

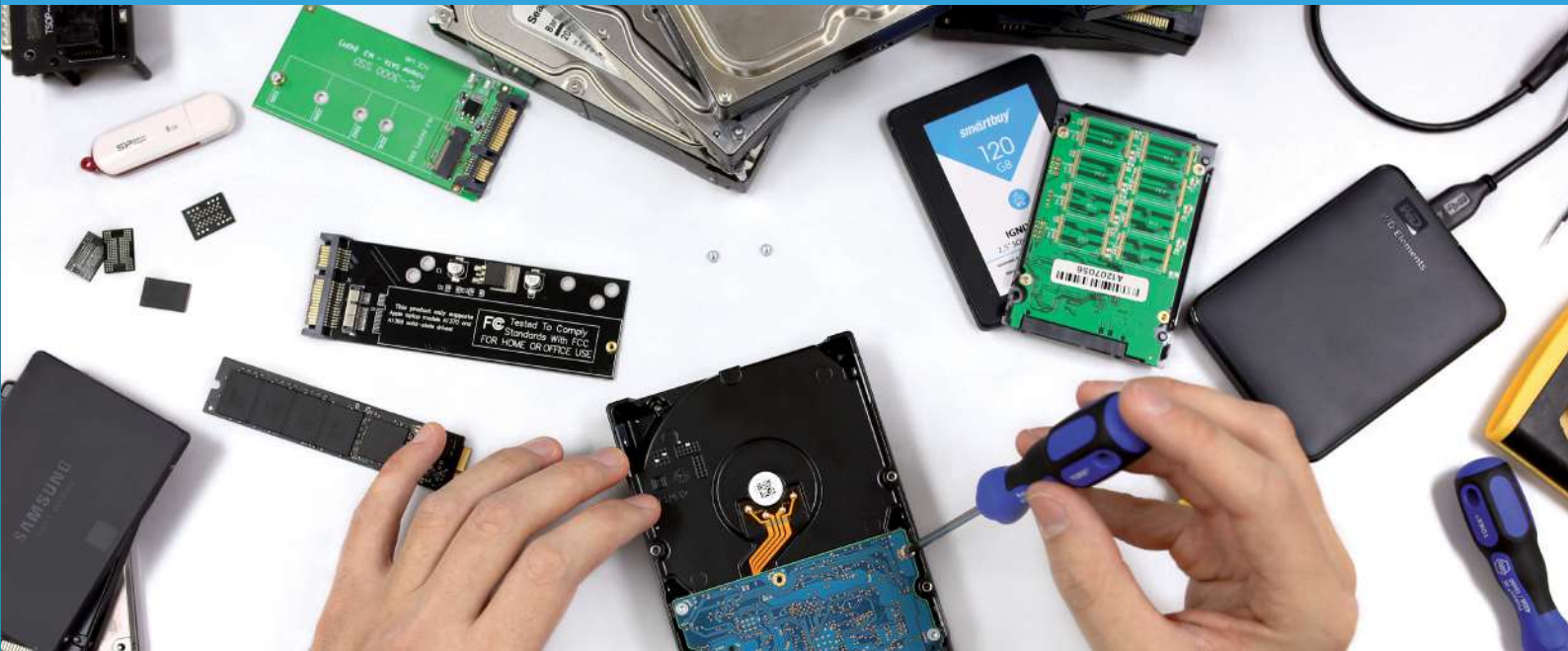


Professional Data Recovery Solutions

Product Catalogue



PC-3000 - the ultimate standard for all areas of data recovery:



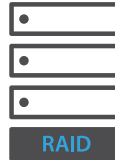
SATA/IDE HDD



SAS/SCSI HDD



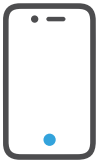
SATA/PCIe SSD



RAID



NAND Flash devices



Mobile devices

— Every serious data recovery engineer uses PC-3000!

ACE Lab, being the leader of the industry, is always the first to apply all of the latest innovations. The PC-3000 Tools deliver breakthrough technologies, up-to-date methods, and techniques for data recovery and drive repair. Our products offer the highest success rates, incomparable quality, and unparalleled support. For the convenience of our users, the software is available in four languages: English, Japanese, Chinese, and Korean.

PC-3000 is more than just a set of essential tools:

- You may be certain that with PC-3000 you'll get the 360-degree approach to your needs:
- Constant development and perfection of the hardware
- Regular software updates with many useful features
- Comprehensive technical support to help you with especially difficult cases
- A variety of training opportunities to master your skills in data recovery



Find PC-3000 that will suit your needs

Product name	Storage media type		
	SATA/IDE HDD	SATA SSD	PCIe SSD
PC-3000 Portable III System	PC-3000 Portable + Data Extractor		
PC-3000 Portable III SSD System	PC-3000 Portable + Data Extractor	+ PC-3000 SSD Extended	+ Additional PCIe SSD adapters
PC-3000 Portable III RAID System	PC-3000 Portable		
PC-3000 Portable III Ultimate System	PC-3000 Portable	+ PC-3000 SSD Extended	+ Additional PCIe SSD adapters
PC-3000 Express System	PC-3000 Express + Data Extractor		
PC-3000 Express SSD System	PC-3000 Express + Data Extractor	+ PC-3000 SSD	
PC-3000 Express RAID System	PC-3000 Express		
PC-3000 Express Ultimate System	PC-3000 Express	+ PC-3000 SSD	
PC-3000 UDMA System	PC-3000 UDMA + Data Extractor		
PC-3000 UDMA SSD System	PC-3000 UDMA + Data Extractor	+ PC-3000 SSD	
PC-3000 UDMA RAID System	PC-3000 UDMA		
PC-3000 UDMA Ultimate System	PC-3000 UDMA	+ PC-3000 SSD	
PC-3000 SAS System			
PC-3000 SAS RAID System			
PC-3000 Flash Basic Package			
PC-3000 Flash All-in-One Package			
PC-3000 Mobile			



PC-3000 Portable III Systems



The most universal data recovery systems for any type of storage media devices: HDD, PCIe/SATA SSD, RAID, NAND Flash drives, and SAS*

4-port controller

3 HDD/SSD/RAID members

Write protection

3 SATA/1 USB

ports with speed up to 490 MB/s

+

Fast imaging

SATA/USB drives

can be connected to the PC-3000 Portable at the same time. The total number of connected RAID members can be increased with motherboard ports and image files.

a special jumper on the device blocks any alteration of data during the extraction or imaging with SATA 0 and USB ports.



The PC-3000 Portable III System is a hardware-software solution intended for diagnostics, repair and data recovery from almost all storage media devices. Together with the ACE Lab's software products and adapters, the PC-3000 Portable III forms the systems to recover data from SATA/PATA/USB HDD, RAID and PCIe/SATA SSD both in the lab and on-site:

- ▶ PC-3000 Portable System (PC-3000 Portable + Data Extractor Portable)
- ▶ PC-3000 Portable RAID System (PC-3000 Portable + Data Extractor Portable RAID Edition)
- ▶ PC-3000 Portable SSD System (PC-3000 Portable + Data Extractor Portable + PC-3000 SSD Extended)
- ▶ PC-3000 Portable Ultimate System (PC-3000 Portable + Data Extractor Portable RAID Edition + PC-3000 SSD Extended)

What's special about PC-3000 Portable III



Compact size & Standalone Mode
Size: 15,35 x 8,4 x 4,65 cm.
No need for a host computer to diagnose, image and erase drives.



Few-clicks solutions & Easy Mode
Almost all daily cases with logically damaged HDDs can be solved with a few buttons.



Maximum data & Full-Featured Mode
The highest success rates of data recovery no matter how difficult the case is.



Drives condition check-up & reports
Automatic check-up of the drives' condition and generation of reports about it.



Damaged PCIe SSD Support
The world's first and only tool to recover data from DAMAGED PCIe SSDs.**



Faster work with USB HDD/SSD/Flash
Easy and reliable connection of USB HDD/SSD. Support of logically damaged NAND Flash drives and SD/micro SD cards.

The PC-3000 Portable III Kit:

