RIMAGE®

DICOM CD/DVD Production

for Medical Imaging

Patient Name: John Doe
Patient ID: 123456789
Study: CT Head
Modality: US
Date: 08.07.2014

THE GLOBAL LEADER
IN WORKFLOW INTEGRATED DISC PUBLISHING SOLUTIONS

- ✓ Compatible with all PACS/DICOM systems
- ✓ Lowest production costs
- ✓ Seamless Workflow Integration
- ✓ High Print Quality

Rimage products draw on almost

20 years of Disc Publishing know-how.

To date over 10.000 recording solutions have been installed around the globe.
The robotics, software integration and print quality is best-in-class technology. We offer a worldwide distribution, service and partner network.

"Rimage systems have allowed us to deliver a fast and accurate product to our customers maintaining the high level of quality and customer care they are accustomed to."
Department Head, PACS Administrator

Automate Your Patient Data Distribution

with a RIMAGE Medical Disc Device

Digital data in the medical industry is growing rapidly. Today´s goal is to reduce operating costs by streamlining your data management and patient record distribution.

Built on high-performing hardware and software, Rimage digital publishing systems **integrate with PACS and modalities** to automatically offload, distribute and archive patient data on CD and DVD - as easily as using a shared printer.

"In searching for a patient CD solution, I found that competitive brands did not match up to our department's requirements."
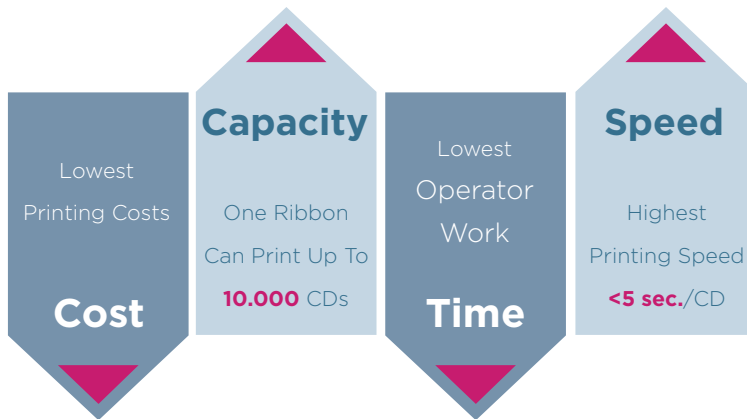
Director of Release of Information,

Big Country Hospital
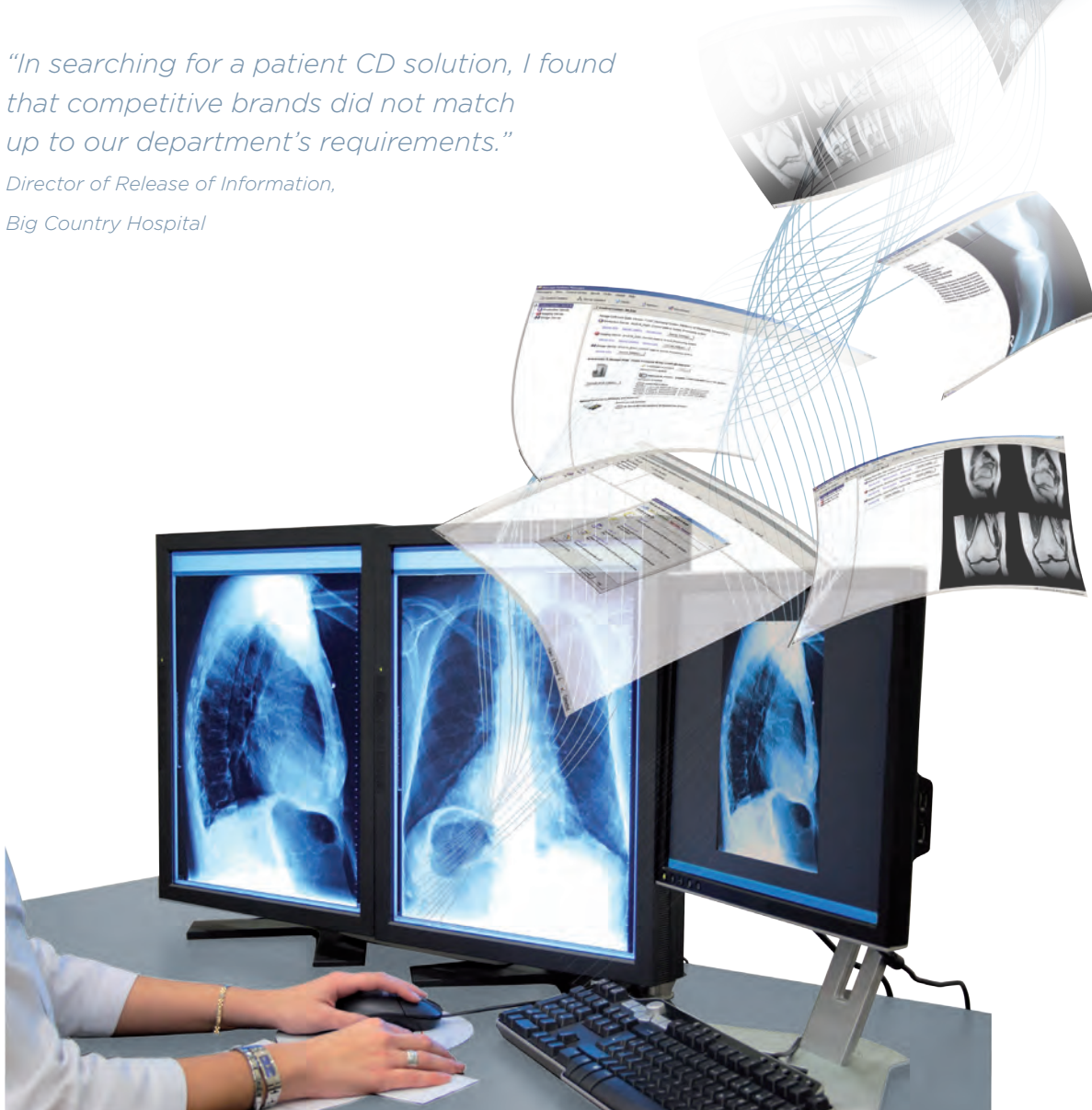
Lowest Production Costs

