

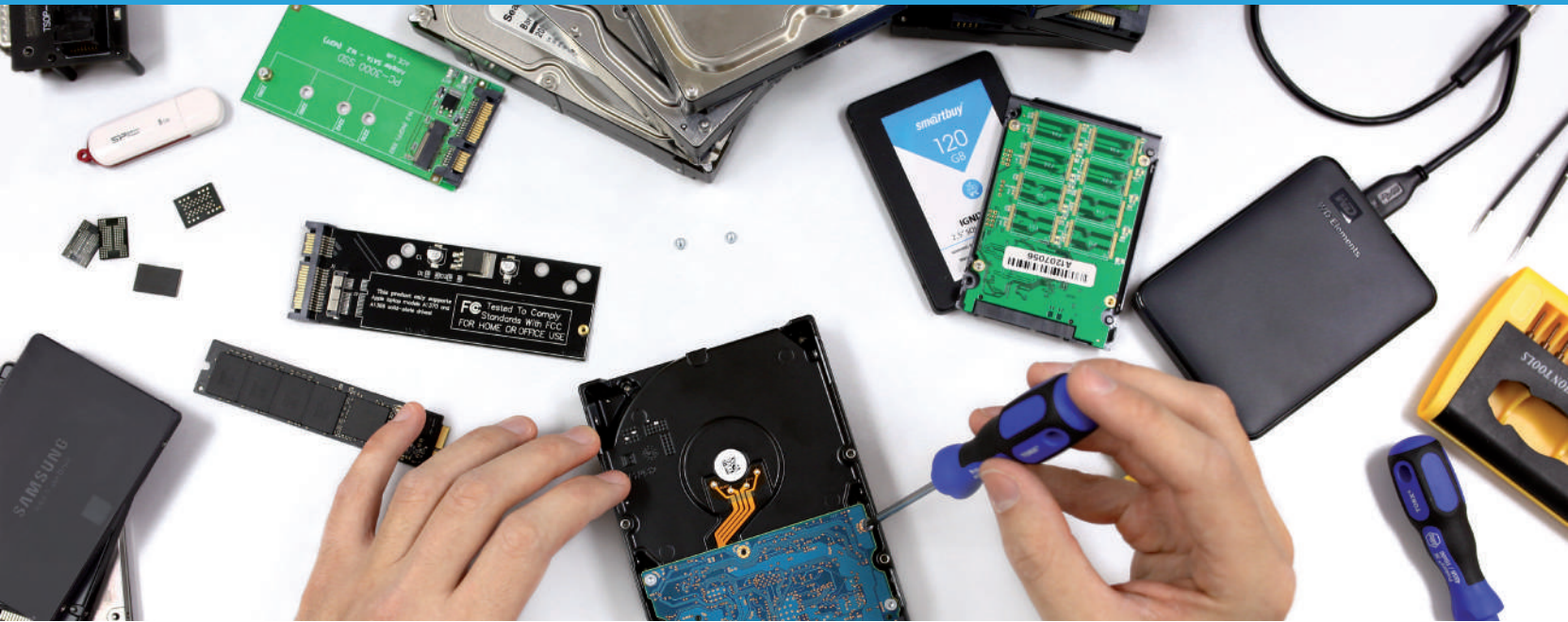


Forensic Data Recovery Solutions

Product Catalogue



PC-3000 - the ultimate standard for all areas of forensic 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!

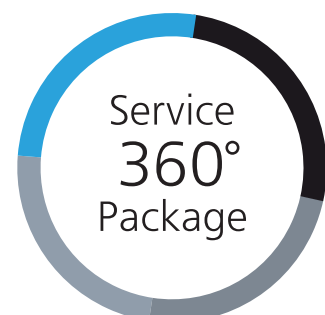
Use the power of PC-3000 to:

- ▶ Recover data when no other tools can do it
- ▶ Extract digital evidence from both healthy and physically/logically damaged drives of all types
- ▶ Protect the data integrity from the OS influence due to the connection through the PC-3000 board
- ▶ Fully, partially or temporarily restore the operability of damaged data storage devices
- ▶ Bypass the password protection
- ▶ Get access to the Service Area to obtain the evidence that can be hidden there

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 forensic data recovery 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 PRO			

RAID	SAS/SCSI HDD	NAND Flash devices	NAND Flash devices + Monoliths	Mobile devices
	+ Additional SAS adapter	for logical issues	for logical issues	
	+ Additional SAS adapter	for logical issues	for logical issues	
+ Data Extractor RAID Edition	+ Additional SAS adapter	for logical issues	for logical issues	
+ Data Extractor RAID Edition	+ Additional SAS adapter	for logical issues	for logical issues	
+ Data Extractor RAID Edition				
+ Data Extractor RAID Edition				
+ Data Extractor RAID Edition				
+ Data Extractor RAID Edition				
	PC-3000 SAS + Data Extractor			
+ Data Extractor RAID Edition	PC-3000 SAS			
		PC-3000 Flash + basic set of adapters		
		PC-3000 Flash + extended set of adapters	+ Spider Board Adapter	
				PC-3000 Mobile PRO



PC-3000 Portable III Systems

PERFECTLY EFFICIENT
WHEREVER YOU NEED



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 SATA/1 USB ports with speed up to 490 MB/s

+ Fast imaging SATA/USB drives

3 HDD/SSD/RAID members

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.