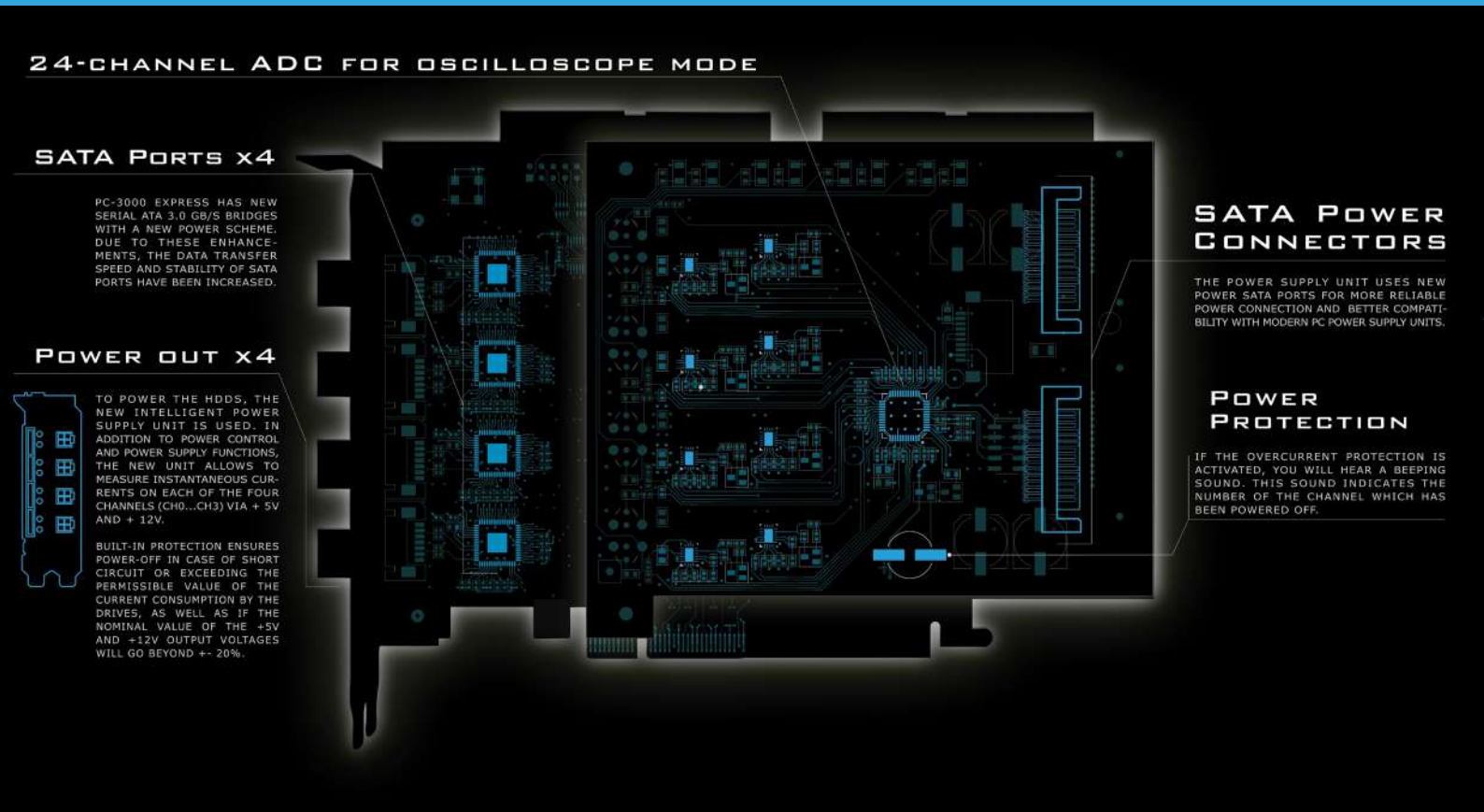


1. PC-3000 Portable III controller	– 1 pc.	11. M.2 PCIe NVMe/AHCI SSD & M.2 SATA SSD adapter	– 1 pc.
2. PC USB TERMINAL 3 adapter	– 1 pc.	12. ATCS, ATDA probe unlock	– 1 pc.
3. SATA-micro SATA adapter	– 1 pc.	13. USB 2.0 cable	– 1 pc.
4. PC-FUJ.SATA adapter	– 1 pc.	14. USB 3.0 cable	– 1 pc.
5. PC-SAMSUNG adapter	– 1 pc.	15. SATA/POWER cable	– 3 pcs.
6. PC-SEAG.SATA adapter	– 1 pc.	16. Power supply unit	– 1 pc.
7. PC-SEAGATE adapter	– 1 pc.	17. IDC10 (30 cm) cable	– 1 pc.
8. PC-TOSH.SATA adapter	– 1 pc.	18. PC-3000 Portable III software, resource database	– 1 pc.
9. PC-WD 3.5" adapter	– 1 pc.	19. 2-in-1 SD/microSD Card Reader Adapter	– 1 pc.
10. PC-WD 2.5" adapter	– 1 pc.	20. User manual	– 1 book

*To deal with SAS drives, you need to get additionally the SAS adapter for the PC-3000 Portable III.
**To work with Solid-State drives you need the PC-3000 solution which supports SSD: PC-3000 Portable SSD or Ultimate Systems



PC-3000 Express Systems



What's special about PC-3000 Express Rev. 2.0.

- ▶ Broad support of all generations of SATA/PATA HDD (500MB-8TB) with proven over time hardware platform
- ▶ More efficient HDD diagnostics due to the oscilloscope functions of the new Intelligent Power Supply Unit
- ▶ Better compatibility with modern PC power supply units as a result of substitution of the old 4-pin PATA Power Connectors with SATA Power connectors
- ▶ The increase of the data transfer rate and improvement of the SATA ports stability thanks to the new circuit design of the Serial ATA 3.0 GB/s bridges

The PC-3000 Express Kit:



Professional data recovery solutions for the labs with a big flow of cases

6-port*
tester-board

4 HDD/SSD/RAID
members

4 SATA
ports
with speed up to
150 MB/s

+

2 PATA
ports
with speed up to
133 MB/s

can be connected to the PC-3000 Express at the same time. Thus, you can restore either 4 SATA drives or 2 SATA and 2 PATA drives or 3 SATA and 1 PATA drives.

The total number of connected RAID members can be increased with motherboard ports, image files and the PC-3000 Hybrid System (see more on p. 10)

The PC-3000 Express is a hardware-software solution intended for diagnosing and repairing damaged SATA/IDE HDDs. Together with other ACE Lab's software products, it forms the fastest, most efficient and powerful systems to recover data from SATA/IDE HDDs, RAID and SSD that ever existed:

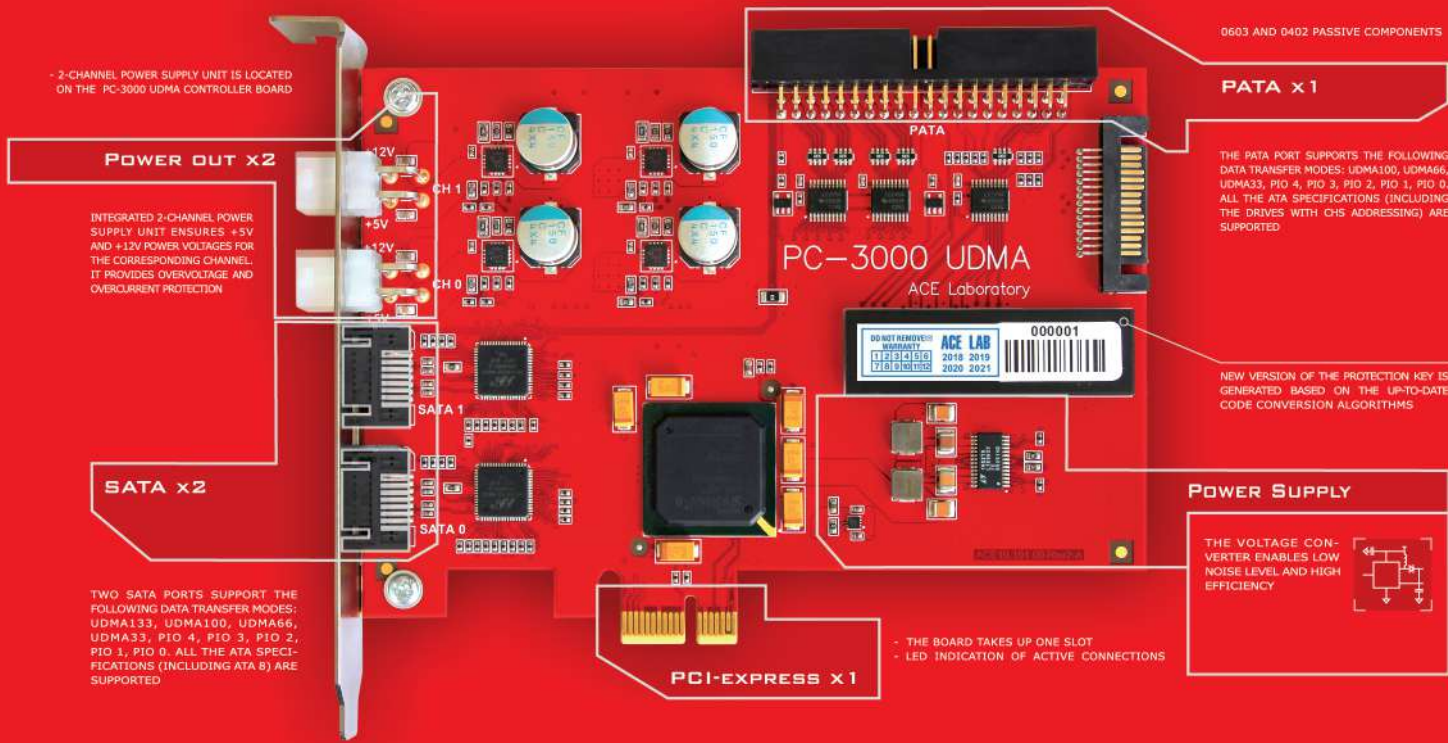
- ▶ PC-3000 Express System (PC-3000 Express + Data Extractor Express)
- ▶ PC-3000 Express RAID System (PC-3000 Express + Data Extractor Express RAID Edition)
- ▶ PC-3000 Express SSD System (PC-3000 Express + Data Extractor Express + PC-3000 SSD)
- ▶ PC-3000 Express Ultimate System (PC-3000 Express + Data Extractor Express RAID Edition + PC-3000 SSD)

1.	PC-3000 Express controller	– 1 pc.	14.	PC-WD 2.5" adapter	– 1 pc.
2.	PC-USB PWR adapter	– 1 pc.	15.	ATCS, ATDA probe unlock	– 1 pc.
3.	PC USB TERMINAL 3 adapter	– 2 pcs.	16.	USB 2.0 cable	– 2 pcs.
4.	PC-2" adapter	– 1 pc.	17.	SATA RAID edition (100 cm) cable	– 4 pcs.
5.	SATA-micro SATA adapter	– 1 pc.	18.	UDMA80 (80 cm) flat cable	– 2 pcs.
6.	MX-SAFE adapter	– 1 pc.	19.	IDC10 (30 cm) cable	– 2 pcs.
7.	PC-FUJ.SATA adapter	– 1 pc.	20.	MX-SAFE power cable	– 1 pc.
8.	PC-QUANTUM adapter	– 1 pc.	21.	SATA HDD (100 cm) power cable	– 2 pcs.
9.	PC-SAMSUNG adapter	– 2 pcs.	22.	PATA HDD (85 cm) power cable	– 2 pcs.
10.	PC-SEAG.SATA adapter	– 2 pcs.	23.	PATA-SATA (15 cm) power adapter	– 2 pcs.
11.	PC-SEAGATE adapter	– 2 pcs.	24.	PC-3000 Express software, resource database	– 1 pc
12.	PC-TOSH.SATA adapter	– 2 pcs.	25.	User manual	– 1 book
13.	PC-WD 3.5" adapter	– 1 pc.			

* SATA0 and SATA1 are the primary ports, SATA2 and SATA3 ports are switchable with the PATA ports (PATA0 and PATA1).



PC-3000 UDMA Systems



What's special about PC-3000 UDMA Rev. 2.0.