Medical Disc Device 7200Np with Prism III

Thermal Transfer Printer

Cost — Lowest Printing Costs

Capacity — One Ribbon Can Print Up To **10.000** CDs

Time — Lowest Operator Work

**Speed** — Highest Printing Speed **<5 sec.**/CD

This powerful, industrial-grade solution is designed for round-the-clock operation. It's the best DICOM CD/DVD production system for lowering production costs with unmatched performance and lowest total cost of ownership.

The Prism III direct thermal printer prints monochrome discs in less than five seconds with printing costs below 2 cents using Perfect Print technologie.

Number of patient CDs produced with a budget of 10.000 €

Prism III | Inkjet | Watershield
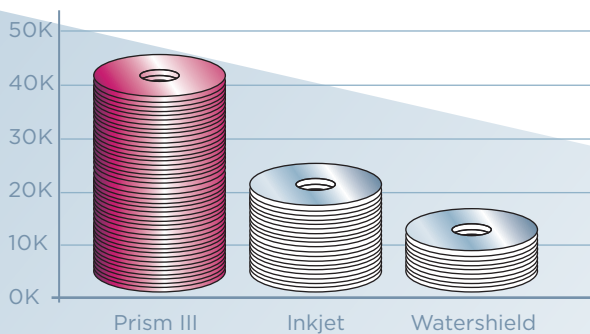
Production costs for 75 patient CDs per day over 3 Years

Watershield | Inkjet | Prism III

Printing Costs € 0,01 - 0,06
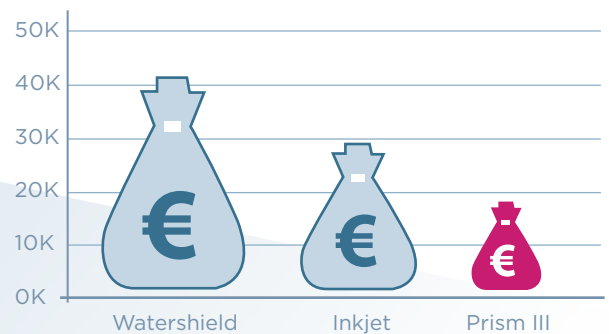
PRISM III™ PRINTER

Thermal Transfer Print Technology
RIMAGE Prism III

"We turned our disc publishing investment into a profit center within just three months." IT Director, Hospital

Thermal transfer compared to inkjet technology means

50% reduction

of total production costs in 3 years.

Inkjet vs. Thermal Disc Print Costs: You might be surprised!