Write protection

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 evidence 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 evidence & 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

24-CHANNEL ADC FOR OSCILLOSCOPE MODE

SATA PORTS X4

PC-3000 EXPRESS HAS NEW SERIAL ATA 3.0 GB/S BRIDGES WITH A NEW POWER SCHEME. DUE TO THESE ENHANCEMENTS, THE DATA TRANSFER SPEED AND STABILITY OF SATA PORTS HAVE BEEN INCREASED.

POWER OUT X4

TO POWER THE HDDS, THE NEW INTELLIGENT POWER SUPPLY UNIT IS USED. IN ADDITION TO POWER CONTROL AND POWER SUPPLY FUNCTIONS, THE NEW UNIT ALLOWS TO MEASURE INSTANTANEOUS CURRENTS ON EACH OF THE FOUR CHANNELS (CH0...CH3) VIA +5V AND +12V.

BUILT-IN PROTECTION ENSURES POWER-OFF IN CASE OF SHORT CIRCUIT OR EXCEEDING THE PERMISSIBLE VALUE OF THE CURRENT CONSUMPTION BY THE DRIVES, AS WELL AS IF THE NOMINAL VALUE OF THE +5V AND +12V OUTPUT VOLTAGES WILL GO BEYOND +- 20%.

SATA POWER CONNECTORS

THE POWER SUPPLY UNIT USES NEW POWER SATA PORTS FOR MORE RELIABLE POWER CONNECTION AND BETTER COMPATIBILITY WITH MODERN PC POWER SUPPLY UNITS.

POWER PROTECTION

IF THE OVERCURRENT PROTECTION IS ACTIVATED, YOU WILL HEAR A BEEPING SOUND. THIS SOUND INDICATES THE NUMBER OF THE CHANNEL WHICH HAS BEEN POWERED OFF.



Professional data recovery solutions for the digital forensic 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.

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)

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

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

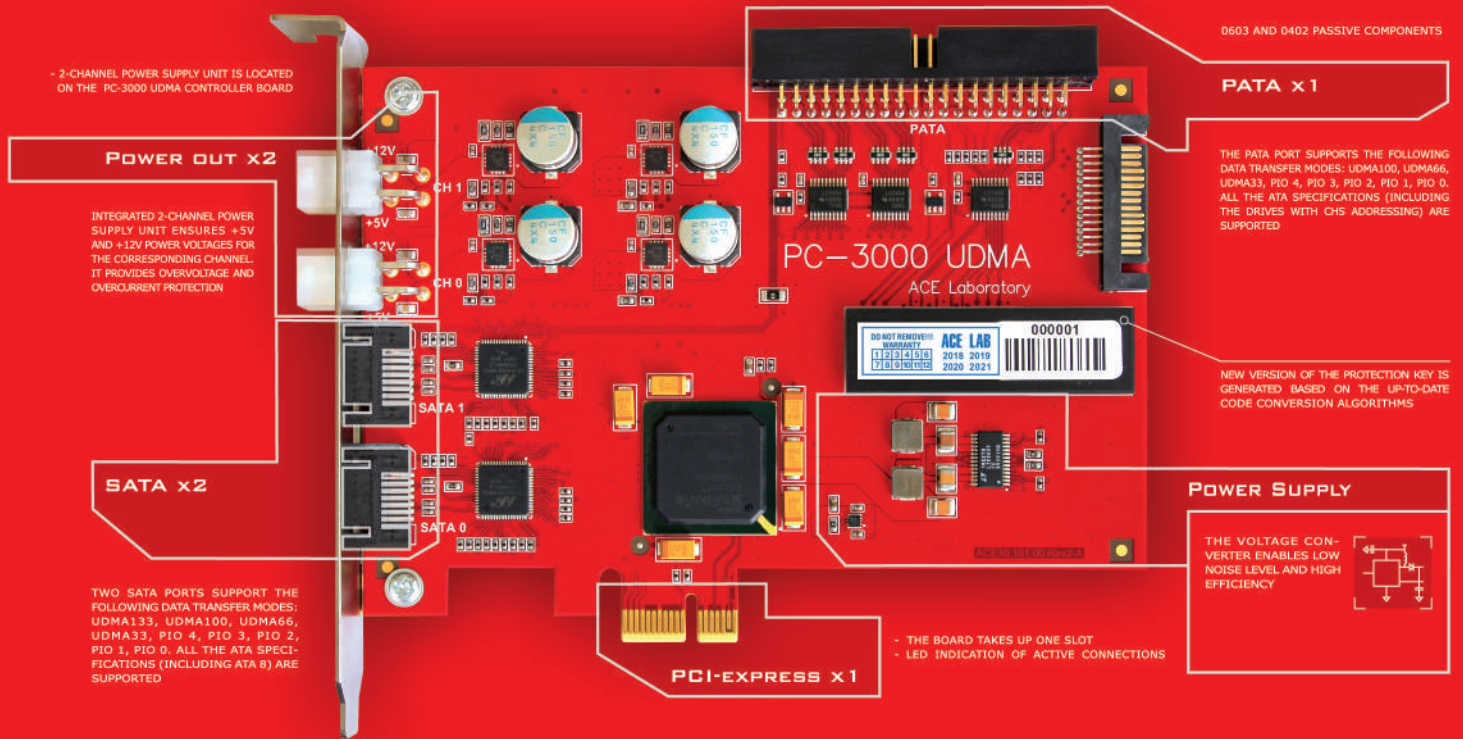
The PC-3000 Express System Kit:



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.		



PC-3000 UDMA Systems



The optimal choice for 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:

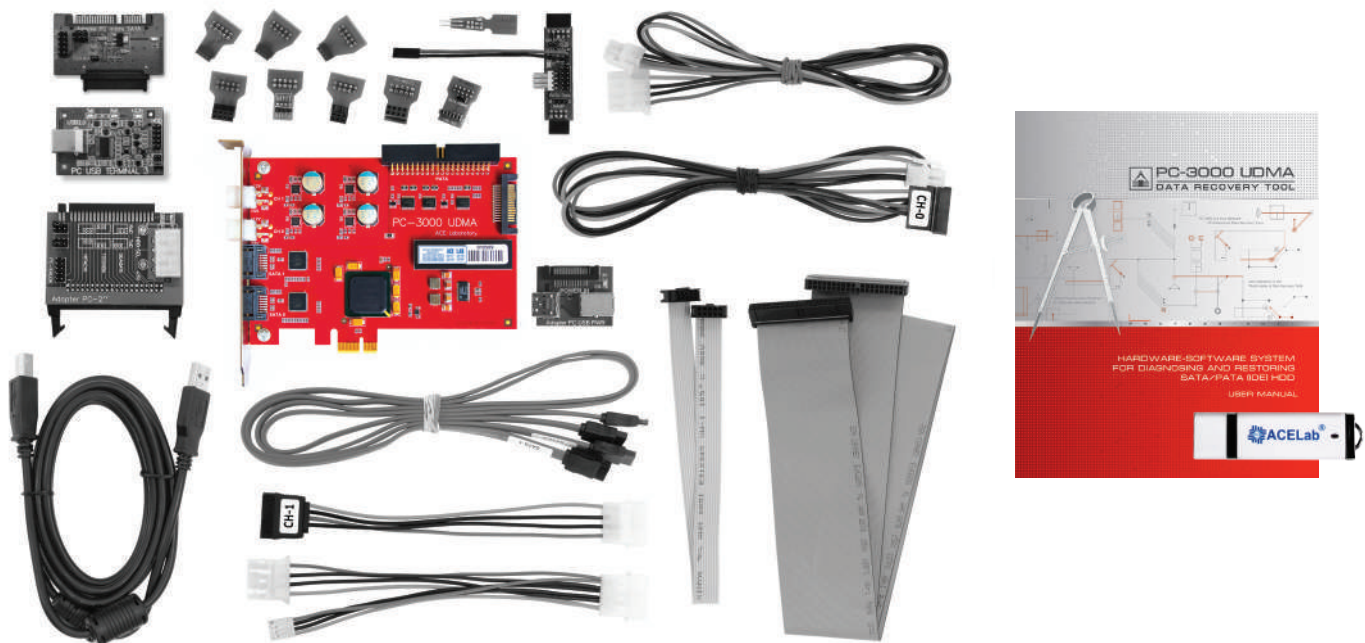
- ▶ PC-3000 UDMA System (PC-3000 UDMA + Data Extractor UDMA)
- ▶ PC-3000 UDMA RAID System (PC-3000 UDMA + Data Extractor UDMA RAID Edition)
- ▶ PC-3000 UDMA SSD System (PC-3000 UDMA + Data Extractor UDMA + PC-3000 SSD)
- ▶ PC-3000 UDMA Ultimate System (PC-3000 UDMA + Data Extractor UDMA RAID Edition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

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

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 System Kit:



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.		



PC-3000 SAS 6 Gbit/s Systems

"INSIDE COMPONENTS" - THE DESIGN PROVIDES AN ADDITIONAL MECHANICAL PROTECTION

THE BOARD TAKES UP TWO ADJACENT SLOTS
LED INDICATION OF ACTIVE CONNECTIONS



HIGH-EFFICIENCY
SAS 2.0 CONTROLLER



POWER PROTECTION

IF THE OVERCURRENT PROTECTION IS ACTIVATED, YOU WILL HEAR A BEEPING SOUND. THIS SOUND INDICATES THE NUMBER OF THE CHANNEL WHICH HAS BEEN POWERED OFF.