- ▶ Broad support of all generations of SATA/PATA HDD (500MB-8TB) with proven over time hardware platform
- ▶ The data transfer speed and the SATA ports stability is increased with the new 88SA8052-64 QFN Serial ATA 3.0 Gb/Sec bridge chipset
- ▶ The stability of power supply and electromagnetic compatibility is improved with jam-resistant package of coils with the 1.2V and 3.3V power supply regulator on Xilinx chipset. The connection of balanced capacitors is changed. The printed board of the adapter is improved for large currents with the enhanced circuitry of the power control adapter
- ▶ The safety and stability of HDD power supply is boosted with a highly reliable power supply connector – SATA POWER

The PC-3000 UDMA Kit:



The optimal choice for data recovery start-ups or daily tasks in a data recovery facility

3-port*
tester-board

2 HDD/SSD/RAID
members

2 SATA
ports
with speed up to
150 MB/s

+

1 PATA
ports
with speed up to
133 MB/s

can be connected to the PC-3000 UDMA at the same time. Thus, you can restore either 2 SATA drives or 1 SATA and 1 PATA drives simultaneously.

The total number of connected RAID members can be increased with motherboard ports and image files.

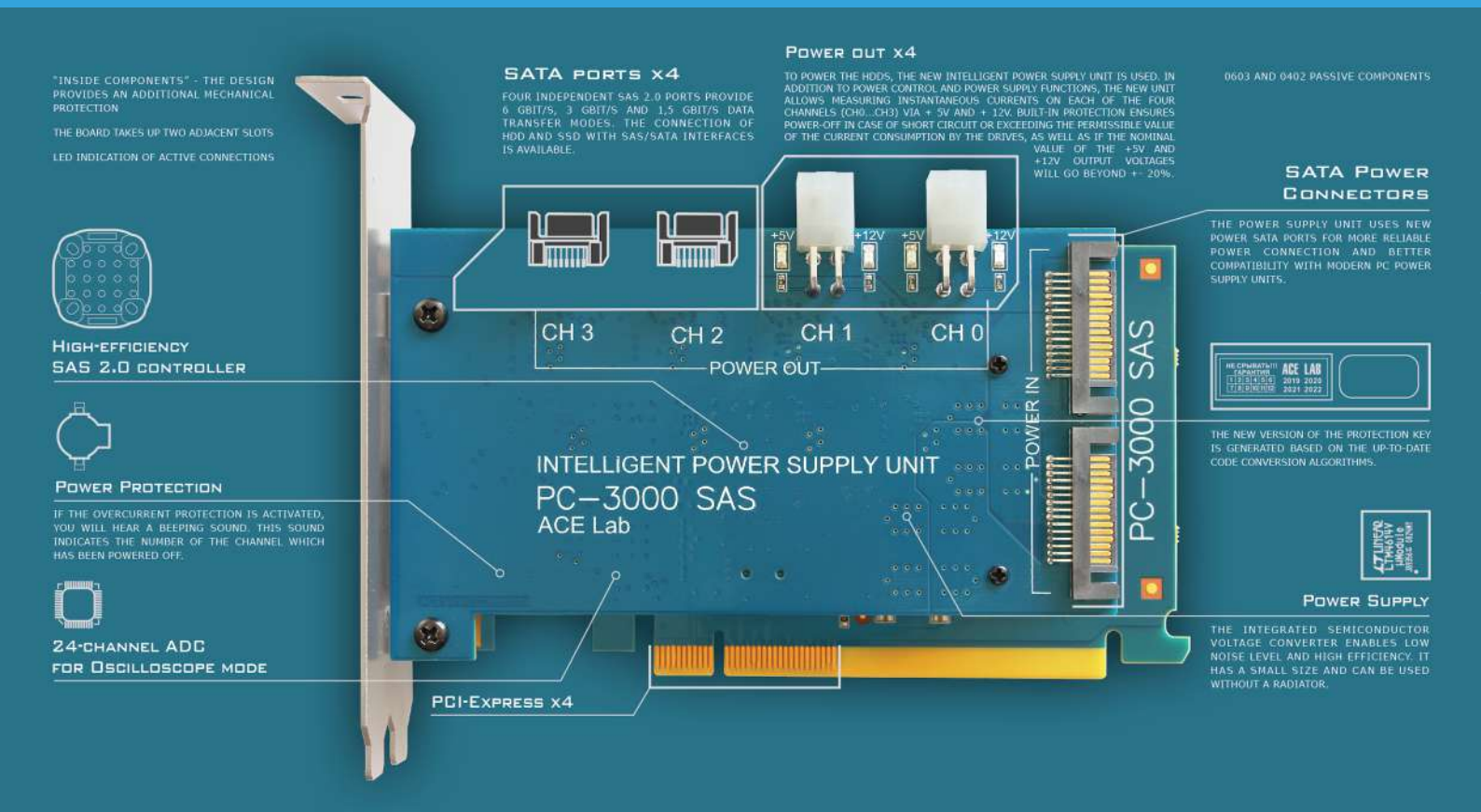
The PC-3000 UDMA is a hardware-software solution intended for diagnosing and repairing damaged SATA/IDE HDDs. Together with other ACE Lab's software products, it represents the systems with optimal combination of high efficiency and reasonable price to recover data from SATA/IDE HDDs, RAID and SSD:

- ▶ PC-3000 UDMA System (PC-3000 UDMA + Data Extractor UDMA)
- ▶ PC-3000 UDMA RAID System (PC-3000 UDMA + Data Extractor UDMA RAID Edition)
- ▶ PC-3000 UDMA SSD System (PC-3000 UDMA + Data Extractor UDMA + PC-3000 SSD)
- ▶ PC-3000 UDMA Ultimate System (PC-3000 UDMA + Data Extractor UDMA RAID Edition + PC-3000 SSD)

1.	PC-3000 UDMA controller	– 1 pc.	14.	PC-WD 2.5" adapter	– 1 pc.
2.	PC-USB PWR adapter	– 1 pc.	15.	ATCS, ATDA probe unlock	– 1 pc.
3.	PC USB TERMINAL 3 adapter	– 1 pc.	16.	USB 2.0 cable	– 1 pc.
4.	PC-2" adapter	– 1 pc.	17.	SATA RAID edition (100 cm) cable	– 2 pc.
5.	SATA-micro SATA adapter	– 1 pc.	18.	UDMA80 (80 cm) flat cable	– 1 pc.
6.	MX-SAFE adapter	– 1 pc.	19.	IDC10 (30 cm) cable	– 1 pc.
7.	PC-FUJ.SATA adapter	– 1 pc.	20.	MX-SAFE power cable	– 1 pc.
8.	PC-QUANTUM adapter	– 1 pc.	21.	SATA HDD (100 cm) power cable	– 1 pc.
9.	PC-SAMSUNG adapter	– 1 pc.	22.	PATA HDD (85 cm) power cable	– 1 pc.
10.	PC-SEAG.SATA adapter	– 1 pc.	23.	PATA-SATA (15 cm) power adapter	– 1 pc.
11.	PC-SEAGATE adapter	– 1 pc.	24.	PC-3000 UDMA software, resource database	– 1 pc.
12.	PC-TOSH.SATA adapter	– 1 pc.	25.	User manual	– 1 book
13.	PC-WD 3.5" adapter	– 1 pc.			

* SATA0 is the primary port, SATA1 is switchable with the PATA port (PATA0).

PC-3000 SAS 6 Gbit/s Systems



What's special about the PC-3000 SAS 6 Gbit/s

- ▶ The possibility to work faster as a result of increase of the drive's reading speed to 6 Gbit/s
- ▶ More efficient diagnostics and analysis of the drives due to the oscilloscope functions of the new Intelligent Power Supply Unit
- ▶ Better compatibility with modern PC power supply units thanks to the new advanced SATA Power connectors
- ▶ The ability to access Firmware for solving issues with servers and storage systems based on SAS drives

The PC-3000 SAS Kit:



The most sophisticated products to solve different issues with SAS drives

4-port
tester-board

4 SAS
ports
with speed up to
600 MB/s

+

Fast imaging
of healthy
SCSI/SAS & SATA
drives

4 SAS HDD/RAID
members

can be connected to the PC-3000 SAS at the same time.
The total number of connected RAID members can be increased with motherboard ports, image files and the PC-3000 Hybrid System (see more on p. 10)

1.	PC-3000 SAS 6 Gbit/s controller	– 1 pc.
2.	SAS SFF-8482/SATA/Molex (100cm) cable	– 4 pcs.
3.	HDD SCSI (50 cm) power cable	– 4 pcs.
4.	PC-3000 SAS software	– 1 pc.
5.	User manual	– 1 book

The PC-3000 SAS is a hardware-software solution intended for diagnosing and repairing damaged SAS/SCSI HDDs. Together with other ACE Lab's software products, it forms the most sophisticated and the fastest systems to recover data from SAS/SCSI HDDs and RAID :

- ▶ PC-3000 SAS System (PC-3000 SAS + Data Extractor SAS)
- ▶ PC-3000 SAS RAID System (PC-3000 SAS + Data Extractor SAS RAID Edition)



Data Recovery from HDD

```
0x0000: 46 49 54 20 20 20 20 20
0x0010: 41 30 09 00 9D 00 10 00
0x0020: B3 00 42 4F 4F 54 53 45
0x0030: 02 00 46 49 54 20 23 20
0x0040: 04 00 4D 4 9 53 54 20
0x0050: 00 00 46 53 49 20 20 20
0x0060: 9B 00 53 56 5F 54 42 4C
0x0070: B4 00 52 52 30 5F 54 42
0x0080: B5 00 52 45 53 4F 5F 54
0x0090: 68 00 46 44 54 5F 54 42
0x00A0: 0C 00 43 48 4E 5F 54 42
0x00B0: 06 00 43 4F 4E 46 49 47
```

DATA EXTRACTOR
THE BEST... EVER

Data recovery professionals' best choice

The Data Extractor professional software product is an essential part of the PC-3000 hardware-software systems intended for recovering data from SATA (Serial ATA), ATA (IDE) HDDs 3.5", 2.5", 1.8", 1.0", SAS (Serial Attached SCSI), SCSI, USB HDD, SSHD (Solid State Hybrid Drive), etc.

When working with a damaged drive, it is very important to read the maximum data volume in the shortest period of time,

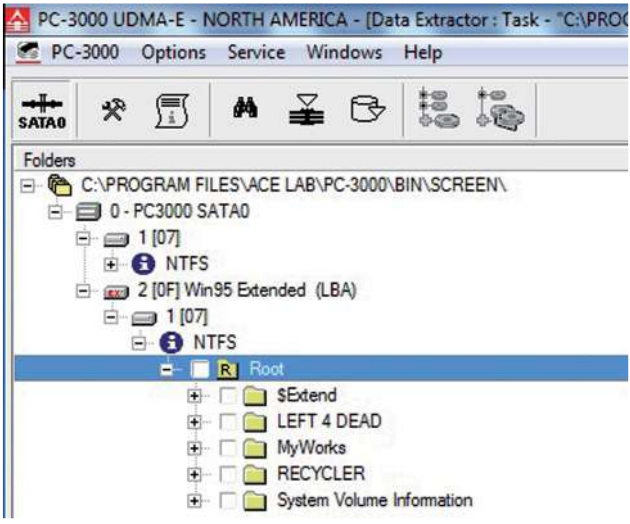
as a damaged HDD can stop functioning at any time. The Data Extractor has the powerful integrated functionality for logical analysis of file systems, which allows to read only necessary data. This advanced technology greatly reduces the volume of the read data, the workload on damaged HDDs and the time required for data recovery. Thus, you can read the data even if a drive has considerable physical damages.