When purchasing new CD/DVD production systems, the system price is often perceived as the most important criteria. Only a few decision makers consider their on-going costs, also known as total cost of ownership (TCO). The bulk of TCO is largely made up by the supplies and service costs associated with the production system purchased. In fact, many manufacturers price their production systems economically and inflate the number of discs that will be consumed by one set of ink cartridges. Unfortunately, the reality is that almost no users actually realize these inflated disc per ink-cartridge expectations.

The purchase price is only 50% of the cost

It is true that the production systems based on inkjet are favorably priced when compared to thermal retransfer systems, however, they conceal a number of pitfalls. Ink usage is influenced by many factors and you should analyze the claims being made by manufacturers.

In addition to the print resolution, the disc label coverage plays a very important role. In general the yield is defined by manufacturers as 25% coverage. When a full color picture is printed on a CD, the yield diminishes dramatically, such that only ¼ of the specified yield is achieved.

One may argue that the system is only seldom used and the yield and cost are manageable. Not True! Here lies the next pitfall. If the inkjet printer is not used regularly, the print-head dries up. Because the print head is cleaned each time the system is started, cleaning uses up extremely large amounts of ink.

Another factor to consider is atomized spray from the print heads; given the print surface of the optical media is not as absorbent as paper, a very fine spray develops and coats the inside of the machine. This can lead to electronic faults and other printer malfunctions. The higher quality (more expensive) machines are equipped with an extractor and waste tank to address this, but these 'consumable items' also have to be replaced at regular intervals, which is an additional cost that most manufacturers forget to mention.

Thermal retransfer printing: Consistent and well defined pricing

While Rimage production systems equipped with thermal or thermal retransfer printers are somewhat higher priced than inkjet systems, this cost balances itself quickly through the omission of the additional 'hidden' costs discussed above. The thermal/thermal retransfer ribbons have an exact yield, so that the final media costs can be 100% accurately calculated. Neither the print resolution nor the coverage play a role, because the ribbon is always used in the same way, print after print, after print.

Thermal printing (Prism print) offers the greatest savings when combined with pre-printed media. Pre-printed media is silk screen printed with a design and a small index mark so the printer can register on its positioning. The production system (robot) takes the media out of the recorder, rotates it so that it is fully aligned/registered with the index mark and places it in the printer. Once registered, the printer can print individual text lines in the correct position in relation to the pre-silk screened artwork enabling it to be a personalized The Prism thermal printer uses only as much ribbon as there are lines of text to print. Therefore, depending on the amount of text, one ribbon can print several thousand discs, and the corresponding print costs shrink to less than a cent per disc.

This method is particularly popular in the medical market. For example, Patient CD's are pre-printed with the name, logo and address of the medical practice because this information remains constant. After recording this kind of disc, it can be personalized in just a few seconds with additional fields of data, e.g. Patient Name, Date and Patient Number.

Inkjet Media is much cheaper.................Not always true!

Unfortunately, because many home inkjet printers can also print CDs there is a large demand for lower priced 'consumer grade' media, hence many manufacturers also produce a lower quality label and recording surface to meet this need. However, it is not intended for professional use and long term data retention. This leads to confusion and a misconception that all discs are made equal.

As previously described, the seemingly cheaper media have a lower quality and less absorbent label surface. The result is more atomized spray, the inkjet print engine gets increasingly dirty and the print quality suffers; the print is blurred and the colors lose their brilliance.

The highest inkjet print quality is achieved using glossy discs that must be water resistant. There are various types of media available on the market (Water-shield, Smart-guard, Aqua-shield etc.) and they appear brilliant when printed. Unfortunately they do not provide complete protection against moisture. The surfaces of such discs can be easily scratched when they come into contact with water or other fluids; making the print unrecognizable. Moreover, they cost 25-30% more than the non-glossy discs and due to their surface characteristics need to be printed with a higher print resolution to achieve the brilliant print quality.

In addition to the high cost of glossy discs, they do not provide good recording results. In order to ensure the media can be read by the user, data verification is a prerequisite.

Perfect Print Technology Prism III

Rimage Perfect Print

enables the alignment of customized graphics and text to **pre-printed CDs and DVDs** that reflect corporate color standards, logos and graphics. This very cost-effective technology is available with Prism III printers on Mediscal Disc Device 7200Np systems. Discs can be pre-printed by screen printing or by offset printing.