24-CHANNEL ADC
FOR OSCILLOSCOPE MODE

SATA PORTS x4

FOUR INDEPENDENT SAS 2.0 PORTS PROVIDE 6 GBIT/S, 3 GBIT/S AND 1.5 GBIT/S DATA TRANSFER MODES. THE CONNECTION OF HDD AND SSD WITH SAS/SATA INTERFACES IS AVAILABLE.

Power out x4

TO POWER THE HDDS, THE NEW INTELLIGENT POWER SUPPLY UNIT IS USED. IN ADDITION TO POWER CONTROL AND POWER SUPPLY FUNCTIONS, THE NEW UNIT ALLOWS MEASURING INSTANTANEOUS CURRENTS ON EACH OF THE FOUR CHANNELS (CH0...CH3) VIA +5V AND +12V. BUILT-IN PROTECTION ENSURES POWER-OFF IN CASE OF SHORT CIRCUIT OR EXCEEDING THE PERMISSIBLE VALUE OF THE CURRENT CONSUMPTION BY THE DRIVES, AS WELL AS IF THE NOMINAL VALUE OF THE +5V AND +12V OUTPUT VOLTAGES WILL GO BEYOND +/- 20%.

0603 AND 0402 PASSIVE COMPONENTS

SATA Power Connectors

THE POWER SUPPLY UNIT USES NEW POWER SATA PORTS FOR MORE RELIABLE POWER CONNECTION AND BETTER COMPATIBILITY WITH MODERN PC POWER SUPPLY UNITS.

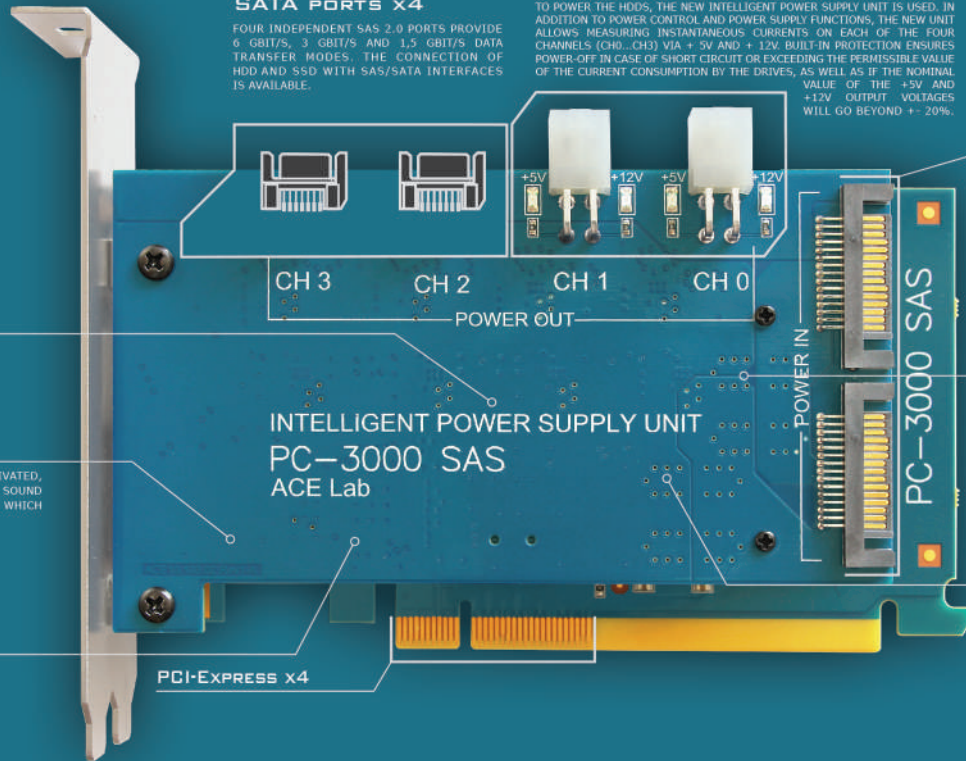


THE NEW VERSION OF THE PROTECTION KEY IS GENERATED BASED ON THE UP-TO-DATE CODE CONVERSION ALGORITHMS.



Power Supply

THE INTEGRATED SEMICONDUCTOR VOLTAGE CONVERTER ENABLES LOW NOISE LEVEL AND HIGH EFFICIENCY. IT HAS A SMALL SIZE AND CAN BE USED WITHOUT A RADIATOR.



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.

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)

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 System Kit:



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



Evidence 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

Recovers more data than any other tool in the world

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.

