

IML 560 USER GUIDE

Low Power 56Kbps Industrial modem



Version 1.2

December 6, 2002

AYANTRA Inc.

Revision History

Date	Version	Description	By
November 18, 2002	1.1	Initial Release	-
December 6, 2002	1.2	Update Warranty	SD

Contents

1. IML 560 DESCRIPTION.....	4
1.1 LED Description:	5
1.2 Serial Port Pins:.....	5
1.4 DIP Switch Settings:.....	6
1.4.1 DTE Speed:	6
1.4.2 Auto Answer:	7
1.4.3 Local Echo Enable:	7
1.4.4 Result Code Enable:.....	7
1.4.5 Result Code Terse:.....	7
1.4.6 Flow control:	7
1.4.7 Error Correction:	8
1.4.8 Host DTR Normal:.....	8
1.4.9 Deep sleep:	8
2. BASIC SETUP:	8
3. WARRANTY	9

1. IML 560 DESCRIPTION

The IML 560 (Low Power Industrial Modem 56Kbps) is an industrial grade modem incorporating data compression and error detection techniques for a data throughput of up to 230 Kbps.

The modem operates from -20°C to $+65^{\circ}\text{C}$ with over 95% relative humidity.

For most applications, the modem configuration can be set using the DIP switch located on the right side of the unit without a PC. Typically no familiarity with “AT” commands is expected.

This User Guide explains how to set up and configure the unit.

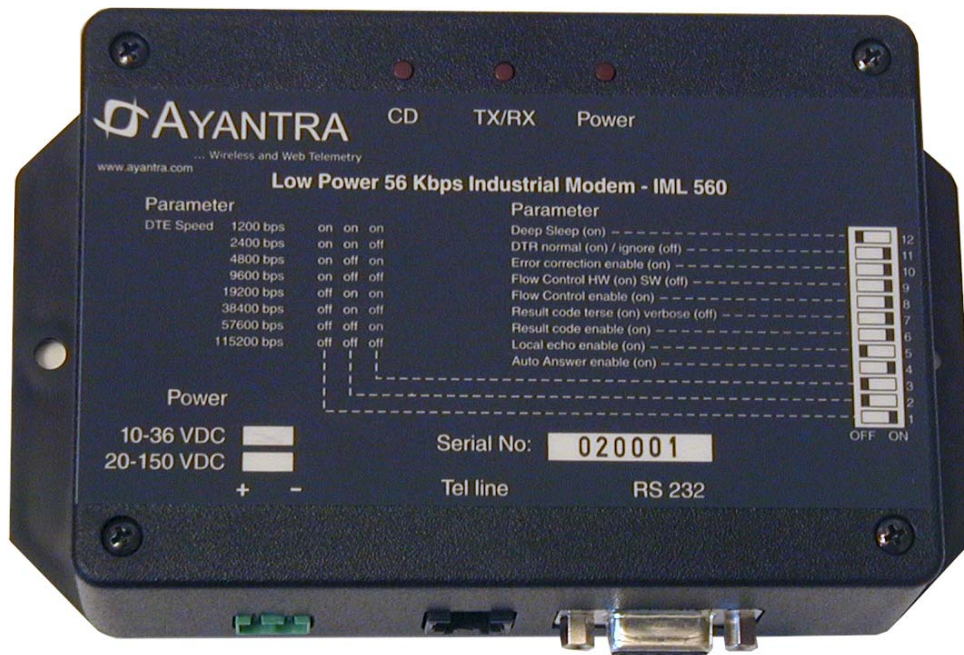


Figure 1. IML 560

1.1 LED Description:

LED name	Description
CD	Carrier Detect indicating that modem connection is ON.
TX/RX	Serial line activity
Power	Power on

1.2 Serial Port Pins:

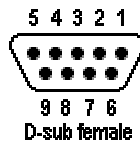


Figure 2. DB9 Female DCE Interface RS-232

Pin No.	Signal Name	Description
1	CD	Carrier Detect
2	RX	Receive Data
3	TX	Transmit Data
4	DTR	Data Terminal Ready
5	GND	Ground
6	DSR	Data Set Ready
7	RTS	Request To Send
8	CTS	Clear To Send
9	RI	Ring Indicator

1.4 DIP Switch Settings:

A distinctive feature of the IML 560 is that most commonly used parameters can be set using the DIP switches on the device (see figure 3).



Figure 3. DIP Switches

Therefore, for most applications, no PC is required to configure the IML 560. This is of significance in situations where the host machine does not use “AT” commands. The following parameters can be set using the DIP switches located on the right side of the unit.

Note: The default and commonly used settings are highlighted in **YELLOW** color.

1.4.1 DTE Speed:

Serial Port (Host e.g. instrument or PC) baud rate DIP Switch settings:

Switch 1	Switch 2	Switch 3	Serial Baud rate
ON	ON	ON	1200 bps
ON	ON	OFF	2400 bps
ON	OFF	ON	4800 bps
ON	OFF	OFF	9600 bps
OFF	ON	ON	19200 bps
OFF	ON	OFF	38400 bps
OFF	OFF	ON	57600 bps
OFF	OFF	OFF	115200 bps

1.4.2 Auto Answer:

Required if the modem is to handle incoming calls):

Switch 4	Auto Answer
ON	Auto Answer On.
OFF	Auto Answer Off.

1.4.3 Local Echo Enable:

Necessary if typed characters are to be sent back to the host.
Generally local echo is turned OFF):

Switch 5	Local Echo Enable
ON	Enable Local Echo. ATE1
OFF	Disable Local Echo. ATE0

1.4.4 Result Code Enable:

Indicates status of the activity. This feature is disabled for most of the applications

Switch 6	Result Code Enable
ON	Result code enable ATQ0
OFF	Disable Result code ATQ1

1.4.5 Result Code Terse:

Please see “AT” Command Document.

Switch 7	Result Code Terse
ON	Short form result code ATV0
OFF	Long form result codes ATV1

1.4.6 Flow control:

Used to coordinate flow of data between host and modem. This prevents the loss of data.

Switch 8	Switch 9	
OFF	OFF	None Flow control
OFF	ON	None Flow control
ON	OFF	Software Flow control
ON	ON	Hardware Flow control

1.4.7 Error Correction:

Switch 10	Error Correction
ON	Enable Error Correction
OFF	Disable Error Correction

1.4.8 Host DTR Normal:

Switch 11	DTR Normal
ON	Host DTR is passed to the Modem
OFF	Host DTR is ignored

1.4.9 Deep sleep:

Switch 12	Deep Sleep
ON	Go to Deep sleep when offline to conserve power
OFF	No deep sleep

When Deep Sleep mode is activated, the modem will wake up on incoming RING activity or any TX activity on the RS 232 port.

The activity of waking up takes approximately 25 seconds. During this time, any data sent to the TX pin will be lost. The deep sleep mode is recommended for situations where the modem is always only in the answer mode only.

2. BASIC SETUP:

Step 1: Set the DIP switches to desired configuration.

Step 2: Connect the Power cable and power up the unit.

The Power Led should rapidly flash indicating that the unit is being configured as per the DIP switches set.

Once the Power led becomes constantly ON, the unit is ready for operation.

The above behavior will be every time on power up and also whenever the DIP switch is changed.

When unit is in Deep Sleep mode, the power LED will flash at a very low rate of approximately once every 2 seconds.

Step 3: Connect the Phone cable

Step 4: Connect the unit to the Serial port of the PC or the instrument.

The unit is now ready for operation.