To recover data from HDD you need one of the following Systems:

- ▶ PC-3000 Express Systems
- ▶ PC-3000 UDMA Systems
- ▶ PC-3000 Portable Systems
- ▶ PC-3000 SAS Systems

Supported file systems

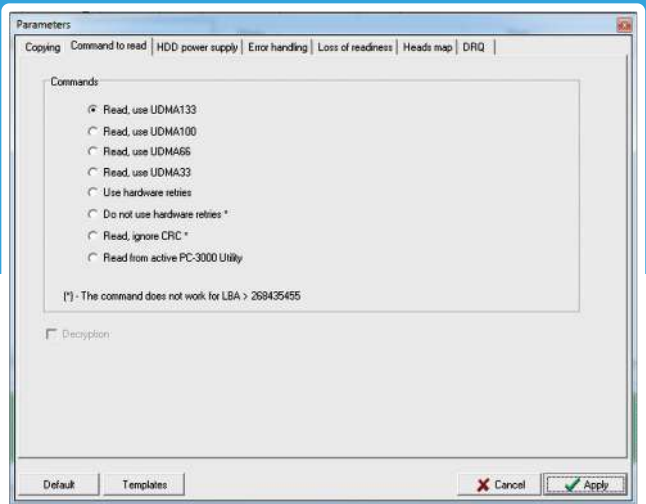
The Data Extractor supports the most popular file systems FAT, exFAT, NTFS, ReFS, HFS+, APFS, EXT2/3/4, XFS, F2FS, ReiserFS, BtrFS, VMFS, UFS1/2, ZFS, DHF4.1, WFS0.x (Digital Video Recorder). It is possible to build the used/unused sectors map, the file system metadata map, the map of selected files and folders. The specialized modes, such as **Partition Data Analysis**, enable to recover data from the damaged file systems (data deleted by users, virus attacks, deleted metadata, software failures, etc.). Data recovery from virtual drives (flat, vmdk, vhd, vhdx, dmg) and encrypted partitions (FileVault, BitLocker, TrueCrypt) are supported.



Working with damaged drives

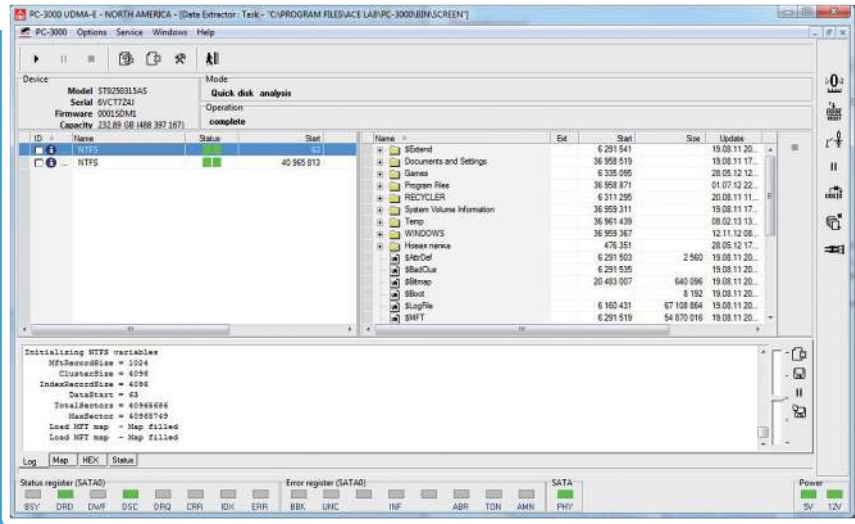
The PC-3000 hardware-software system allows to create a «shadow» copy of the read data and use this copy for the further work. It minimizes the handling of bad drives. Moreover, the Data Extractor has an extended functionality for working with damaged HDD:

- ▶ Reading HDD in technological mode
- ▶ Reading by head map
- ▶ Reading mode selection (UDMA 133/100/66/33, PIO 4/3/2/1/0)
- ▶ Read forward and backward
- ▶ Read ahead (cache function) disabling
- ▶ Autorelocation disabling
- ▶ Reading with hardware and software retries
- ▶ Reading with ignoring ECC
- ▶ Power supply control
- ▶ Software and hardware resets
- ▶ Virtual translator mode for recovering data from HDDs with corrupted dynamic translators
- ▶ Flexible map operation functionality (separate map building for heads)



Quick Disk Analysis mode

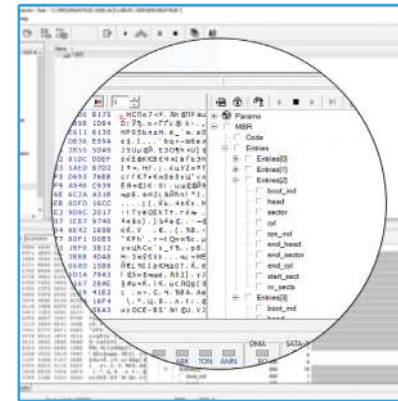
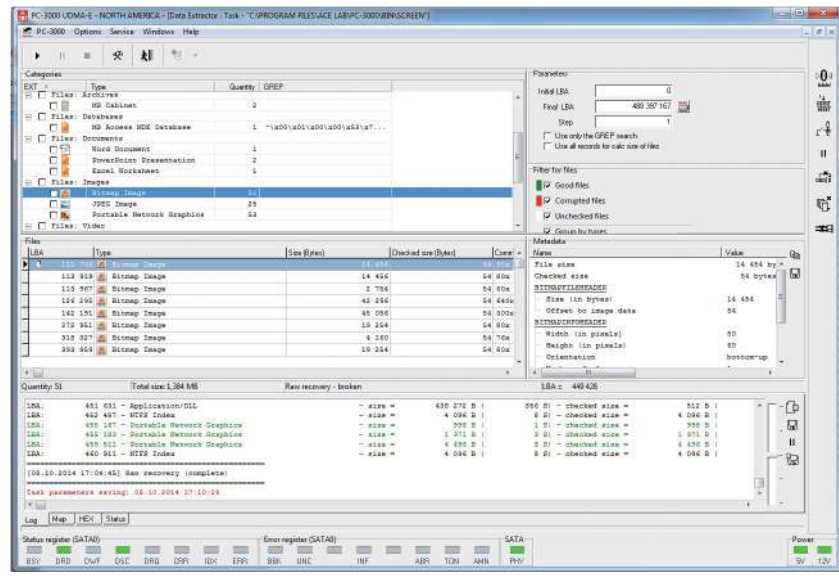
This mode allows to find the partitions which are not available anymore because the disk structure is lost: MBR, GPT, Apple partition table, etc. It enables to estimate the partition integrity and view a file/folder tree.





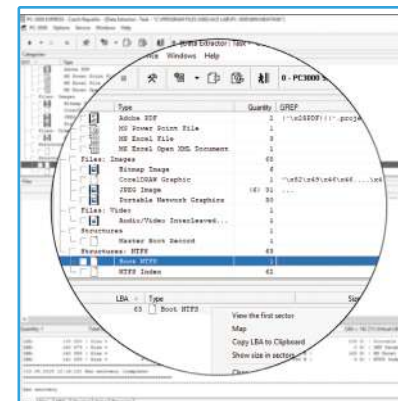
Advanced RAW Recovery mode

The mode allows to recover the most part of user data even if the file system is catastrophically damaged. The RAW Recovery mode searches and analyses the integrity of files irrespective of the file system structure. It supports a broad range of user data (images, audio/video files, archives, etc.) and file system metadata. The regular expression mechanism allows to add your personal search settings.



Data structures viewing and navigation mode

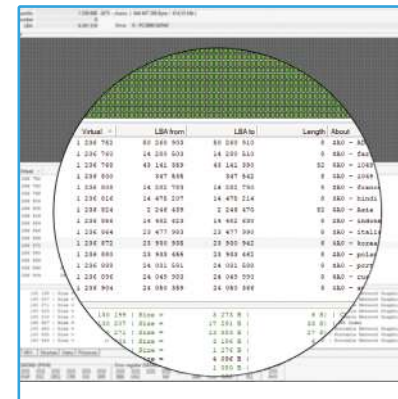
The supplied database of structures includes different filesystem and file metadata



Analysis of data maps through the RAW recovery mode and GREP search

Raw recovery is advanced file carving. RAW recovery mode and GREP search support a broad range of user data (images, audio/video files, archives, etc.) and file system metadata. Using them you can:

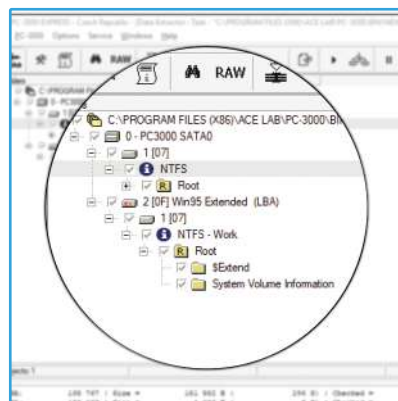
- ▶ Recognize and recover most of user data even if the file system is critically damaged
- ▶ Search and analyze the integrity of files regardless of the file system structure
- ▶ Modify your custom search reference with the regular expression method, etc.



Map building

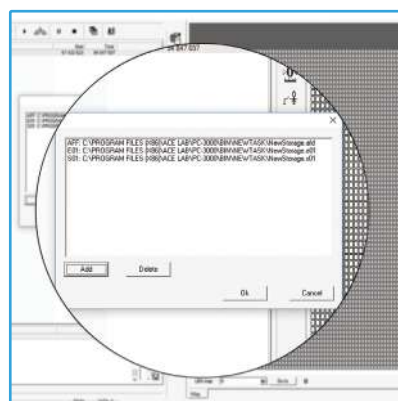
The possibility to build maps for files, folders, partitions, used/unused space, file system metadata, etc.