PC-3000 Systems allow reading only necessary data due to the powerful integrated functionality for logical analysis of file systems. 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 damage

Supported SATA/IDE HDDs:

Damaged (physically and logically), encrypted and healthy SATA/IDE HDDs of various vendors:

- ▶ Western Digital
- ▶ Seagate
- ▶ Samsung
- ▶ Maxtor
- ▶ Toshiba
- ▶ Quantum
- ▶ Fujitsu
- ▶ Hitachi

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 SAS/SCSI HDDs:

Damaged (physically and logically), encrypted and healthy SAS/SCSI HDDs of various vendors:

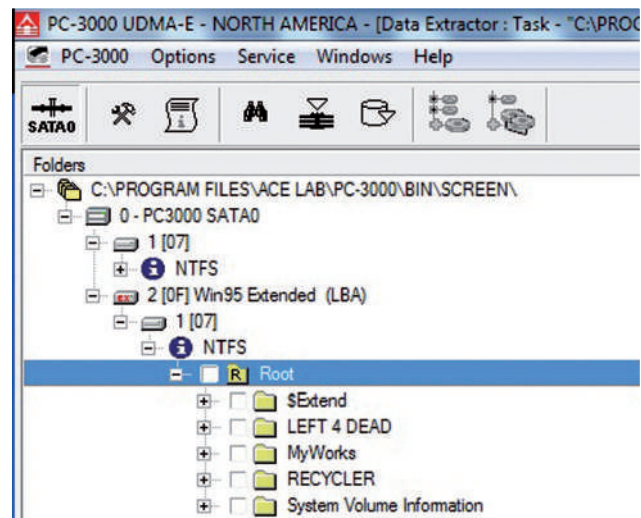
- ▶ IBM
- ▶ Seagate
- ▶ Hitachi GST
- ▶ Maxtor
- ▶ Fujitsu

Supported file and storage systems:

File systems: FAT, exFAT, NTFS, ReFS, HFS+, APFS, EXT2/3/4, XFS, F2FS, ReiserFS, Btrfs, VMFS, UFS1/2, ZFS

DVR Files Systems: WFS0.4, DHFS4.1

Virtual drives: flat (raw image), vhd, vhdx, vmdk, dmg





Evidence recovery from RAID



— The easiest, fastest and smartest systems to recover data and digital evidence 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. The Data Extractor RAID Edition contains all the features of the 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, JB0D, 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



Evidence Recovery from SSD

PC-3000 SSD

DRIVE THE CHANGE

NAND CHIPS ID:

```

CHANNEL 0:
CE 0: LOGIC CHIP .....
CE 1: LOGIC CHIP .....
CE 2: LOGIC CHIP .....
CE 3: LOGIC CHIP .....

CHANNEL 3:
CE 0: 0x2CB8044B .....
CE 1: 0x2CB8044B .....
CE 2: 0x2CB8044B .....
CE 3: 0x2CB8044B .....
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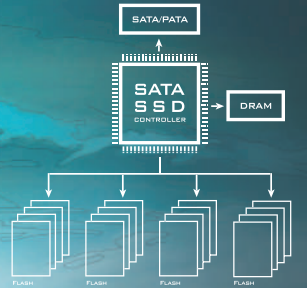
```

SSD DETECTED

```

TECHNOKEY ..... : DETECTED!
CAPACITY ..... : 256 GB
NUMBER OF CHANNELS ..... : 8
CHANNEL 0:
CE 0: LOGIC CHIP .....
CE 1: LOGIC CHIP .....
CE 2: LOGIC CHIP .....
CE 3: LOGIC CHIP .....