Color pre-printed area

Index mark for optical alignment

How Perfect Print Works

Print alignment process

An optical sensor in the Producer's transporter detects a small index mark that is printed in the index ring along with the other artwork. The transporter automatically positions each disc prior to printing so the customized text will always correctly align with the original pre-printed artwork.

Individual printed patient data

Highlights

INTEGRATED DISCWATCH™
status light.
Green/Yellow/Red.

LCD DISPLAY
4 line status display for
input level, media type
and ribbon capacity.

SECURE SYSTEM
System stops automatically
when door is opened. High
operator protection.
Door lock to secure
finished discs.

STABILITY
The robust housing and
robotic arm are virtually
maintenance free.

RIMAGE
MDD 7200N Series

EMBEDDED PC
Optimized performance.
Recovery disc for fast
sytem recovery.

EXTERNAL OUTPUT BIN
100-disc capacity for easy
extraction without
stopping production

400-DISC ROTATING CAROUSEL
Media capacity for
several days.

QUICK-RELEASE RECORDERS
Replace the recorders without
tools in less than 1 minute - no
adjustment necessary.

Benefits

» In-house support; availability within 24 hours on site.
» Service centers in most EMEA countries with highly qualified engineers.
» Financially healthy company with worldwide organization.
» Media kits for easy consumables handling.
» Robust error management.

Reliable
**Easy to use
Versatile**

Medical Disc Device 7200Np Series

PRISM III
PRINTER

RIMAGE®

Medical Disc Device

7200N

Patient Name: John Doe
Patient ID: 123456
Study: CT Head
Modality:
Date:

Patient Name: John Doe
Patient ID: 123456789
Study: CT Head
Modality: US
Date: 08.07.2014

BEST MEDICAL CENTER
RIMAGE®
A Data Solution from
www.rimage.com
100 Health Drive Northwest
Anycity, State 12345
P: 1-555-123-4567 F: 1-555-123-5678

Contents:
Medical Image Files

DATE:
11/07/2012
6:05 PM

Password Protected [X] [ ]
               Y   N

Patient Information
Name: John Sample Doe
PT ID: 123456
Study Date: 11/03/2012
Study Description: MR, CT, VS, CR, XA
Result: No
Reference: Smith

PATIENT RECORD
CONFIDENTIAL

Optional:
Everest 600 printer

Prism III printer

Blu-ray Disc™   DVD   COMPACT disc

Highlights

INTEGRATED DISCWATCH™
status light.
Green/Yellow/Red.

LCD DISPLAY
2 line status display for
input level and ribbon
capacity.

SECURE SYSTEM
Systems stops automatically
when door is opened. High
operator protection.

STABILITY
The robust housing and
robotic arm are virtually
maintenance free.

RIMAGE
MDD 2410 Series

OPTIONAL EXTERNAL OUTPUT BIN
50-disc capacity for easy
extraction without
stopping production.

150-DISC ROTATING CAROUSEL
Media capacity for
several days.

QUICK-RELEASE RECORDERS
Replace the recorders without
tools in less than 1 minute - no
adjustment necessary.

Benefits

» In-house support; availability within 24 hour on site.
» Service centers in most EMEA countries with highly qualified engineers.
» Financially healthy company with worldwide organization.
» Media kits for easy consumables handling.
» Robust error management.

All-In-One
**front-office solution,
easy to use.**

Medical Disc Device 2410 Series

EVEREST™
400
PRINTER

PRINTER
RIBBON ABSENT

RIMAGE

Medical Disc Device

2410
PROFESSIONAL

RIMAGE

Medical Solutions

Patient Name: John Doe
Patient ID: 123456789
Study: CT Head
Modality: US
Date: 08.07.2014

RIMAGE

Medical Solutions

Patient Name: John Doe
Patient ID: 123456789
Study: CT Head
Modality: US
Date: 08.07.2014

Everest 400
printer

Blu-ray Disc   DVD   COMPACT disc

Your Benefits

Streamlined workflow

Rimage systems are fully-networked disc publishing solutions that integrate with PACS and modalities. Anyone, anywhere in your organization can create discs containing patient data and personalized, durable, full-color, direct-to-disc labels in minutes.

Hands-free operation

Reliable robotics and software offload patient data to CD/DVD/BD for distribution and archiving, maximizing performance and leaving you free to do your job.

Portable media

Optical media is affordable and compatible across industries. Its intuitive format is easily distributed and used with any standard PC.

Secure distribution & archiving

Password protection safeguards content stored on optical media, and direct-to-disc thermal-retransfer printing is impervious to scratching, humidity and UV exposure.

