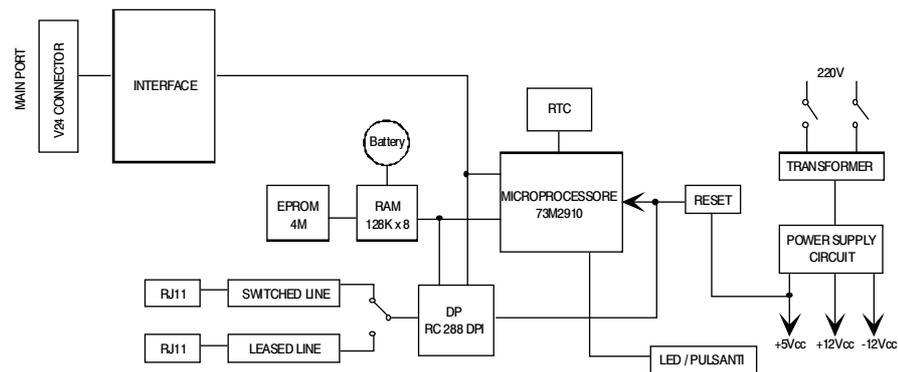
#### **Telecommunication Line Interface**

PSTN: a single RJ11 connector with 2 wires for the line and 2 wire for the phone

Leased Line: a single RJ11 connector for 2 and 4 wires line

**Environment Condition**

Operating:	-5C° to +45C°
Storage:	-20C° to +80C°
Humidity:	20%RH through 80%RH (without condensation)

**1.3. BLOCK DIAGRAMS****1.3.1. SNM 49 block diagram***Fig. 1.1. SNM 49 block diagram***1.3.2. SNM 50 block diagram***Fig. 1.2. SNM 50 block diagram*

### 1.3.3. SNM 54 block diagram

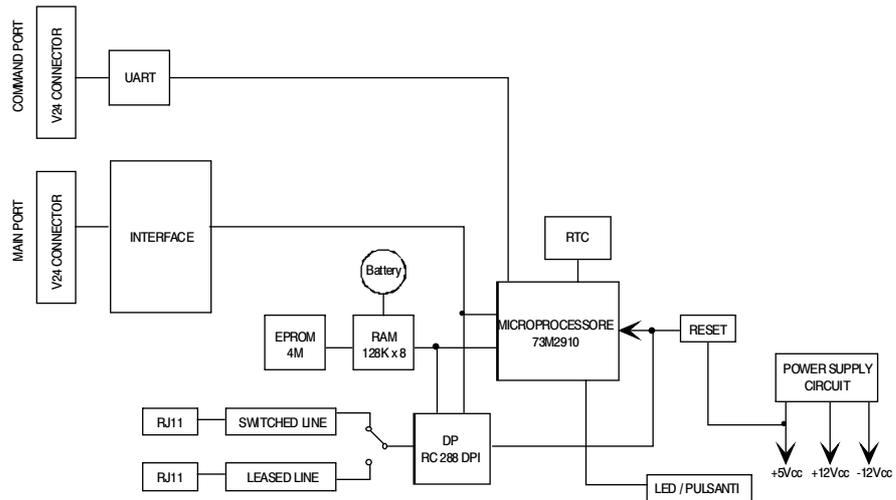


Fig. 1.3. SNM 54 block diagram

## 1.4. MAIN FEATURES

Here below are described the most important features available with the Digicom's modems SNM49, SNM50 and SNM54.

### **Autobaud**

### **Chapter 3.5.4 Command AT**

The modem is able to detect the speed and the format of the character from 300bit/s to 115.200bit/s.

The formats accepted are:

- 7 bit plus parity (even, odd, mark, space)
- 8 bit without parity

### **Multistandard**

### **Chapter 3.5.4. Command F and #F**

Automatic adaptation to remote modem line rate and modulation standard.