```



```

CHANNEL 1:
CE 0: 0x2CB8044B .....
CE 1: 0x2CB8044B .....
CE 2: 0x2CB8044B .....
CE 3: 0x2CB8044B .....

CHANNEL 2:
CE 0: 0x2CB8044B .....
CE 1: 0x2CB8044B .....
CE 2: 0x2CB8044B .....
CE 3: 0x2CB8044B .....
>

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

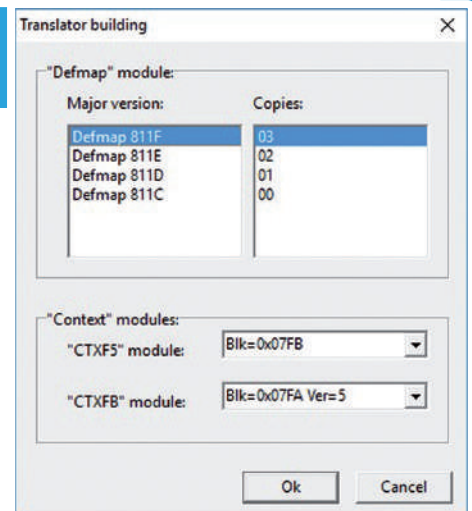
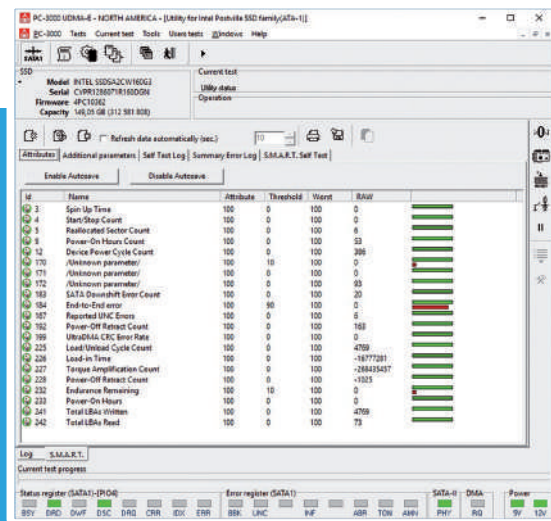
The PC-3000 SSD Software is a professional product intended for restoring SSD and recovering data from them.

To recover evidence 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.

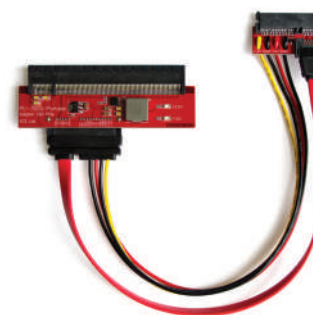
Breakthrough: PCIe SSD Support in the PC-3000 Portable III



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



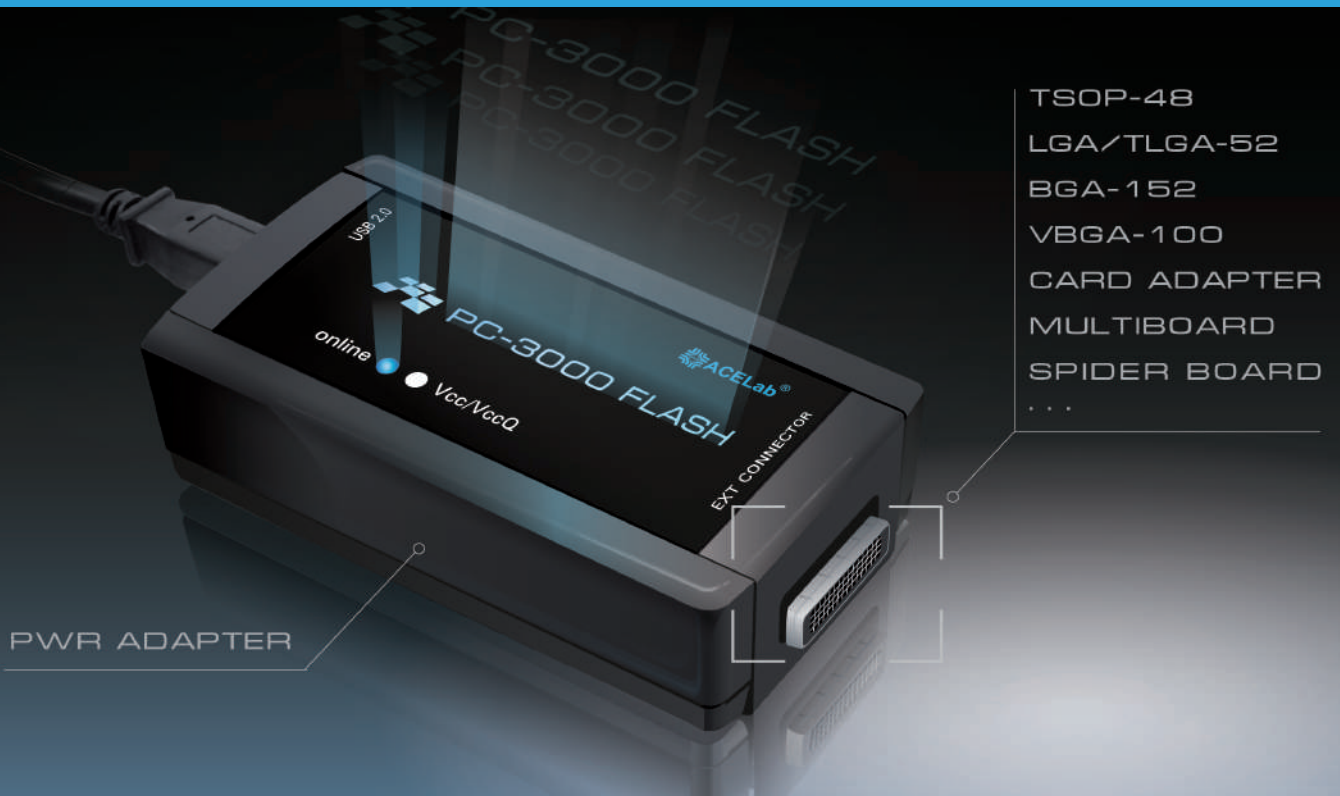
PCIe NVMe/AHCI Adapter for Apple Macbook SSD



PCIe x16 SSD Adapter



PC-3000 Flash (4.0.)



- TSOP-48
- LGA/TLGA-52
- BGA-152
- VBGA-100
- CARD ADAPTER
- MULTIBOARD
- SPIDER BOARD
- ...

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.

Supported Flash Devices

Common Structure:

- ▶ USB Sticks (UFD)
- ▶ CF (Compact Flash)
- ▶ SD (Secure Digital)
- ▶ Voice Recorders
- ▶ MS (Memory Stick)

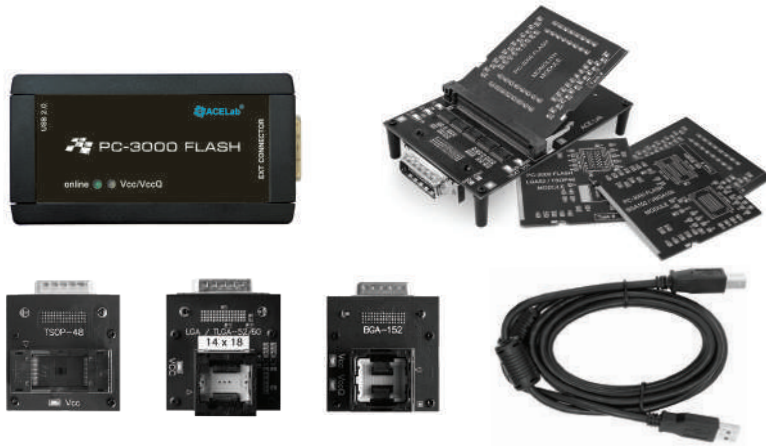
Monolith Structure:

- ▶ SD (in monolith package)
- ▶ UFD (in monolith package)
- ▶ MS (in monolith package)
- ▶ xD

Only PC-3000 Flash has:

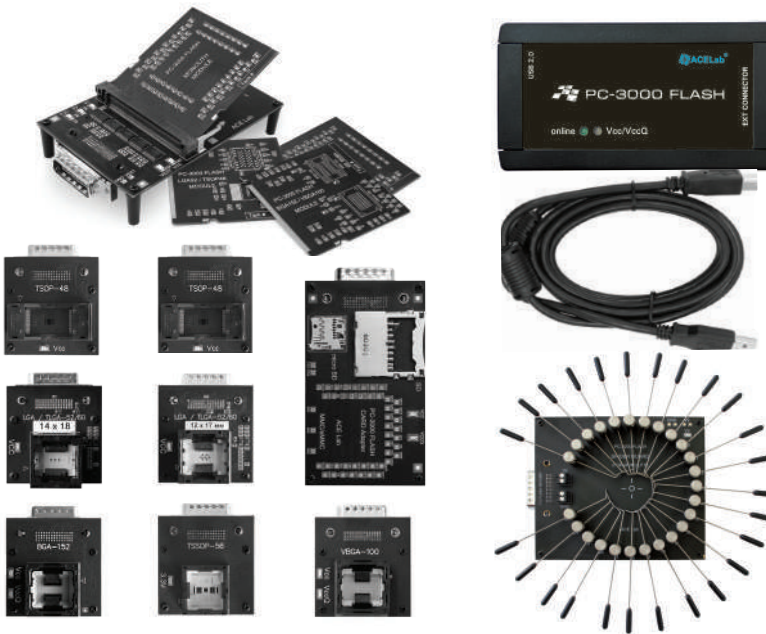
- ▶ The widest range of adapters to deal with various NAND-based devices, including the revolutionary Spider Board
- ▶ Over 7900 «one-click» solutions in the PC-3000 Flash Solution Center to recover data in 5 minutes
