18X DVD-ROM DRIVE

(SATA Interface)

User's Manual

CLASS 1 LASER PRODUCT
APPAREIL A LASER DE CLASSE 1
LASER KLASSE 1
LUOKAN 1 LASERLAITE
PRODUIT LASER
CATEGORIE 1

DANGER	INVISIBLE LASER RADIATION WHEN OPEN AVOID DIRECT EXPOSURE TO BEAM
VORSICHT	INSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETSEN
ATTENTION	RADIATION DU FAISCEAU LASER INVISIBLE EN CAS D'OUVERTURE. EVITER TOUTE EXPOSITION AUX RAYONS.

Copyright Statement

FCC Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

FCC Warning Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FOR EUROPE

CE "The drive is in conformity with the EMC directive and low-voltage directive."

Table of Contents

INTRODUCTION

Welcome to a multimedia world of DVD technology! This high-performance DVD-ROM drive of ATAPI interface plays DVD titles at maximum 18X DVD-ROM speed and plays CD-ROMs at maximum 48X speed. With the bundled software, you can enjoy the wide range of educational and entertaining CD/DVD titles with theater quality.

DVD stands for Digital Versatile Disc which has high-density capacity of storing 4.7 gigabytes of data on single side and up to 17GB on double side and dual layer. Other than that, a DVD is MPEG-2 compressed video compatible and has Dolby Digital Surround Sound audio (known as AC-3) capabilities. That is, the combination of DVD titles, your stereo setup and this DVD-ROM drive package will bring you fascinating sound and visual effect.

Here are some important features:

- 5.25" half-height internal drive
- Quick access time
- High data transfer rate (CAV* technology)
- Smooth DVD playback
- Efficient power saving feature
- Superior error recovery
- Excellent compatibility of media formats
- Horizontal & Vertical operation
- Good vibration resistance & low noise

*CAV: Constant Angular Velocity

System Requirements

To install and use the DVD-ROM drive**,** it is recommended that you have the following for your PC system:

- A Pentium™ II 350 MHz or faster CPU
- 16 MB RAM (32MB is recommended.)
- 16-bit SoundBlaster™ compatible sound card
- Amplified stereo speakers
- Microsoft™ Windows 95/98/Me/NT/2000/XP
- One SATA port

To run DVD titles with DVD playback software installed, the basic requirements recommended:

- Microsoft™ Windows 95/98/98SE/Me/NT4.0 SP5+/2000/XP
- Intel Pentium II 350MHz or above
- At least 64 MB RAM
- 16-bit SoundBlaster™ compatible sound card
- DVD-ROM drive
- Display card supporting DirectDraw

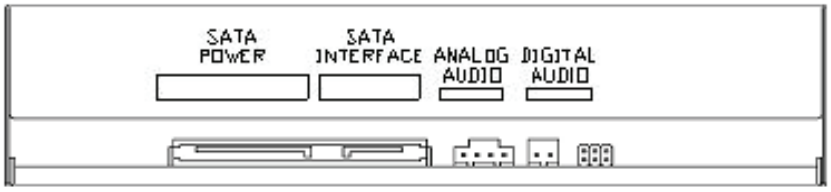
☞ *For detailed information, please refer to the software package.*

INSTALLATION

Hardware Installation

To connect this drive to your PC, you will need an SATA connector for the SATA drive.

1. With the power to your PC disconnected, remove the PC's top cover.
2. Insert the drive into one of the free 5¼" bays available for disk drives and secure it with screws to your PC.
3. Connect the 7-pin Signal & 15-pin Power Segment Key cable from your hard disk to the back of the DVD drive.



4. If you have a sound card that can be connected to this drive, you can also connect Audio-Out of the drive to Audio-In of the sound card with a 4-pin audio cable.

   ◆ *Please make sure to connect Pin 1 from Audio-Out of the Writer to Pin 1 from Audio-In of the sound card.*

5. Reinstall the casing on your PC, and reconnect the power supply.

Driver Installation

For Windows Environment

This DVD-ROM drive is a Plug & Play device. Windows 95/98//Me, and Windows NT/2000/XP will **automatically detect** the drive and **load** the appropriate driver.

DVD Region Coding

Region Playback Control Management

All DVD Video Playback systems have “Region Playback Control” (RPC) which is required by Hollywood movie industry and defined by DVD Forum. You can only play DVD-Video discs with the same region code as your DVD-Video Playback system.

As for DVD-ROM drives, one kind of the DVD-Video Playback system, there are 2 types:

RPC Phase 1 (as **RPC1**): RPC1 drives do not have built-in hardware support for region management. DVD-ROM drives of this kind don’t play a part in controlling the playback region. It solely depends on the decoder.