Economical solution

Cost-effective media plus labor-saving automation maximizes your ROI. The expense of producing and duplicating medical images on disc is far less expensive than film.

RIMAGE® is

Integrated

in leading medical

DICOM software solutions.

Patient CD Workflow
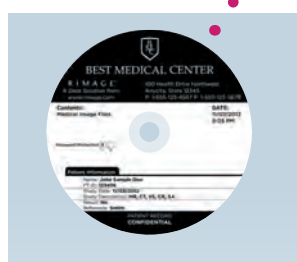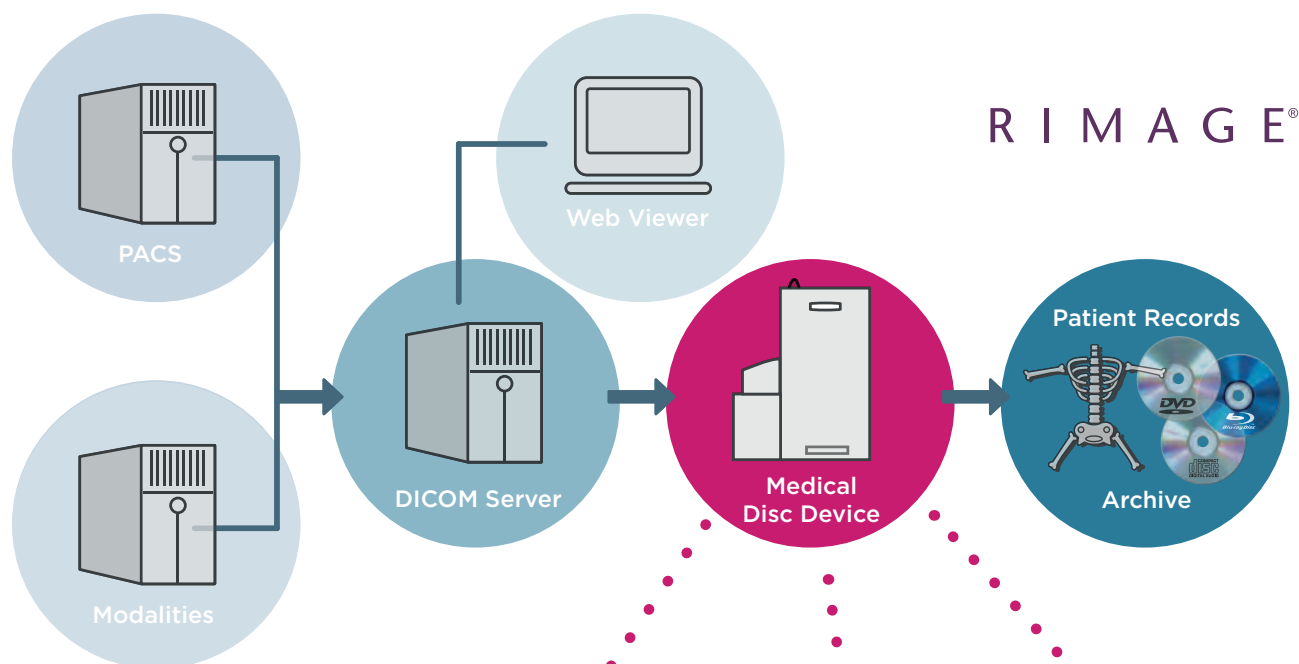
Print Technology / Rimage Printer	Thermal Transfer / Prism III	Thermal Retransfer / Everest 600/400	Inkjet / 480i
Rimage Product Series	MDD7200Np	MDD 7200Ne/2410	2000i
Number of patients	●●●	●●	●
Production robustness	●●●	●●	●
Production speed	●●●	●●	●
Hands-free operation	●●●	●●●	●●●
Low production costs	●●●	●●	●●
Print durability	●●	●●●	●
Full color printing	●	●●●	●●●

Overview Medical Disc Devices

MDD 7200Ne

Recorders	2 CD/DVD Disc
Printers	Everest 600
Input/Output	Carousel 4 x 100 disc bins 100 discs external output bin
Control PC	Embedded

MDD 7200Np

Recorders	2 CD/DVD Disc
Printers	Prism III
Input/Output	Carousel 4 x 100 disc bins 100 discs external output bin
Control PC	Embedded

MDD 2410

Recorders	2 CD/DVD/Blu-ray Disc
Printer	Everest 400
Input/Output	Carousel 3 x 50 disc bins five-disc external output bin Optional 50-disc external output bin
Control PC	End user supplied

Medical Disc Device
7200N Series

Medical Disc Device
2410 Series

RIMAGE® is

Integrated

in leading medical
DICOM software solutions.

