



OWNER'S MANUAL

Ultra Slim Blu-ray Writer

To enjoy fully all the features and functions of your product, please read this owner's manual carefully and completely.

TPE-BLUDVSATA95

ThinkPenguin.com

Safety Instructions

⚠ CAUTION: The laser used in the writer can damage your eyes. Do not attempt to open the cover. To reduce the risk of electric shock, do not remove the cover (or back).
There are no user-serviceable parts inside. Refer servicing to qualified service personnel. Use of controls or performance of procedures other than those specified herein may result in hazardous radiation exposure.

⚠ WARNING: To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

FCC COMPLIANCE STATEMENT

Note : 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 try 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 receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an Authorized Service Center for help.
- **FCC WARNING**
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- This product is for use only with UL listed personal computers that have installation instructions detailing user-installation of card cage accessory.

CLASS 1

LASER PRODUCT

⚠ CAUTION: CLASS 3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO THE BEAM.

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Introduction

Drive Description

This drive reads and writes to CD, DVD, and BD media.

Features of the Drive

- 9.5 mm height internal Ultra Slim BD/DVD Writer Drive.
 - CD-R/RW, DVD-R/-R DL/ -RW/ +R/ +R DL/ +RW, DVD-RAM, BD-RE/R read and write compatible.
 - CD Family, DVD-ROM and BD-ROM read compatible.
 - Active OPC (Running OPC) “Optimum Power Controller” provides for more reliable writes.
 - Easy-to-use drawer loading mechanism.
 - Enhanced-IDE (ATAPI) model: SATA Interface.
 - Supports BDXL media (BD multi-layer) read and write
 - Supports M-Disc DVD and BD read and write
 - Improved Buffer Under- Run Error handling through the Preventive function.
- ¹. Continuously monitors the signal level during recording and adjusts the laser power to compensate when the disc is dirty, insuring a flat signal.

Installation

If the drive is not installed under the following conditions, it may not operate properly.

- (1) When mounting, use tapping screw holes on the left and right both sides of the equipment.

When using screws to fix the connector from PC to the equipment, use tapping screw holes located on the back side of the equipment.

■ Recommended screw tightening torque: 0.12 N·m

- (2) Do not apply an excessive force (press, pull or twist) to avoid distorting equipment.

■ Recommended width of the mounting frame surface on left and right

Dimension L: 102.6 +/- 0.2 mm (See Fig.1)

■ Recommended value for Top and bottom case : See Fig.1, Fig.2 and Fig.3 for detail.

■ After mounting the connector, do not apply excessive force the connector of the equipment in horizontal and/or vertical direction.

■ Tighten screws evenly.

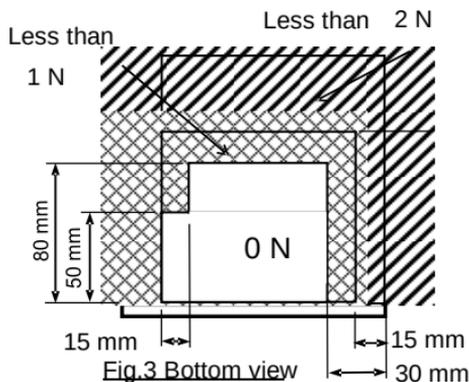
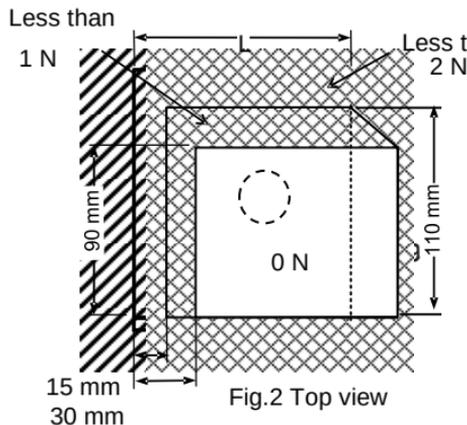
■ Mounting frame surface contacted with the equipment must be flat.

- (3) Allow as much as possible in all directions around the equipment so the equipment does not apply any vibration, mechanical shock, etc.

■ For the maximum dimension of the equipment thickness

Recommended clearance: more than 0.5 mm

■ Recommended clearance around the front bezel: more than 1 mm



(In case of applied 0 N
on the opposite side)

(In case of applied 0 N
on the opposite side)

Vertical direction force
(See Fig.2)

Less than 2N
(Horizontal direction)
(Press or pull)



Less than 2 N

Less than 2 N
(Horizontal direction)
(Press or pull)

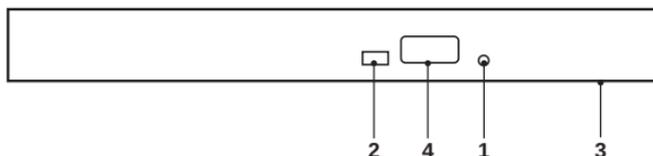
Vertical direction force
(See Fig.3)

Fig.1 Front view

Using the Drive

Front Panel

The following is the general figure of the design of the drive. The drive's appearance and specifications may change without prior notice.