RPC Phase 2 (as **RPC2**): RPC2 drives maintain the region change count information in hardware, and in general, the region of such drives can be changed up to 5 times by the end users under some software decoder. (e.g. PowerDVD)

Region Codes

Region 1: Canada, U.S.

Region 2: Japan, Europe, South Africa, and Middle East, Egypt

Region 3: Southeast Asia and East Asia

Region 4: Australia, New Zealand, Pacific Islands, Central America, Mexico, South America, and the Caribbean

Region 5: Eastern Europe, Indian subcontinent, Africa, North Korea, and Mongolia

Region 6: China

DVD Video Decoder for PC Systems

There are three types of DVD-Video decoders on the market:

Type 1: The RPC code has been set by the manufacturer and can't be changed.
Type 2: The RPC code can be changed up to the maximum of four times (except the initial setting).
Type 3: With RPC Phase 2 drives, the DVD-Video decoder copies the same region code as the drive

Here is a table to help you understand how DVD-ROM drives and the decoder (DVD MPEG cards or DVD playback software) work together for region code setting.

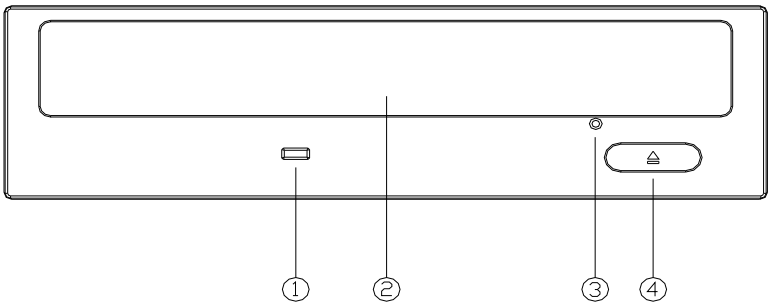
	DVD Drive	
DVD Decoder	RPC Phase 1	RPC Phase 2
Type 1	Decoder	Decoder & Drive
Type 2	Decoder	Decoder & Drive
Type 3	Decoder	Decoder & Drive

About This DVD-ROM Drive

This drive is a RPC2 DVD-ROM drive and according to DVD-Forum, PC chip must be designed into DVD-ROM drives to record how many times a user has changed the region code. The first region code will depend on the DVD title you play and you are allowed to modify the region code 5 times (including the initial one). After the fifth alteration, the region code will be locked and only those DVD titles of the same region code could be played afterwards, so set the code carefully.

OPERATION & CONNECTION

Front Panel



1. LED Indicator

While the tray goes in/out, the indicator flashes **green** and it's off when the drive is ready.

The indicator flashes **green** when the drive reads an audio/data CD/DVD.

2. Disc Tray

This is the tray for the disc. Place the disc in the tray, then press the Close/Eject button or gently push the tray to close it.

3. Emergency Eject Hole

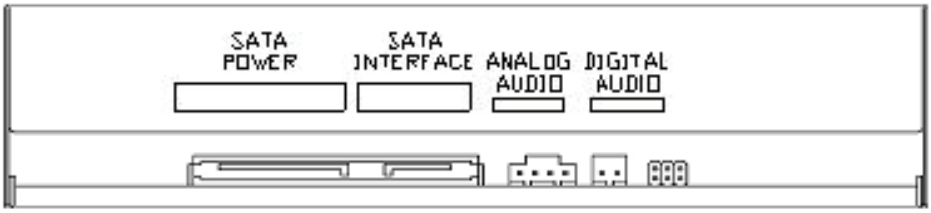
When the Close/Eject button doesn't work properly and the disc tray can't be opened, you can insert a paper clip or other small rod into this hole for manual ejection. Please make sure to power off the system before you do that.

4. Close/Eject button

This button opens and closes the disc tray. If the tray is closed, pressing the button will eject it.

