SGS-THOMSON MICROELECTRONICS

ST622x-KIT

STARTER KIT
FOR ST620x, ST621x and ST622x MCUs

HARDWARE FEATURES

- Immediate evaluation of all ST620x, ST621x and ST622x devices, with stand-alone demonstration routines.
- Simulation and debugging within the user's real application environment.
- In-socket programming of all DIL OTP and EPROM ST620x, ST621x and ST622x devices.
- In-circuit programming of all DIL and SO OTP and EPROM ST620x, ST621x and ST622x devices directly on the user's application board.

SOFTWARE FEATURES

- Software simulation, including I/O read/write.
- Assembler, Linker and Debugger.
- In-socket OTP and EPROM programming utilities.
- In-circuit OTP and EPROM programming utilities
- Application examples and demonstrations

1 DESCRIPTION

The ST622x Starter Kit can be used for evaluation, simulation and emulation purposes. First, it can be used to demonstrate the capabilities of the ST6225. It is only necessary to connect the supply to the board and to load the demonstration software provided with the Kit into the ST62E25 sample.

The same board can be used as a hardware interface to the software simulator when connected to the PC. Analog or digital values from the ST622x I/O pins can also be loaded directly to the simulator.

Once the program is successfully simulated, it can be loaded in a ST62E25 or ST62E20 by using the on-board programmer (DIL packaged devices only). The application environment can be connected to the Starter Kit via the I/O connector to perform a full evaluation of the user application.

In addition, an in-circuit programming facility is provided with the Kit to enable programming, via the Starter Kit board, of any ST62E25 (EPROM) or ST62T2x (OTP) already mounted in the user application board.

1.1 HARDWARE ITEMS

The Kit includes 2 samples of ST62E25, 2 samples of ST62E20, an RS232 interface, a temperature control circuit, a trimmer, a set of LED and buttons, all cables plus a power supply.

Pins are available for direct connection to an external user application.

The board is connected to the PC via the parallel port.

1.2 SOFTWARE ITEMS

The diskette provided with this kit includes an enhanced simulator including I/O read/write, assembler, linker, EPROM/OTP ST6 programming facilities and demonstration examples.

1.3 DOCUMENTATION

A full set of documents is provided with the Kit including the ST622x data book, a Kit guide and the ST62/63 Software Development Tools user manual.

1.4 SYSTEM REQUIREMENT

The ST622x Starter Kit communicates with a PC-AT compatible Personal Computer equipped with a hard disk and a 3 1/2" diskette drive, 640k of conventional memory, one parallel Centronic compatible port and MS-DOS version 3.10 or higher.

1.5 BULLETIN BOARD SYSTEMS

Software Tools upgrades, sample code and documentation are available to registered users on the SGS-THOMSON Bulletin Board Systems (BBS). These are accessible by Modem at the following numbers:

– *In the USA*:
(1) 847 517-1898
2400-14.4k baud (V22bis),
8-bits, No Parity, 1 Stop bit (8,N,1)

– *In Europe*:
Micros Technical Support Hotline (France):
(+33) 76 04 93 99
9600 baud (V32) and lower, 8,N,1

Note: This product conforms with the 89/336/EEC directive; it also complies with the EN55022 emissions standard for ITE, as well as with generic 50082-1 immunity standards.

The product is a **Class A apparatus**. In a residential environment this device may cause radioelectrical disturbances which may require that the user adopt appropriate precautions.

The product is not contained in an outer casing, and cannot therefore be immune against electrostatic discharge (ESD): **it should therefore only be handled at static safe work stations.**