- ▶ The highest data recovery success rates with the Hardware Retries mode to read out 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

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. Card Adapter | - 1 pc. |
| 7. Multiboard Adapter | - 1 pc. | 15. USB 2.0 Cable | - 1 pc. |
| 8. Monolith Module | - 2 pcs. | 16. PC-3000 software + User manual | - 1 pc. |



PC-3000 Mobile PRO **NEW!**



PC-3000 MOBILE PRO

New solution
for mobile devices

A versatile approach to evidence recovery from Mobile devices

The PC-3000 Mobile PRO* is a hardware-software solution intended for recovering evidence 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 PRO provides several approaches to get evidence: 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.



Technical Characteristics

- ▶ 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

** For law-enforcement organizations and affiliates only.
To get the PC-3000 Mobile PRO, you need to provide official documents proving that you belong to a law-enforcement organization are certified to work with law-enforcement agencies.*

- ▶ Hardware write protection switchers for SD/MMC ports
- ▶ Algorithms to improve the quality of reading
- ▶ 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:



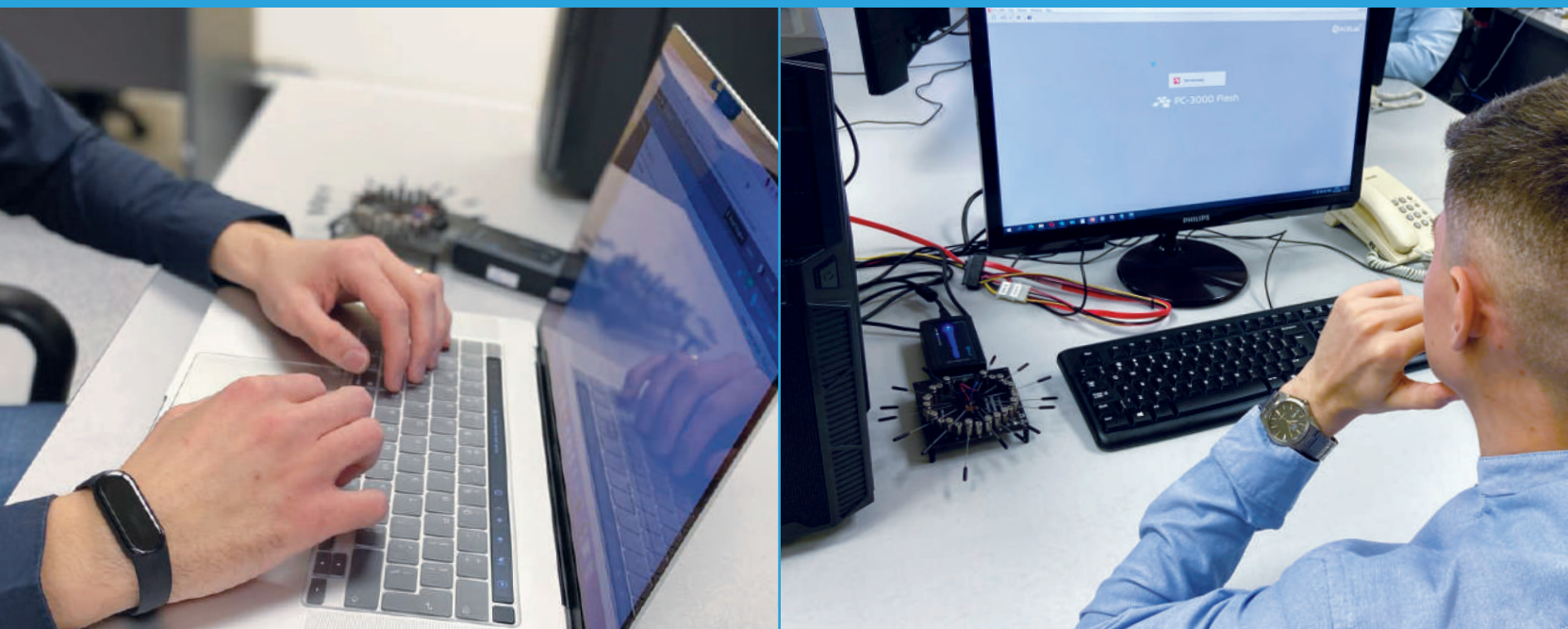
Type/Size	11.5 x 13	10x11	9x11	14x18	12x18	12x16	15x15
eMMC 153/169							
eMCP 162/186							
eMCP 221							
eMCP 529							

The PC-3000 Mobile PRO Kit:



- | | | | |
|--|---------|---------------------------------|----------|
| 1. PC-3000 Mobile PRO 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 PRO software | - 1 pc. |