Key features for Digital Forensics



Storage Device Decryption

Possibility to decrypt software encrypted partitions (Microsoft Bitlocker, Apple FileVault, TrueCrypt) and hardware encrypted Western Digital drives (including Self-encrypting drives)



Support for forensic extensions

Support for *.E01; *.aff; *.s01; *.001 extensions for drive images and partitions. Data export possibility into *.E01; *.aff; *.s01; *.001 file extensions

Other powerful features of PC-3000 Systems to recover digital evidence from HDD:

- ▶ Sector-by-sector data copy to one or several healthy drive(s)
- ▶ Export data possibility for built maps
- ▶ Viewing Service Area modes for searching and recovering the lost part of data
- ▶ Drives and tasks «mounting» possibility to the OS in the Read-Only mode
- ▶ Ability to export the files and catalogues lists to the CSV format
- ▶ Hash sum calculation for files, folders, partitions, and sector chains
- ▶ Possibility to search and analyze the metadata of supported file systems
- ▶ Opportunity to group and sort the files by selected parameters (name, date, type)



Data Recovery from RAID



The easiest, fastest and smartest systems to recover data from RAID



The Data Extractor RAID Edition software product is an essential part of the PC-3000 Systems intended for recovering data from RAID arrays. The hardware-software combination enables to solve the most complex RAID cases when one or several drives have not only logical (deleted partitions, virus attacks, etc.) but also serious physical damages. Data Extractor RAID Edition contains all the features of Data Extractor.

To recover data from RAID you need one of the following Systems:

- ▶ PC-3000 Express RAID/Ultimate System
- ▶ PC-3000 UDMA RAID/Ultimate System
- ▶ PC-3000 Portable RAID/Ultimate System
- ▶ PC-3000 SAS RAID System

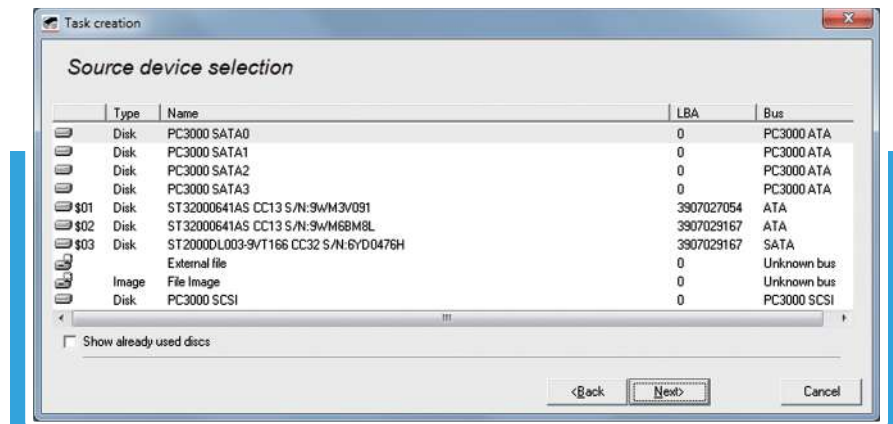
Supported virtual RAID levels

- ▶ 0 (Stripe), 1 (Mirror), 1E Offset and Adjacent, JBOD, 4, 5, 5E, 5EE, 6 and 6-Adaptec
- ▶ Various combined levels: 10, 50, 51, 60 and others (due to the possibility to use virtual RAID array as a member)
- ▶ Software-based RAID and multi-disk storage systems: LDM and mdadm structure analysis, WSS (Windows Storage Spaces), ZFS RAID-Z, Btrfs RAID, Apple Fusion Drive (HFS+, APFS)
- ▶ Custom configurations that are set by user with the tabular (matrix) presentation

0	1	XOR	2	3	XOR
5	XOR	4	7	XOR	6
XOR	8	9	XOR	10	11

Virtual RAID members

- ▶ Drives connected to the PC-3000 ports
- ▶ Storage devices connected in a standard way
- ▶ Image files
- ▶ Data Extractor tasks created previously with copies to files
- ▶ Previously created virtual RAID's



Working with built RAID array

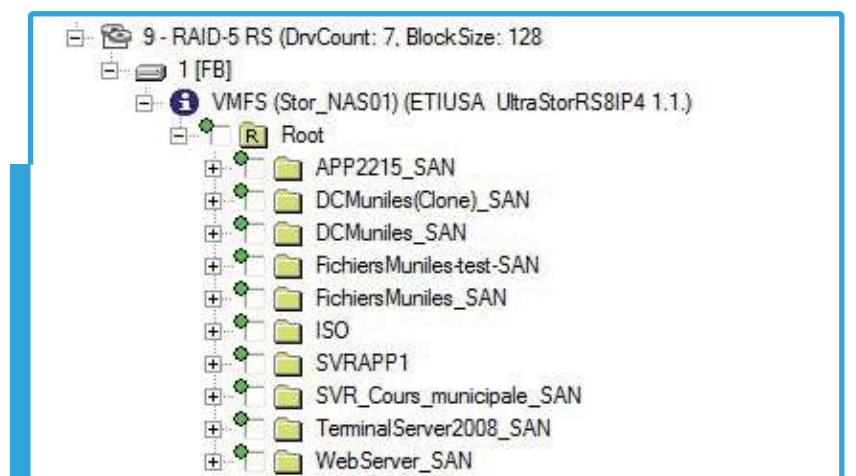
Features:

Ability to work with a virtual RAID array on-the fly (as with a conventional drive without need for imaging of virtual RAID):

- ▶ Reviewing all supported file systems
- ▶ Various logical recovery modes
- ▶ Mounting of virtual RAID to Operating System

Specialized features:

- ▶ Recovering data from redundant RAID arrays (block copies, XOR, Reed-Solomon)
- ▶ Checking the integrity of data for RAID arrays with redundancy
- ▶ Building various «Sub-maps» for specific RAID members

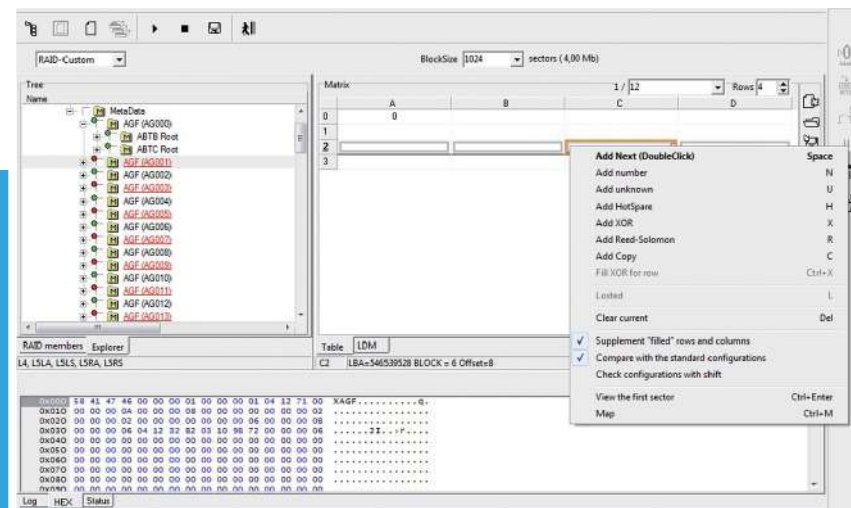




Determining the array configuration

Specialized features make it easier to determine the RAID configuration:

- ▶ Auto-detection mode based on the analysis of RAID metadata (mdamd, LDM, etc.)
- ▶ Unique auto-detection mode based on the analysis of file systems and user data
- ▶ Powerful interactive mode helping to easily determine even the unusual configurations
- ▶ RAID member statistics is effective and robust way that allows to determine RAID parameters
- ▶ Flexible automatic operations enabling the user to control the process
- ▶ Useful search tools help to define numerous RAID parameters (detecting the size, reviewing the file system structures, metadata with disk structure, analysis of the information from LDM, etc.)
- ▶ The possibility to determine the array parameters without any effect on the damaged HDDs



Working with Damaged HDDs in RAID

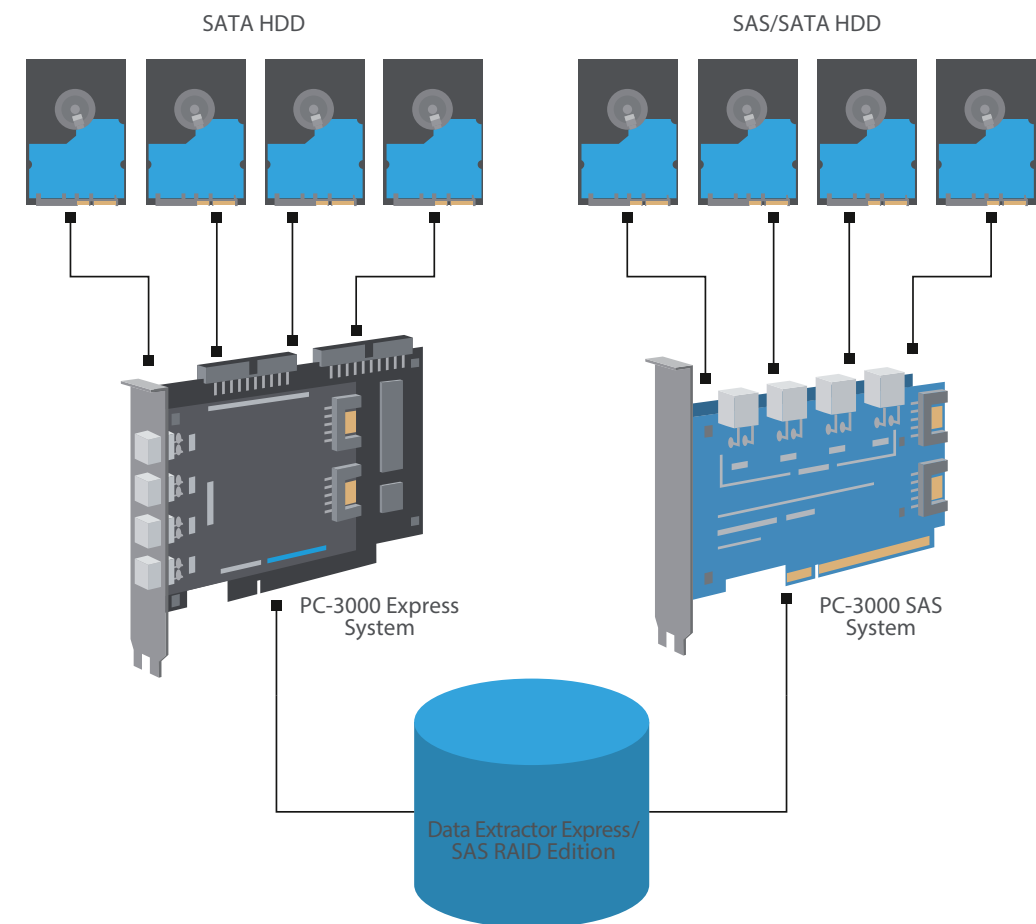
The Data Extractor RAID Edition software can work with several damaged HDDs connected to the PC-3000 ports within one task at the same time. The total number of connected HDDs can be increased by using motherboard ports and image files, as well as creating the PC-3000 Hybrid System.