1. Emergency Eject Hole

If the disc tray does not open when you press the eject button, power off the computer, insert a pin or unfolded paper clip in the hole and push firmly.

2. Indicator Light

The light blinks when there is drive activity.

3. Disc Tray

The disc tray opens automatically when you press the eject button. When you place a disc in the tray, ensure that the label on the disc is facing outwards. If you are not loading or unloading a disc, the tray should remain closed.

4. Eject Button

Press this button to open/close the disc tray. This button works only when power is supplied to the drive.

Drive Operation

Inserting a Disc

- Press the eject button. The disc tray will be ejected.
- Place the disc in the center of the tray with the label side facing up.
- Push disc onto hub until secure.
- Push the disc tray by hand and close completely.

Removing a Disc

- Press the eject button. The disc tray will be ejected.
- Remove the disc.
- Push the disc tray till it closes completely.

NOTE: During some drive activities, the drive will not allow the tray to open even when the eject button is pressed.

Usage Guidelines

- Do not press down on the disc tray when it is opening or closing.
- Do not place objects on the disc tray.
- Never use a damaged, broken, scratched, or deformed disc.
- Keep the disc tray closed when the drive is not in use.

NOTE: High-speed drives spin the disc at a high rotational speed. If a disc has printing on only half of the disc, or if there is a slight imbalance in the disc, the imbalance is greatly magnified by the high speed, causing the drive to vibrate or produce a fan-like noise. These effects are inherent in the high-speed technology and do not indicate a problem with the drive.

Emergency Eject

The procedure described below can be used to remove a disc from the drive if the eject button is disabled by software or a power failure occurs.

1. Turn the computer off.
2. Insert a small diameter rod or a stiff wire (a straightened paper clip about 1.2 mm [0.047 in] in diameter) into the emergency eject hole and push firmly.
3. The disc tray is ejected by about 10 mm (0.39 in). Pull the disc tray out.

NOTE: Do not insert more than 50 mm (1.9 in) in depth. Inserting more than 50 mm (1.9 in) may damage the drive.

Cleaning Media

If dust or fingerprints get on the disc, wipe it with a soft cloth from the center to the edge.



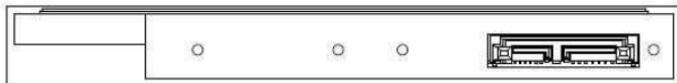
CAUTION: Do not use benzene, paint thinner, record cleaner, solvent or static repellent. This can damage the disc.

Cleaning the Drive

Cleaning the inside of the drive is not recommended.

Drive Connectors

Slim SATA Drive Connectors



Troubleshooting

Please refer to the Introduction section to determine if the drive in your system is a slim device.

Symptoms and Solutions

Symptoms	Solutions
1. Drive is not recognized by system.	1-1. Turn off the system, remove the drive, and re-insert back to the system.
2. Cannot read or play disc.	2-1. If the disc is dirty (fingerprints, etc.), clean it with a non-abrasive cloth from the disc center hole to the outside. 2-2. If the disc is scratched and warped, do not insert it into the drive. 2-3. If the disc is inserted upside-down, re-insert it in the proper direction. 2-4. Check to see that the necessary software applications are installed correctly.
3. Certain types of disc do not play.	3-1. This drive only supports discs with the formats indicated in the Specifications section. It cannot read the data on discs with other formats. Check the disc's format.
4. Drive will not write or read at maximum speed.	5-1. Ensure disc is clean and free of scratches. 5-2. Media from different manufacturers or purchased at different times will record at different speeds. The drive will adjust the available recording speeds to achieve the highest write quality.
5. Cannot eject disc.	6-1. Check to see that the system is powered up. 6-2. For drives with LED indicator and it does not light up, refer to section 1 above. 6-3. Use Emergency Eject Instructions to open the tray. Please refer to the Using the Drive section. 6-4. If the system is capable of booting into an operating system, attempt to issue an eject command from within the operating system.

Symptoms	Solutions
6. Cannot write to disc (for drives with write capability).	7-1. Is the disc loaded in the drive with the read/write surface facing the right direction? The label should be up. If a disc does not have a label, the disc code on the inner side of the disc should be properly oriented for reading when looking from the top of the disc. 7-2. CD-R, DVD+R, DVD-R, and BD-R discs cannot be re-written. 7-3. Please check the type of disc that is being used. Please refer to Specifications section to ensure that the disc type is supported by this drive. 7-4. Is there enough free space on the writable disc? 7-5. Did a screen saver or other application operate while writing to the disc? If so, try again with the application turned off.