| 5. MicroUSB - USB Type-C adapter | - 1 pc. | 11. User manual | - 1 book |
| 6. USB 3.0 cable | - 1 pc. | 12. Equipment hard case | - 1 pc. |

Professional technical support



Highly qualified engineers to help you with any data recovery cases

Need to recover evidence faster?

Want to be up-to-date on the latest solutions for present-day drives?

Stuck with an especially difficult case?

Recover more cases easier with our top-skilled 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

FREE helpful online resources

- ▶ blog.ancelab.eu.com — ACE Lab Blog with much-needed video tutorials and interesting articles
- ▶ forum.ancelab.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.ancelab.eu.com & ts.ancelab.eu.com

Professional data recovery training



A rapid way to data recovery mastership

Become a certified PC-3000 engineer

Training Type	Basic level <small>ONLINE!</small>	Forensic Expert <small>ONLINE!</small>	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 	India	together with
South Korea	together with 	Japan	together with
France	together with 	Singapore	together with
Turkey	together with 	Netherlands	together with

About us



30+
years

125+
countries

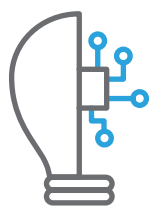
19 000+
customers

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.

**SOLVING THE UNSOLVABLE
since 1992!**

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

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09:00 - 17:00 EDT

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ISO/IEC 27001:2014 | COMPANY

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