Key features:

- ▶ You can make a full or partial data copy from any HDD included in the RAID
- ▶ It is possible to create and use a virtual translator for any HDD in the RAID or the whole virtual RAID
- ▶ Efficient interaction with the specialized PC-3000 Utilities for HDDs connected to the PC-3000 ports (power supply management, reset commands, choice of reading command, work in technological mode, etc.)
- ▶ Redundancy usage with the purpose of data recovery from the damaged HDDs
- ▶ The possibility to skip a damaged HDD while determining the array configuration or to use the data taken from a copy
- ▶ Integrated logical analysis features that allow to read only the minimally necessary amount of data from the storage device, thus reducing the workload and increasing the chances of successful recovery
- ▶ Advanced features for working with SCSI and SAS storage devices (full control over reading parameters, choice of reading command, building the head map, etc.)

The PC-3000 Hybrid System to Recover Data from Hybrid RAID

To work with Hybrid RAID arrays which consist of SATA and SAS/SCSI HDDs, ACE Lab has developed a powerful solution to help you in the most efficient way. The new PC-3000 SAS 6 Gbit/s System paired with the PC-3000 Express RAID System or the PC-3000 Express System paired with the PC-3000 SAS 6 Gbit/s RAID System will turn your tools into the PC-3000 Hybrid System.



The PC-3000 Hybrid System offers you new opportunities. By using it, you will be able to:

- ▶ Recover data and evidence from hybrid RAID arrays which consist of different hard drive types: SATA and SATA/SCSI.
- ▶ Operate with big RAID arrays which contain up to 8 HDDs (4 SATA drives are connected to the PC-3000 Express board and 4 more drives — to the PC-3000 SAS board). Thus, if you have such RAID array, you will be able to connect all the drives to the PC-3000 ports and be sure that the data will not be changed during the data recovery process.
- ▶ Connect any number of devices to available ports. The high-speed PC-3000 SAS 6 Gbit/s allows to connect SATA and SAS HDDs and work with them at the highest possible speed, both for reading and writing data (for example, when creating a copy).



Data Recovery from SSD



PC-3000 SSD DRIVE THE CHANGE

The leading-edge unique solution for recovering SSD in technological mode

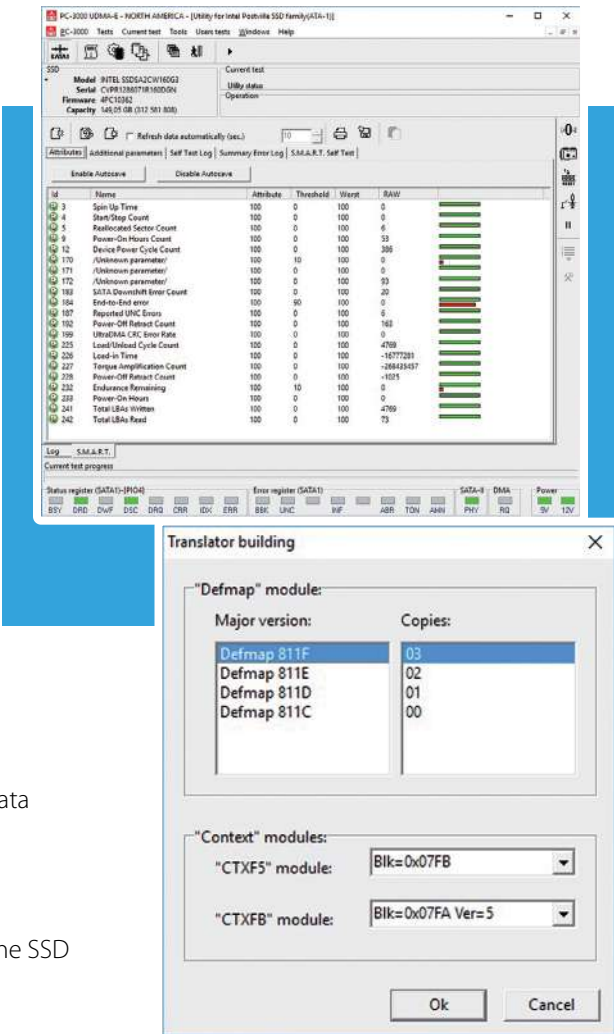
The PC-3000 SSD Software is a professional product intended for restoring SSD and recovering data from them.

To recover data from SSD you need one of the following Systems:

- ▶ PC-3000 Express SSD/Ultimate System
- ▶ PC-3000 UDMA SSD/Ultimate System
- ▶ PC-3000 Portable SSD/Ultimate System

Key Features for SSD Diagnosis, Repair and Data Recovery

- ▶ Diagnose an SSD in technological mode
- ▶ View the logs of hidden defects (P-page, G-page)
- ▶ Perform low-level formatting to hide the discovered defects
- ▶ Reset the logs and S.M.A.R.T. parameters
- ▶ Search for the damaged memory chips
- ▶ Provide direct access to the content of memory chips so that you do not need to unsolder the chips
- ▶ Emulate the translator operation in order to get an access to user data
- ▶ Load the microcode into the drives RAM
- ▶ Read and write the content of the SSD ROM
- ▶ Verify and restore the SSD service information
- ▶ View the password and reset the password that was earlier set on the SSD
- ▶ Turn off background processes in the SSD to prevent data damage
- ▶ Work with the Data Extractor



	PC-3000 SSD	PC-3000 SSD Extended
Compatibility with the PC-3000 hardware-software systems	PC-3000 Express, PC-3000 UDMA	PC-3000 Portable III
Supported manufacturers:	ADATA, AMD, Apacer, Corsair, Crucial, DEXP, GOODRAM, INDILINX, Intel, KingDian, KingSpec, Kingston, Lexar, Lite-On, Micron, OCZ, Patriot, Plextor, PNY, QUMO, RevuAhn, Samsung, SanDisk, Seagate, Silicon Power, Smartbuy, Transcend, Western Digital, etc. More manufacturers are added with the updates.	
Supported interfaces:		
SATA	✓	✓
M.2 SATA*	✓	✓
mSATA*	✓	✓
AHCI*		✓
NVMe*		✓
M.2 PCIe*		✓
PCIe x16*		✓
Apple Macbook*		✓

*The appropriate adapter from ACE Lab or third-party vendors is required.

Breakthrough: PCIe SSD Support in the PC-3000 Portable III



M.2 PCIe NVMe/AHCI SSD & M.2 SATA SSD adapter



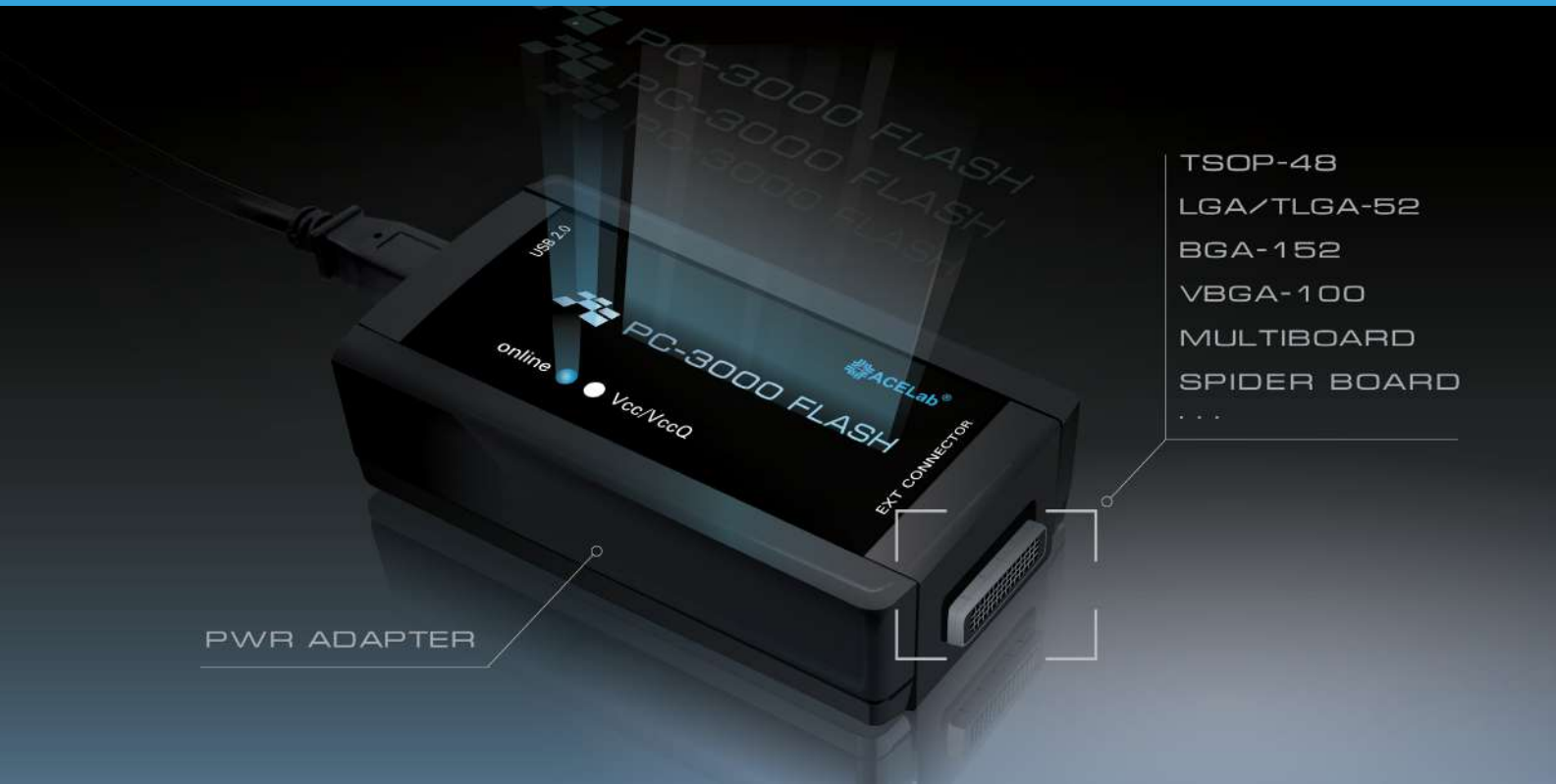
PCIe NVMe/AHCI Adapter for Apple Macbook SSD



PCIe x16 SSD Adapter



PC-3000 Flash (4.0.)