Specifications

		TPE-BLUDVSATA95	
TRANSFER RATES-WRITE (MAX)	MODEL		Type
			Ultra Slim Blu-ray / DVD Writer
	BD-R (SL)		2x CLV, 4x PCAV, 6x CAV
	M-DISC BD (BD-R)		2x CLV, 4x PCAV
	BD-R (DL)		2x CLV, 4x PCAV, 6x CAV
	BD-R (TL)		2x CLV, 4x PCAV
	BD-R (QL)		2x CLV, 4x PCAV
	BD-R (LTH)		2x CLV, 4x PCAV, 6x CAV
	BD-RE (SL/DL/TL)		2x CLV
	DVD-R (SL)		2x CLV, 4x PCAV, 8x CAV
	DVD-R (DL)		2x CLV, 4x, 6x ZCLV
	DVD+R (SL)		2.4x CLV, 4x PCAV, 8x CAV
	M-DISC DVD (DVD+R)		4x PCAV
	DVD+R (DL)		2.4x CLV, 6x ZCLV
	DVD+RW		2.4x, 3.3x CLV, 4x, 6x, 8x ZCLV
	DVD-RW		2x, 3x CLV, 4x, 6x ZCLV
	DVD-RAM		2x, 3x CLV, 5x PCAV
	CD-R		10x CLV, 16x PCAV, 24x CAV
	CD-RW		4x, 10x CLV, 16x ZCLV
TRANSFER RATES-READ (MAX)	BD-ROM	SL/DL	6x CAV
		SL/DL	6x CAV
	BD-R	TL/QL	6x CAV
		SL LTH	6x CAV
		SL/DL	6x CAV
	BD-RE	SL/DL	6x CAV
		TL	4x PCAV
	BDMV (AACS Compli. Disc)(SL/DL)		6x CAV
	DVD-ROM	SL/DL	8x CAV
	DVD-R	SL/DL	8x CAV
	DVD+R	SL/DL	8x CAV
	DVD-RW		8x CAV
	DVD+RW		8x CAV
	DVD-RAM		2x, 3x CLV, 5x PCAV
	DVD-Video (CSS Con Disc)(SL/DL)		8x CAV
CD-R/RW/ROM		24x / 24x / 24x CAV	
CD-DA		24x CAV	
OTHER FEATURES	Silent Play		Yes
	Jamless Play		Yes
ACCESS TIME (1/3 STROKE)	BD-ROM		250ms typ.
	DVD-ROM		200ms typ.
	CD-ROM		200ms typ.
SUSTAINED TRANSFER RATE	BD-ROM		26.97 MB/s (6x) max.
	DVD-ROM		11.08 MB/s (6x) max.
	CD-ROM		3.6 MB/s (24x) max.
BUFFER SIZE	4MB Buffer Under-run prevention function embedded		

HOST	Internal (Drive)	SATA
COMPLIANCE	RoHS	Yes
	Safety UL	UL 60950-1 Second Edition
	C-UL	CSA C222 No. 60950-1 Second Edition
	TUV	EN 60950-1 / EN60825-1
	SEMKO	EN 60950-1 / EN60825-1
	EMC	CE Marking, C-Tick Mark, BSMI, FCCI, KC, CU, FCC Part 15 Class B Digital Device, ICES-003 Digital Apparatus
	Laser Safety	Class 1 laser product comply with DHHS rules 21 CFR Subchapter J Class 1 laser product to EN60825-q/IEC 60825-1
OPERATING SYSTEMS		Linux
SYSTEM REQ	CPU	Intel Pentium D 3.2Gz+ (w/ USB 2)
	Recommended	Intel Core 2 Duo P8600 2.4GHz+
	HDD	30GB or more of available space (60GB for Blu-ray Disc authoring)
	RAM	1GB or Higher
	BD Movie Playback	Intel:E6400 or higher
DIMENSIONS	W x D x H	5.0" x 0.3" x 5.0" (128 x 9.5 x 127 mm)
WEIGHT		0.28 lb +/- 0.02lb (Without Bezel)

Power Requirements

1 Source Voltage

+5V \pm 5% Ripple Less than 100 mVp-p

2 Current

Stand-By *1	40 mA typ.	(Slumber)
Continuous Read	700 mA typ.	(CD-ROM 24x max. CAV)
	800 mA typ.	(DVD-ROM 8x max. CAV)
Continuous Write	800 mA typ.	(BD-ROM 6x max. CAV)
	750 mA typ.	(CD-R 24x max. CAV)
	750 mA typ.	(DVD+R 8x max. CAV)
	1000 mA typ.	(DVD+/-R DL 6x max. CAV)
	900 mA typ.	(BD-R 6x max. CAV)
Seek (Full)	1000 mA typ., 2000 mA max.	(DVD-RAM 5x max. PCAV)
Spin UP (Spindle motor start up)	1000 mA typ., 2000 mA max.	(DVD-RAM 5x max. PCAV)
Maximum Current	2000 mA	

-note- Inrush current within 1 ms is ignored.

*1) If Zero Power function is supported, 0mA.

3 Rush Current

Maximum

3.0 A / less than 1 ms