The standards accepted are:

Standard	Speed	Standard	Speed
V.34plus	33.600 bit/s	V.34	7.200 bit/s
V.34plus	31.200 bit/s	V.34	4.800 bit/s
V.34	28.800 bit/s	V.32bis	14.400 bit/s
V.34	26.400 bit/s	V.32bis	12.000 bit/s
V.34	24.000 bit/s	V.32	9.600 bit/s
V.34	21.600 bit/s	V.32bis	7.200 bit/s
V.34	19.200 bit/s	V.32	4.800 bit/s
V.34	16.800 bit/s	V.23	1200/75 bit/s
V.34	14.400 bit/s	V.22bis	2.400 bit/s
V.34	12.000 bit/s	V.22	1.200 bit/s
V.34	9.600 bit/s	V.21	300 bit/s

The function of automatic speed adaptation (fall-back), in case of bad line, is available by AT command (see command \*Q and registers S61/S62). Using the standard V.23 is mandatory to set the digital speed at 1200bit/s, 7bits, parity even.

### **Fix Modulation Standard**

### **Chapter 3.5.4 Command F and #F**

Instead to use the multistandard mode is possible to fix the modulation at one defined. In V.34 it's not possible to fix the speed of 4.800, 7.200, 9.600, 12.000 and 14.400bit/s.

**Autologon** **Chapter 3.9.1**

It is possible to link stored numbers to the different options which enable, for example, password exchange after the connection. Autologon works in synchronous-asynchronous mode with or without error correction. This feature is particularly useful to increase security access.

**Call-Back** **Chapter 3.1.2**

As in autologon it is possible, to link a procedure to a stored number. When a password (in answering mode) is acknowledged, the modem disconnects and calls the associated number immediately .

**Error Corrector & data Compression** **Chapter 5.5.**

V.42 LAP-M, V.42bis and MNP class 5 data compression mode for increased throughput.

**Factory Configuration** **Chapter 5.7.**

The user can select up to 10 different factory pre loaded configuration profiles and use them like user configuration. It's also possible to link the configurations to the telephone numbers of the phonebook. In this case the modem before to make the call sets itself in according with the associated configuration .

**User Configuration** **Chapter 3.5.4. Command &W**

The user can store up to 10 configurations by AT commands or front pannel. Every configuration can be linked to a stored number into the phonebook.

**Test Facilities** **Chapter 4.1**

According to ITU V.54 is possible to make:  
local analog test loop ( loop 3) including a self-test facility  
digital testloop ( loop 2)  
remote controlled digital test loop (loop 2) including a selftest facility  
test pattern: 511

**Asynchronous Communication**

The modem can works in asynchronous with format at 8, 9, 10, 11 bits.

**Synchronous Communication** **Chapter 3.5.4 Command AT&M**

In synchronous the modem can operats with internal, external or slave clock

**Switched Line** **Chapter 3.5.4 Command AT&L**

The modem is designed to work on switched line and it support an associated telephone set.

**Leased Line** **Chapter 3.5.4 Command AT#B**

This feature is not available on model SNM49.

The modem can operate over a 2 or 4 wires leased line with the feature of automatic back-up over switched line in case of line failure. In this case are available 5 different back-up procedure:

- 1) Back-up disabled
- 2) Back-up enabled
- 3) Back-up with timer and look back
- 4) Back-up using the interface circuit C116
- 5) Back-up with monitor

For more informations see AT#B command description. The factories configurations number 4, 5, 6 and 7 offer the back-up in V32bis and V34.

**Inactivity timer** **Chapter 3.8.2 Register S36/37**

The modem can verify mark or space conditions on the circuits C103 and C104 for the times selected respectively on the registers S36 and S37 before to proceed with an automatic disconnection.

**RTS/CTS delay** **Chapter 3.8.2 Register S26**

It is selectable from 0mS to 2550mS (see for more info the description of register S26)

**Half-Duplex Simulation** **Chapter 3.5.4 Command #H**

When in synchronous mode the modem can activate a half duplex simulation (as per ITU V.13 recommendation).

**Remote Configuration** **Chapter 3.10.3**

This may be enabled using AT command. This is always available both in synchronous and asynchronous mode with or without error corrector.