

Software Specifications

Get to know more about the L7000 Series Notebook with a detailed look at the software specifications.

The information contained in the chapter can be quite useful when you are troubleshooting the system's hardware. Each item has its individual usage for you to understand the software side of the notebook's architecture.

This chapter includes specifications about:

- System Resources Map
- Function Key Definition
- LED Indicator Definition
- BIOS POST Code

RESOURCES

MAP

System Resources Map

Some of system resources, such as I/O address, DMA channels, interrupt vector and memory map, have been utilized by the notebook by default. Users who wish to add in more devices should be aware of any conflicts with used resources.

I/O Address

The L7000 Series Notebook, by default, occupies input and output addresses with the following devices:

0120-013F	Intel 82371 AB/EB PCI to USB Universal Host Controller
0170-0177 01F0-01F0 0376-0376 03F6-03F6 0CF8-0CFE	Intel 82371 AB/EB PCI to USB Bus Master IDE Controller
0170-0177 0376-0376	Secondary IDE Controller (dual fifo)
0180-01BF	Ricoh RL5C476 CardBus Controller
01F0-01F0 03E6-03E6	Primary IDE Controller (dual fifo)
0201-0201	YAMAHA OPL3-SAx GamePort
0220-022F 0330-0331 0338-038F 0530-0537	YAMAHA OPL3-SAx Sound System
02F8-02FF	Communications Port (COM2)
0378-037F	Printer Port (LPT1)
03B0-03BB 03C0-03DF	Silicon Motion LynxE
03F0-03F5 03F7-03F7	Standard Floppy Disk Controller
03F8-03FF	Communications Port (COM1)

DMA

DMA Channels

The L7000 Series Notebook, by default, occupies the DMA channels as follows:

00	YAMAHA OPL3-SAx Sound System
01	Free
02	Standard Floppy Disk Controller

03	Free
04	DMA Controller
05	Free
06	Free
07	YAMAHA OPL3-SAx Sound System

 I R Q

Interrupt Vectors

The L7000 Series Notebook, by default, occupies the interrupt vectors as follows:

00	System timer
01	Keyboard
02	Programmable Interrupt Controller
03	Communications Port (COM2)
04	Communications Port (COM1)
05	YAMAHA OPL3-SAx Sound System
06	Standard Floppy Disk Controller
07	Printer Port (LPT1)
08	System CMOS/Real-Time Clock
09	Free
10	IRQ Holder for PCI Steering Intel 82371 AB/EB PCI to USB Universal Host Controller
11	IRQ Holder for PCI Steering Ricoh RL5C476 CardBus Controller Ricoh RL5C476 CardBus Controller Silicon Motion LynxE
12	Alps GlidePoint
13	Math Co-processor
14	Intel 82371 AB/EB PCI Bus Master IDE Controller Primary IDE Controller (dual fifo)
15	Intel 82371 AB/EB PCI Bus Master IDE Controller Secondary IDE Controller (dual fifo)

 M E M O R Y

Memory Range

The L7000 Series Notebook, by default, occupies memory range as following:

00000000-0009FFFF 000CC000-000CFFFF 000DC000-000FFFFF 00100000-01FFFFFF	System board extension for PnP BIOS
000A0000-000AFFFF 000B0000-000BFFFF	Silicon Motion LynxE

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000C0000-000CFFFF FD000000-FDFFFFFF	
000D0000-000D0FFF 000D1000-000D1FFF 02000000-0200FFFF	Ricoh RL5C476 CardBus Controller
F8000000-FBFFFFFF	Processor to PCI bridge
FFF80000-FFFFFFFF	Motherboard resources

HOTKEYS

Function Key definition



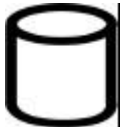


The notebook has several special function keys that can be used to adjust system settings. These hotkeys also support hardware icon, which shows up on the upper-left hand corner of the screen when the corresponding keys are pressed.

Fn + F1	System Suspend
Fn + F2	Number Pad On/Off
Fn + F5	Display Brightness Up
Fn + F6	Display Brightness Down
Fn + F7	Panel On/Off
Fn + F8	Toggle Between LCD, CRT and Simultaneous Display
Fn + F9	TV On/Off
Fn + F10	Speaker On/Off, Battery Low Warning Beep Mute
Fn + F11	Volume Up
Fn + F12	Volume Down

LED

LED Indicator Definition

The LED indicators on the front of the notebook show the current status of the system.