— PC-3000 Flash Basic Package



1. PC-3000 Flash Reader (ver.4.0)	– 1 pc.	7. LGA-52/TSOP-48 Module	– 1 pc.
2. TSOP-48 adapter	– 1 pc.	8. BGA-152/VBGA-100 Module	– 1 pc.
3. LGA/TLGA-52/60 (14x18) adapter	– 1 pc.	9. USB 2.0 Cable	– 1 pc.
4. BGA-152/132 adapter	– 1 pc.	10. PC-3000 software	– 1 pc.
5. Multiboard Adapter	– 1 pc.	11. User manual	– 1 pc.
6. Monolith Module	– 2 pcs.		

— PC-3000 Flash All-in-One Package



1. PC-3000 Flash Reader (ver.4.0)	– 1 pc.	9. LGA-52/TSOP-48 Module	– 1 pc.
2. Spider Board adapter	– 1 pc.	10. BGA-152/VBGA-100 Module	– 1 pc.
3. TSOP-48 adapter	– 1 pc.	11. BGA-152/132 adapter	– 1 pc.
4. TSOP-48 W (wide) adapter	– 1 pc.	12. TSSOP-56 adapter	– 1 pc.
5. LGA/TLGA-52/60 (14x18) adapter	– 1 pc.	13. VBGA-100 adapter	– 1 pc.
6. LGA/TLGA-52/60 (12x17) adapter	– 1 pc.	14. USB 2.0 Cable	– 1 pc.
7. Multiboard Adapter	– 1 pc.	15. PC-3000 software	– 1 pc.
8. Monolith Module	– 2 pcs.	16. User manual	– 1 pc.

— State-of-the-art solution with the advanced modes for the most successful data recovery from NAND Flash devices

The PC-3000 Flash professional hardware-software system is well-known as the most efficient, comprehensive and user-friendly solution with the advanced modes for NAND data recovery. It is a highly-demanded product among data recovery engineers as it offers the widest range of features and newest algorithms to recover data with the maximum success rate. The PC-3000 Flash will help you with both simple cases using «one-click» solutions and the most complex ones using a large selection of manual modes.

It supports various NAND-based devices such as: USB Flash drives, SD, microSD, Memory Stick (MS), xD, MMC, CF, Voice Recorder, etc. even if there is no access by conventional means. The PC-3000 Flash Reader ver.4.0 has a built-in power control adapter that allows to manage power supply for the majority of adapters.

The PC-3000 Flash software is being constantly developed, providing the users with new features to solve more NAND issues than any other tool available on the market.

— What is special about PC-3000 Flash:

- ▶ Over 7900 «one-click» solutions in the PC-3000 Flash Solution center to recover data in 5 minutes
- ▶ The highest data recovery success rates with the Hardware Retries mode to read out damaged memory chips
- ▶ Regularly updated Online Databases (XOR, Dynamic XOR, ECC, Page Format, ReadRetry Tables) to get the latest resources for the present-day flash drives
- ▶ The most universal and affordable technologies and an extensive Monolith Database to recover data from a great variety of monoliths
- ▶ The biggest team of highly qualified Technical Support engineers ready to help with any Flash recovery case
- ▶ A huge number of articles at blog.acelaboratory.com and a separate section at forum.acelaboratory.com to find the solutions to your specific cases.



— Adapters sets – combo offers to save time and money

Starter Monolith Set



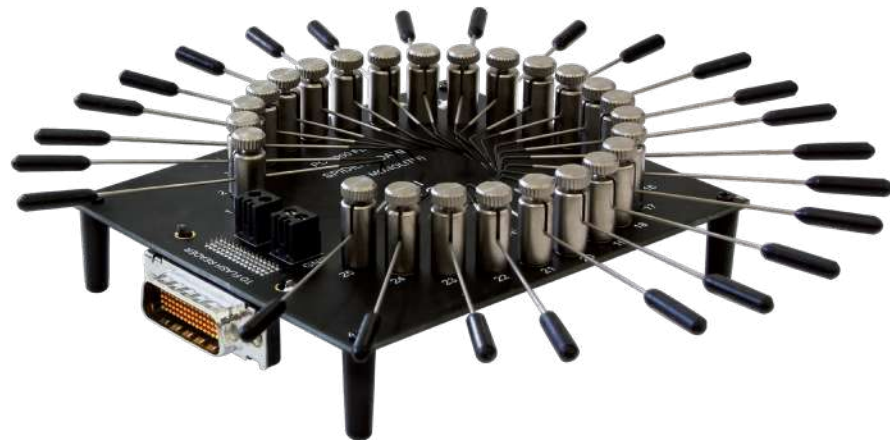
- | | |
|----------------------------|---------|
| 1. Multiboard Adapter | – 1 pc. |
| 2. Monolith Module | – 2 pc. |
| 3. LGA-52/TSOP-48 Module | – 1 pc. |
| 4. BGA-152/VBGA-100 Module | – 1 pc. |

Extended Set



- | | |
|-----------------------------------|---------|
| 1. TSSOP-56 Adapter | – 1 pc. |
| 2. VBGA-100 Adapter | – 1 pc. |
| 3. LGA/TLGA-52/60 (12x17) Adapter | – 1 pc. |
| 4. TSOP 48 W adapter | – 1 pc. |

— Spider Board Adapter



Change-maker in monolith recovery. Minimal Soldering & minimal risk. The Spider Board Adapter is a universal all-in-one solution for safe data recovery from monoliths.

It is designed for connection to internal contacts of NAND-based Flash drives manufactured as single-package chips (monoliths). The adapter consists of 25 universal contacts that support software configuration of their association with NAND interface signals in a corresponding task.

Using it you will forget about tedious soldering and searching for specific adapters to each monolith you deal with!

— Key Features to Recover Data from Monoliths

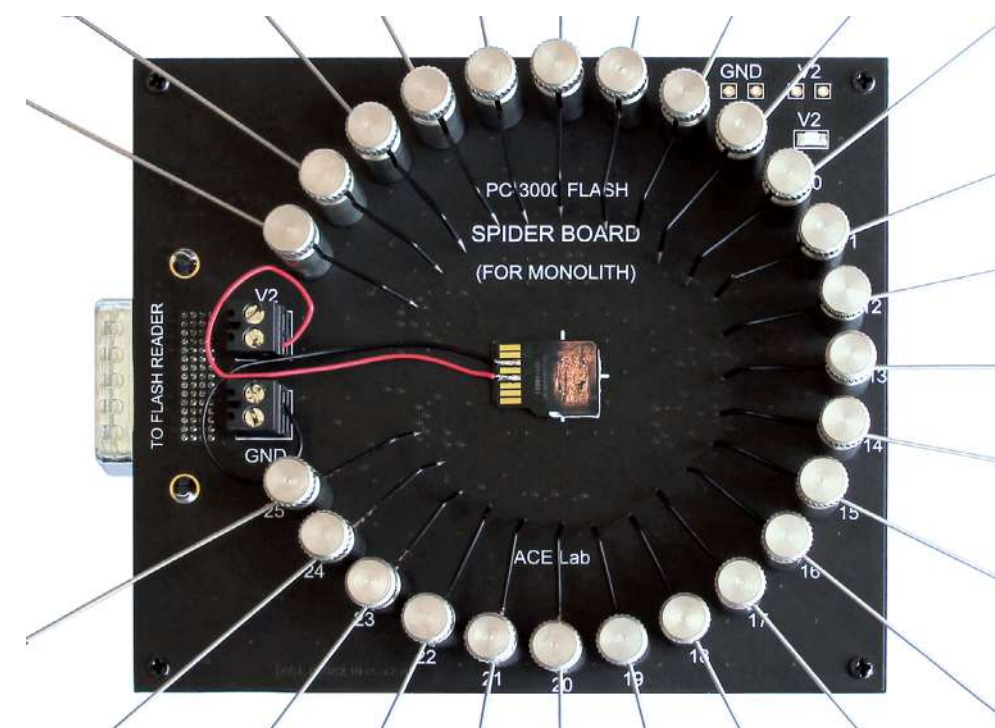
- ▶ Universal solution that doesn't require soldering to the technological pinouts. It saves time, reduces the risks and makes monolith recovery process much easier
- ▶ 25 specialized needles that help you connecting to pinouts, no matter how they are located
- ▶ GND and VCC pins are fixed by screw connectors for convenient usage
- ▶ The adapter is developed specifically for using with microscope

— With the Spider Board Adapter it is possible to



- ▶ Fine-tune the connectors on the software level
- ▶ Save the previous pinout settings in a file to use on similar cases
- ▶ Constant 5V or controlled by VCC (1.8 V-3.6 V) power supplies
- ▶ Control the adapter power supply via software
- ▶ Recover data from partially damaged SD and MicroSD cards

NAND-based devices supported: **MicroSD, SecureDigital, UFD, MemoryStick.**



Minimal soldering is required to power up the monolith.

Pinout connection is performed via 25 needles.



PC-3000 Mobile **NEW!**

PC-3000 MOBILE

Affordable
& Multi-function

- ▶ The built-in power control adapter
- ▶ Logical recovery and data analysis capabilities
- ▶ SD/microSD memory cards support
- ▶ Specialized SD/MMC adapter to support the following types of MMC memory chips:



Type/Size	11.5 x 13	10x11	9x11	14x18	12x18	12x16	15x15
eMMC 153/169							
eMCP 162/186							
eMCP 221							
eMCP 529							

The PC-3000 Mobile Kit:



1. PC-3000 Mobile controller	– 1 pc.	7. USB-USB Type C cable	– 1 pc.
2. PC-3000 Mobile power supply unit	– 1 pc.	8. USB-micro USB cable	– 1 pc.
3. SD/MMC adapter + 7 size constraint frames	– 1 pc.	9. Universal download cable	– 1 pc.
4. USB 3.0 - USB Type-C adapter	– 1 pc.	10. PC-3000 Mobile software	– 1 pc.
5. MicroUSB - USB Type-C adapter	– 1 pc.	11. User manual	– 1 book
6. USB 3.0 cable	– 1 pc.		