Figure 1. Block Diagram of ST622x Starter Kit

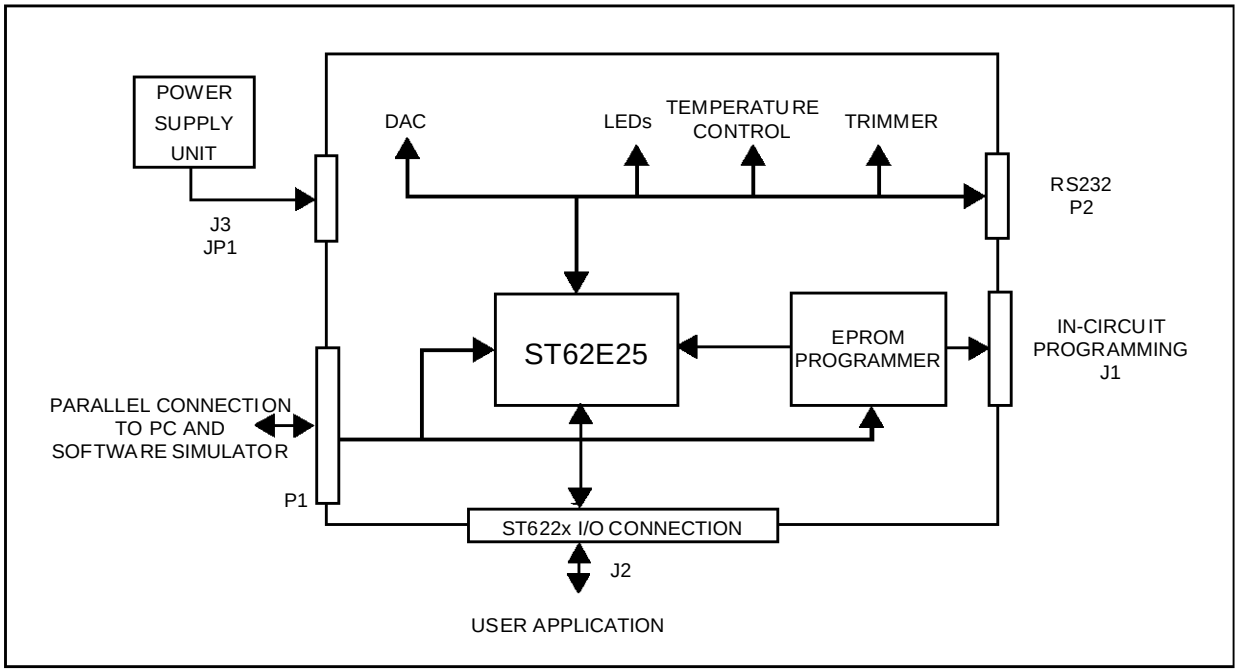


Table 1. kit Contents

ST622x STARTER KIT Hardware:	– ST6225 MCU Core and Peripherals evaluation – ST620x, ST621x and ST622x EPROM/OTP programmer – DIL support for ST620x, ST621x and ST622x programming, in 16, 20 and 28 lead packages – Power supply and PC-AT connection cable
SOFTWARE TOOLS:	– AST6/LST6 ST6 family assembler/linker – SIMST6 simulator software – ST622xPG EPROM/OTP programming software
APPLICATION ROUTINES:	– Demonstration programs – Basic subroutines library
ASSOCIATED DOCUMENTS:	– STARTER KIT USER MANUAL – ST6 SOFTWARE TOOLS MANUAL (DBST6SOFTOST/x)* – ST62 GENERAL PURPOSE APPLICATION MANUAL (AMST62APPLST/x)* – ST62 GENERAL PURPOSE DATA BOOK (DBST6ST/5)