RIMAGE® Software & Services

Customer Advantages

Performance

Rimage System Software is the powerful brain behind automated disc creation. From custom-designed direct-to-disc printing to system monitoring, Rimage provides everything you need to publish discs.

Productivity

Rimage software ensures your workflow and software integration is easy and intuitive. Rimage applications and tools can be used anywhere on the network and the Software Development Kit (SDK) makes software development a snap.

Reliability

Reliability of disc Medical Disc Devices in professional environments is paramount. Rimage systems' industry leading reliability not only includes system dependability but also recorded disc quality, disc print quality and error recovery.

Manageability

Rimage Medical Disc Devices are fully networked appliances. View the status of jobs, get accurate disc and media counts and control functionality from any machine on the network.

Integrator Advantages

Seamless Integration
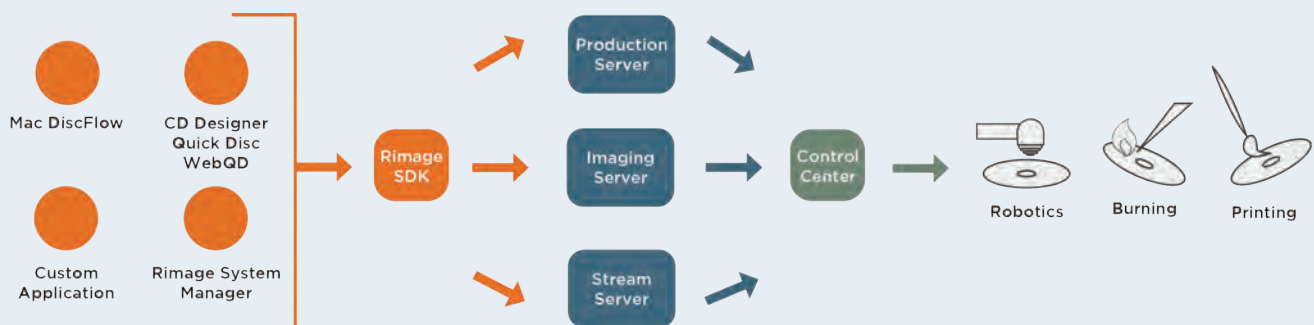
Rimage Software Development Kit (SDK)

If an out-of-the-box software solution doesn't work for your business, the Rimage Software Development Kit enables you to develop your own customized solution. Whatever your needs and however complex your operations, the Rimage SDK can help you integrate a disc publisher into your workflow.

„The Rimage software is both extremely versatile as well as dependable. Now it's easy for anyone on my team to sit at a workstation and set up a new patient CD."
Project Coordinator, Research Company

RIMAGE Media Kits

Never be caught short when publishing discs. Rimage offers a comprehensive collection of accessories and supplies to help get the most from your Rimage solution.

Rimage Media Kits deliver guaranteed performance with matched, pre-packaged quantities of discs and print ribbons. Rimage systems are designed to work with Media Kits to deliver consistent print quality and guaranteed data integrity.

Everest Media Kits come in 500, 1,000 and 10,000 disc quantities and are specifically designed for Everest thermal print coatings. CDs, DVDs and Blu-ray Discs in Media Kits are guaranteed to pick, clamp, record and print to your satisfaction.

Service and Support

Rimage maintenance agreements are designed to meet your production requirements and budget — keeping down time to an absolute minimum.

	Next Business Day On-Site	Rapid Exchange	Exchange	
Phone Support	Yes	Yes	Yes	
Email Support	Yes	Yes	Yes	
Online KnowledgeBase	Yes	Yes	Yes	
Delivery Arrival of replacement unit, parts or repair time	Next business day	Next business day	4-5 days	
On-Site Field Technician	Yes	No	No	

Customized service options in addition to those listed are available. Please consult Rimage or the Rimage service provider in your country for the specific response times, call hours and service agreement options for your system and for your location.

RIMAGE®

To learn more about Rimage Disc Publishing Medical Solutions visit
http://www.rimage-europe.info/medical/

To start a conversation with a medical and product market specialist visit
http://www.rimage-europe.info/contact/

Or, contact us at any of the phone numbers and addresses on the back page of this document

www.rimage.com

RIMAGE®