A versatile approach to data recovery from Mobile devices

The PC-3000 Mobile is a hardware-software solution intended for recovering data from mobile devices such as mobile phones, smartphones, tablets as well as other devices that use solid-state drives and NAND memory chips as internal memory. Depending on the condition of the device and circumstances of the exact case, the PC-3000 Mobile provides several approaches to get data: high-level access by conventional means, in-depth research that includes the disassembling of the storage media and Chip-off methods, or uploading previously created images for further analysis.



What's special about PC-3000 Mobile

- ▶ USB 3.0 interface to connect the PC-3000 Mobile controller to a PC in your lab or a laptop for on-site data recovery tasks
- ▶ 2 USB ports to connect mobile devices
- ▶ USB ports overcurrent protection and analysis of USB bus errors
- ▶ Ability to control the power supply on the USB ports of the PC-3000 Mobile controller
- ▶ An independent extension port to work with eMMC/eMCP chips
- ▶ Chips reading speed up to 100 MB/sec, 1, 4, 8 bits bus support
- ▶ Hardware write protection switchers for SD/MMC ports
- ▶ Algorithms to improve the quality of reading

ACE Lab Professional Technical Support

Right by your side until the case is solved!



Highly qualified engineers to help you with any data recovery cases

Taking your first steps in data recovery?
Stuck with an especially difficult case?
Want to stay ahead of the competitors?

Multiply your efficiency with the biggest team of technical support engineers!

14 hours
a day

- ▶ Professional consulting by ACE Lab engineers via the CRM Ticket System
- ▶ TeamViewer assistance with the most complex issues
- ▶ Regular software updates containing new unique features that no other tools have

Data recovery is easy with ACE Lab Technical Support!

Don't know what next step to take? No worries — our technical support will get you covered! Our engineers are ready to:

- ▶ help you in learning
- ▶ even solve the case instead of you



If you need assistance with your case, just contact ACE Lab Technical Support! Our engineers will help you remotely with data recovery. If the Internet connection is not possible on the computer where you are dealing with the case, we can provide you with an instruction on which actions to perform to solve the case. Thus, you can be sure that our support will assist you safely, and that you will not be left alone with your case.

FREE helpful online resources

- ▶ blog.acelab.eu.com – ACE Lab Blog with much-needed video tutorials and interesting articles
- ▶ forum.acelab.eu.com – ACE Lab Forum, where you can share your knowledge and opinions with experienced PC-3000 users and with ACE Lab engineers
- ▶ www.youtube.com/user/PC3000datarecovery – ACE Lab YouTube channel with useful video tutorials

More information at www.acelab.eu.com & ts.acelab.eu.com



Professional data recovery training

Get trained online!



A rapid way to data recovery mastership
Recover more data with the
PC-3000 Data Recovery Training:

Training Type	Expert level	Advanced level
PC-3000 HDD Data Recovery Training		
PC-3000 SSD Data Recovery Training		
PC-3000 Flash Data Recovery Training		
PC-3000 Monolith Data Recovery Training		
PC-3000 RAID Data Recovery Training		

Training Locations

Czech Republic

at ACE Lab Training Center

Germany

together with

USA

together with

Canada

together with

South Korea

together with

Japan

together with

France

together with

Singapore

together with

Basic Training

Training Type	Duration	Basic level
PC-3000 HDD Data Recovery Online Training	1 day	
PC-3000 Flash Data Recovery Online Training	1 day	
PC-3000 RAID Data Recovery Online Training	1 day	

Forensic Expert Training **NEW!**

Training Type	Duration	Expert level
PC-3000 HDD Forensic Expert Online Training	3 days	
PC-3000 Flash Forensic Expert Online Training	3 days	



Why Train Online with ACE Lab?

- ▶ Receive knowledge from the world data recovery leader
- ▶ Get official ACE Lab Certification
- ▶ Learn with experienced ACE Lab instructors
- ▶ Do real practical tasks in the virtual class via remote connection
- ▶ Ask questions and get help just like at the offline training
- ▶ Study in mini-groups up to 3 persons
- ▶ Enjoy the individual approach
- ▶ Save your time and money on travelling

Professional Offline and Online Events

Latest technological know-how at first hand

You are always welcome to our Conferences, Meetups, and Webinars!

- ▶ The latest and advanced techniques shared directly by the ACE Lab developers and top engineers
- ▶ Numerous tips and tricks and even ready-to-use solutions
- ▶ Asking questions directly to the ACE Lab top engineers
- ▶ Networking with data recovery peers
- ▶ Sharing experience in the data recovery community

If you are interested in being the first to learn the latest developments in data recovery and staying on the cutting edge of technologies, check the date of our next event in the News section on our website.



About us

30+
years

125+
countries

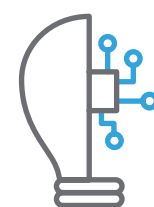
19 000+
customers

ACE Lab is internationally recognized as a pacesetter in the development of the solutions for recovering data and evidence from the widest range of storage devices. For 30 years we have been setting the benchmark and remaining the proven leader in the field by constantly perfecting our products and services. Through the PC-3000 product line we provide customers with the most comprehensive and reliable professional data recovery tools on the market. Upward of 19 000 professionals from over 125 countries award their trust to ACE Lab and get profit from the PC-3000 solutions.

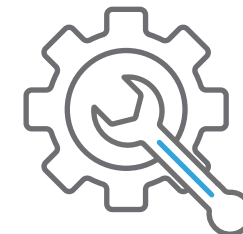
Our company has been certified with ISO 9001:2016 and ISO/IEC 27001:2014. Thus, our customers can be sure that ACE Lab fully conforms to the quality management and the strictest information security requirements.

The world's leader in developing the most efficient solutions for damaged storage media

Core competencies



Professional data
recovery R&D



Products
manufacturing



Application of data
recovery techniques
in digital forensics



Full-scale
technical support
service



Training in all
areas of data
recovery

ACE Lab certificates

As a market leader in the development of data recovery technologies, we continually review and improve our Quality Management and Information Security Systems which comply with the ISO 9001:2016 and ISO/IEC 27001:2014 to ensure that we not only meet but exceed our customers' expectations.



EKO-KOM Certificate for PC-3000



Electrical Safety Certificate for PC-3000 Express, UDMA, UDMA-E, Portable, SAS



Electrical Safety Certificate for PC-3000 Flash, Mobile

Hear what our customers are saying

Not only does ACE Lab have the best hardware/software solutions for data recovery, but they have unmatched technical support. Their data recovery tools are priced competitively, but the usability, documentation, and support cannot be matched by the competition. We use PC-3000 tools for HDD, SSD, and Flash recovery every day at Blizzard Data Recovery

David Blizzard | [Blizzard Data Recovery](#)
UNITED STATES OF AMERICA

Simply super, the leader in the field of data recovery of all types of drives, diagnostics and hard drive repair. For 8 years we have been offering the data recovery service with its tools and we have more and more satisfied customers. I suggest all services and products of ACE Lab. In addition, its technical support is very efficient and useful to solve queries and problems.

Juan Carlos Carbajal Gomez | [DNP CORP](#)
PERU

Before getting into the data recovery field I spent a lot of time researching the available tools that would be needed to startup such a business. The PC-3000 suite was a big financial outlay, but in the first few months the product has already allowed me to almost recover that cost.

The product supports all the drives that I have had to deal with, and the support team is always ready to help when in need of a solution. I would recommend this product to anyone who is thinking seriously about data recovery.

Nick Parsons | [SOUTHBIT DATA RECOVERY](#)
SOUTH AFRICA

Excellent support of all drive brands, including not popular ones like Hitachi and Toshiba. Decryption of WD passport WITHOUT password (I did not believe it was possible). Smooth operation across all models. (We have tried other data recovery equipment but they don't work reliably across all models). Ability to quickly determine Seagate F3 headmap using the zone-head deactivation feature. Ability to solve WD slow responding issue in RAM. And of course great technical support! For non-standard issues, only ACE Lab technical support engineers know how to solve them.

Kevin Xiao | [Data Pro](#)
CANADA

I have been using PC-3000 for a number of years to analyse and recover malfunctioning Hard Disk Drives. As an Academic and a Digital Forensics Practitioner, I believe the training offered by ACE Lab are of great value to the Data Recovery Industry and can provide the Digital Forensics Practitioner with a deeper understanding of hard disk technologies and possible methods for recovery.

Gareth Davies | [UNIVERSITY OF GLAMORGAN](#)
UNITED KINGDOM

I must admit that from the moment we invested in ACE Lab products our success rates and delivery times have really increased. Nowadays I believe that no data recovery lab can be successful without ACE lab products and support. I can not compare the functions of PC-3000 complex with any other tool.

Mike Mingos | [TICTAC DATA RECOVERY LABORATORIES](#)
GREECE

... We would not be where we are today in data recovery if we were not for your tools and help.

Walmart Data Recovery Team | [Walmart](#)
UNITED STATES OF AMERICA

The best tools we ever use in data recovery with hard disk or SSD drive or flash. It's just like Ferrari cars keep up, regards from Egypt

Tawfeek Mokhtar | [Alsafwa data recovery Egypt](#)
EGYPT

Our company has been using the PC-3000 for several years now, and it has made our job of data recovery so much easier. We are now able to recover more data in less time, and our clients are even happier. The online support from ACELab has assisted us on numerous occasions and we have enjoyed working with their engineers. This product has undoubtedly become an essential tool in our business, and we are grateful to have it!

Hugo Adrián Francisconi | [Recupero Datos](#)
ARGENTINA

The detailed testimonials are provided on the ACE Lab website.



ISO 9001:2016 certification (English)



ISO/IEC 27001:2014 certification (English)



ISO 9001:2016 certification (Czech)



ISO/IEC 27001:2014 certification (Czech)

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09:00 - 17:00 EDT

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forum.acelab.eu.com



www.acelab.eu.com



ISO 9001:2016 | CERTIFIED
ISO/IEC 27001:2014 | COMPANY

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www.acelab.eu.com