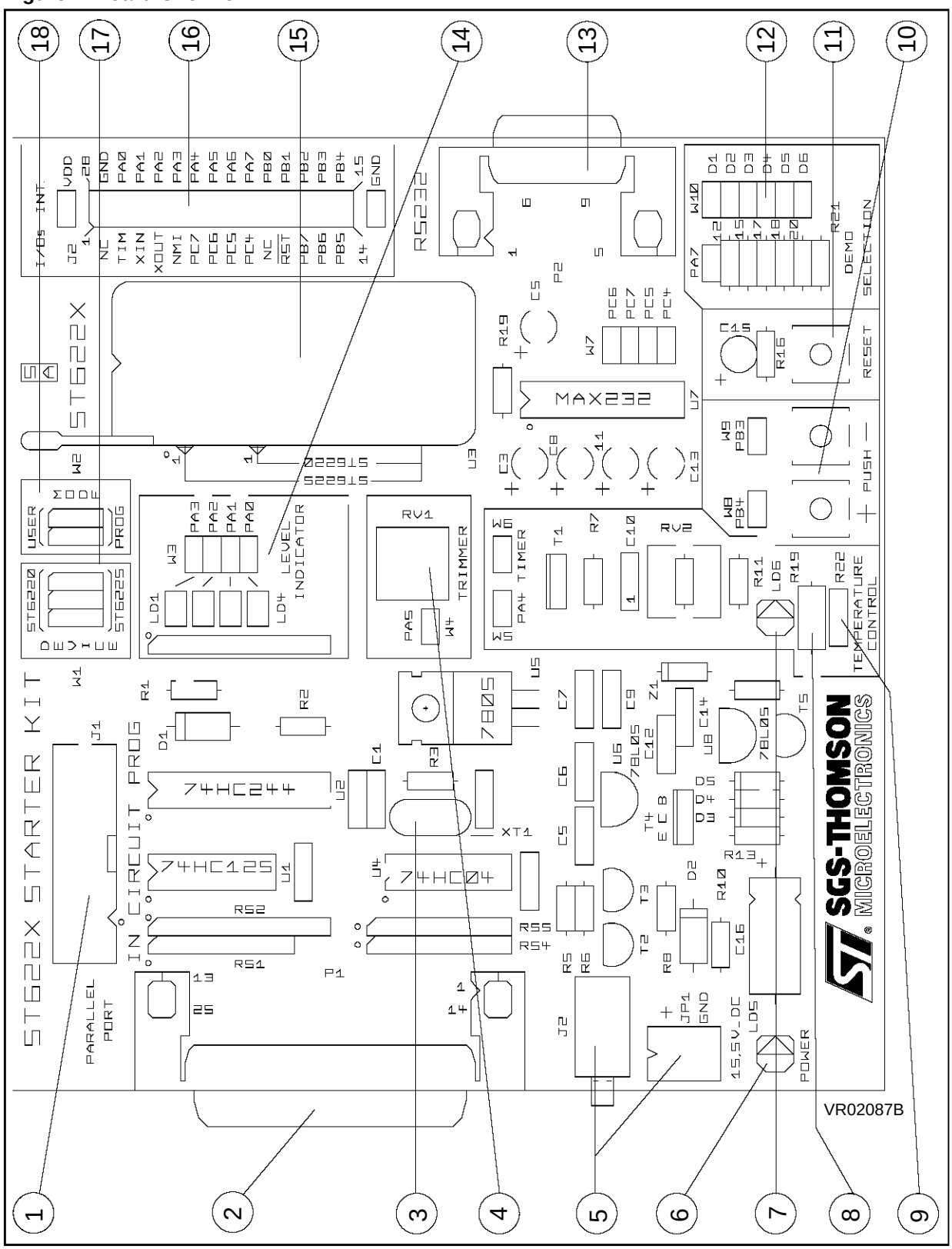
*Contact Sales for the latest version.

2 HARDWARE DESCRIPTION

2.1 BOARD OVERVIEW

1- IN CIRCUIT programming connector J1
2- PC station connector P1 (for links to simulator and programming softwares)
3- 8 Mhz crystal oscillator
4- 10 Kohms trimer including jumper W4-PA5
5- Power supply JACK connector J3 and JP1 pads
6- Power supply LED indicator LD1
7- Heater resistor power LED indicator LD2
8- Heater resistor circuit including jumper W6-TIMER
9- Thermistor circuit including jumper W5-PA4
10- "+" and "-" pushbuttons including jumpers W8-PB4 and W9-PB3
11- RESET pushbutton
12- Demonstration routine selector including jumpers W10
13- RS232 interface circuit and connector including jumpers W7
14- 4 LEDs Level indicator including jumpers W3
15- DIL 20-28 MCU socket
16- User's I/O interface connector J2
17- "ST6220" or "ST6225" device selection jumpers W1
18- "Programming" or "User" operating mode selection jumpers W2
19-

Figure 2. Board Overview



ORDERING INFORMATION

Starter Kit	Device	Description
ST622x-KIT/220	ST620x ST621x ST622x	Complete Kit for operation from 220 Vac mains
ST622x-KIT/110	ST620x ST621x ST622x	Complete Kit for operation from 110 Vac mains
ST622x-KIT/UK	ST620x ST621x ST622x	Complete Kit for operation in United Kingdom