	Power on Solid Green: Power on Blinking Green: Suspended
	Battery Charger Blinking Amber: Battery charging Solid Amber: Battery fully charged
	HDD Accessing
	Number Lock
	Keypad Lock

POST CODE

BIOS POST Code

The following hex values are the trace point of power-on self-test (POST) in the PhoenixBIOS 4.0 Rel. 6.0.

02h	Verify Real Mode
04h	Get CPU type
06h	Initialize system hardware
08h	Initialize chipset registers with initial POST values
09h	Set in POST flag
0Ah	Initialize CPU registers
0Ch	1Initialize cache to initial POST values
0Eh	Initialize I/O
10h	Initialize Power Management
11h	Load alternate registers with initial POST values
12h	Jump to UserPatch0
14h	Initialize keyboard controller
16h	BIOS ROM checksum
18h	8254 timer initialization
1Ah	8237 DMA controller initialization
1Ch	Reset Programmable Interrupt Controller
20h	Test DRAM refresh
22h	Test 8742 Keyboard Controller
24h	Set ES segment to register to 4 GB
28h	Autosize DRAM
2Ah	Clear 512K base RAM
2Ch	Test 512 base address lines
2Eh	Test 512K base memory
32h	Test CPU bus-clock frequency
37h	Reinitialize the chipset
38h	Shadow system BIOS ROM
39h	Reinitialize the cache
3Ah	Autosize cache
3Ch	Configure advanced chipset registers
3Dh	Load alternate registers with CMOS values
40h	Set Initial CPU speed
42h	Initialize interrupt vectors
44h	Initialize BIOS interrupts
46h	Check ROM copyright notice

47h	Initialize manager for PCI Options ROMs
48h	Check video configuration against CMOS
49h	Initialize PCI bus and devices
4Ah	Initialize all video adapters in system
4Ch	Shadow video BIOS ROM
4Eh	Display copyright notice
50h	Display CPU type and speed
52h	Test keyboard
54h	Set key click if enabled
56h	Enable keyboard
58h	Test for unexpected interrupts
5Ah	Display prompt "Press F2 to enter SETUP"
5Ch	Test RAM between 512 and 640k
60h	Test expanded memory
62h	Test extended memory address lines
64h	Jump to UserPatch1
66h	Configure advanced cache registers
68h	Enable external and CPU caches
6Ah	Display external cache size
6Ch	Display shadow message
6Eh	Display non-disposable segments
70h	Display error messages
72h	Check for configuration errors
74h	Test real-time clock
76h	Check for keyboard errors
7Ch	Set up hardware interrupts vectors
7Eh	Test coprocessor if present
80h	Disable onboard I/O ports
82h	Detect and install external RS232 ports
84h	Detect and install external parallel ports
86h	Re-initialize onboard I/O ports
88h	Initialize BIOS Data Area
8Ah	Initialize Extended BIOS Data Area
8Ch	Initialize floppy controller
90h	Initialize hard-disk controller
91h	Initialize local-bus hard-disk controller
92h	Jump to UserPatch2
94h	Disable A20 address line
96h	Clear huge ES segment register
98h	Search for option ROMs
9Ah	Shadow option ROMs
9Ch	Set up Power Management
9Eh	Enable hardware interrupts

A0h	Set time of day
A2h	Check key lock
A8h	Erase F2 prompt
AAh	Scan for F2 key stroke
ACh	Enter SETUP
AEh	Clear in-POST flag
B0h	Check for errors
B2h	POST done--prepare to boot operating system
B4h	One beep
B6h	Check password (optional)
B8h	Clear global descriptor table
BCh	Clear parity checkers
BEh	Clear screen (optional)
BFh	Check virus and backup reminders
C0h	Try to boot with INT 19
D0h	Interrupt handler error
D2h	Unknown interrupt error
D4h	Pending interrupt error
D6h	Initialize option ROM error
D8h	Shutdown error
DAh	Extended Block Move
DCh	Shutdown 10 error
E2h	Initialize the chipset
E3h	Initialize refresh counter
E4h	Check for Forced Flash
E5h	Check HW status of ROM
E6h	BIOS ROM is OK
E7h	Do a complete RAM test
E8h	Do OEM initialization
E9h	Initialize interrupt controller
EAh	Read in bootstrap code
EBh	Initialize all vectors
ECh	Boot the Flash program
EDh	Initialize the boot device
EEh	Boot code was read OK

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