☞ ***Note:*** *The design of front panel is subject to change without notice.*

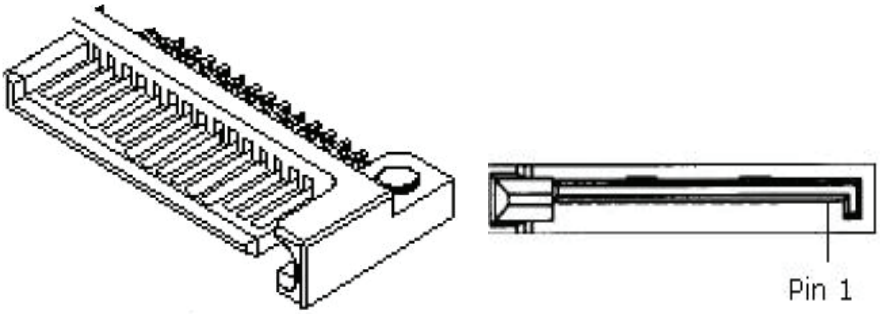
Rear View



The rear panel from left to right contains the following:

- **DC Power Connector, 15-pin**

1. By plugging the computer's power supply cable here, you can connect the drive and your computer system.



- **SATA Interface Connector, 7-pin**

Plug one end of the 7-pin SATA cable here to connect the 7-pin SATA connector on the motherboard.

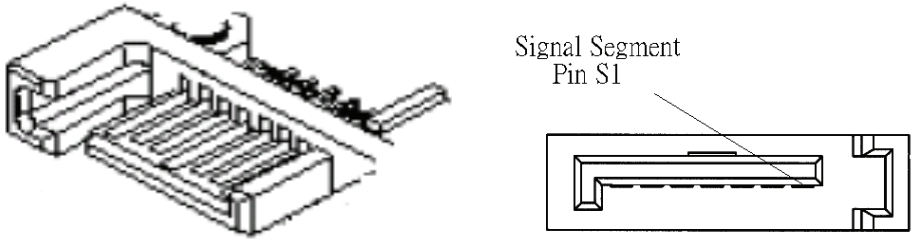


Figure: SATA Interface Connector

- **Analog line out connector, 4-pin**

This connector allows you to connect the drive to your sound card with a 4-pin audio cable.

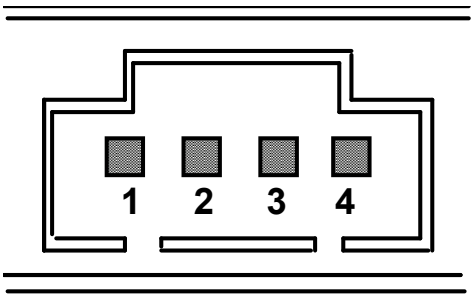


Figure: Analog Audio Output Connector

- **Digital output connector, 2-pin**

If your sound card has a digital audio IEC958 format connector, you can connect it to this digital audio output connector with a 2-pin audio cable.

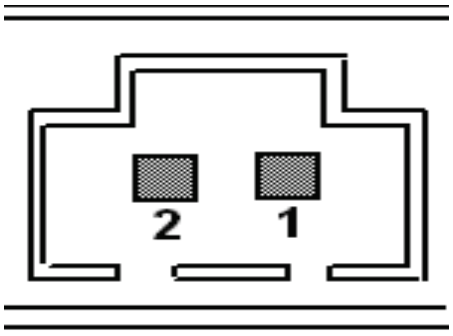


Figure: Digital Output Connector

TECHNICAL DATA

Drive Performance

Data Transfer Rate	DVD-ROM Single layer: 24336KB/s(18X Max.) Dual layer: 13850 KB/s(10X Max.) CD-ROM: 7200KB/s (48X Max.)
Interface	SATA/ATAPI
Data Buffer Memory size	512KB

Compact Disc

Disc Size	80mm and 120mm discs
Disc Data Capacity	DVD-ROM: Single layer – 4.7GB Dual layer – 8.5GB (one side) CD-ROM: 74min - 650MB - Mode 1 80min - 700MB - Mode 1
Disc Format Compatibility	
CD Family	CD-DA, CD-ROM, CD-ROM XA, CD-I, Photo CD, Video CD, CD Extra, CD-Text, CD-R, CD-RW (Multi-Read)
DVD Family	DVD-Video, DVD-ROM, DVD±R, DVD±RW, DVD±R DL, DVD-RAM

Physical Specification

Drive Type	5.25" Half-Height Built-in Drive
Mounting Orientation	Horizontal & Vertical
Disc Loading	Tray (motorized)

Audio output level	Line out = 0.6±10%Vrms Headphone out = 0.6±10%Vrms
Power Requirements	5V±5%, 12V±10%
Dimension	
Height	41.8 ± 0.3 mm
Width	148.6 ± 0.3 mm
Depth	177.2 ± 0.3 mm
Weight (net)	0.75kg

Environment

Temperature	
Operating condition	5°C ~ 45°C
Storage condition	-30°C ~ 60°C
Humidity	
Operating condition	8% ~ 80% (no condensation)
Storage condition	5% ~ 90% (no condensation)

3100554350
Version 1.0
Mar. 2008