Digital **Intelligence**®

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Front view. Handle shown in downward position.

Front/right side view. Handle shown in upward position.

µFRED™

MICRO FORENSIC RECOVERY OF EVIDENCE DEVICE

Digital Intelligence µFRED™: Compact. Portable. Powerful.

Re-engineered for 2024, µFRED delivers the power investigators need in a smaller, compact (17" x 9" x 11.5") form factor. Each µFRED is built with a powerful Intel® Core Ultra 9 285K, 24-core (8P/16E) CPU, up to 5.7 GHz clockspeed, with 36 MB of Intel Smart Cache, and 64 GB of PC5-41600 DDR5 5200 MHz memory, with options to expand RAM capacity to 128 GB. Built-in liquid cooling ensures optimal performance and the lasting reliablility needed for today's forensic investigations.

DI UltraBay 4™ Hardware Write Blocking

Using modern forensic imaging software, the UltraBay 4™ acquires forensically sound images of IDE, SATA, SAS, PCIe (server class, PCIe M.2, and MacBook® mid 2013-2016) drives, as well as USB 3.0/2.0/1.1 and FireWire storage devices. Storage devices may be connected and removed from the UltraBay 4 without powering off the µFRED.

Hard Drive Options for Any Forensic Use Case

µFRED supports up to eight (7) hard drives: Two (2) internal NVMe slots, one SATA in 4 x 2.5" drive bay chassis, and one (1) SATA III SSD in the USB 3.2-connected HotSwap bay. Standard µFRED's ship configured with four (4) drives:

  Slot 1 (Operating System): One (1) 1 TB M.2 NVMe (internal)
  Slot 2 (Temp/Cache): One (1) 1 TB M.2 NVMe SSD (internal)
  Bay 1 (Temp/Cache/Data): One (1) 1 TB SATA III SSD
  HotSwap Bay 1 (Casework/Data): One (1) 4 TB 7200 RPM SATA III HDD

Four (4) empty drive slots provide the flexible storage required for modern forensic imaging and analysis software. Drive options and upgrades are available.

Change Features on the Fly with the Drive Tray Ecosystem

µFRED's USB 3.2 connected HotSwap drive trays support interchanging features by simply swapping out a drive tray. All FRED systems ship with the USB 3.2 connected SATA tray (read/write or write-blocked switchable). See the tech specs for additional tray information.

FEATURE	µFRED™ - Forensic Recovery of Evidence Device Technical Specifications
Processor	Intel® Core Ultra 9 285K, 24-core (8 performance/16 efficiency), up to 5.7 GHz, 36 MB Intel® Smart Cache
Memory	64 GB PC5-41600 DDR5 5200 MHz Memory (configurable up to 128 GB)
Chipset	Intel® B860
Software	Microsoft Windows® 11 Pro 64-bit, openSUSE Linux 64-bit, Symantec® Ghost
Graphics	Intel Graphics

Hard Drive Storage	Two (2) internal NVMe slots:
	  Slot 1 (OS): 1 TB M.2 NVMe PCIe SSD
	  Slot 2 (Temp/Cache): 1 TB M.2 NVMe PCIe SSD
	One (1) 2.5" x four (4) bay chassis:
	  Bay 1 (Temp/Cache/Data): 1 TB SATA III SSD
	  Bays 2-4: Open
	Two (2) HotSwap Bays:
	  Bay 1 (Case/Data): 4 TB 7200 RPM SATA III HDD
	  Bay 2: Open
	Additional drive capacities / types are available.

Drive Bays	Two (2) HotSwap USB 3.2-connected SATA, shock-mounted, removable trays. Read/write & read-only switchable. One (1) 2.5" SATA III x four (4) bay chassis *Optional IDE tray for legacy drives is available.*

Drive Bay Ecosystem	Standard with each µFRED:
	  Two (2) unique HotSwap 3.5"/2.5" SATA III drive trays (USB 3.2-connected, read/write or read-only switchable)
	  One (1) 2.5" SATA III x four (4) drive bay chassis (SATA-connected, HotSwap configurable)
	Optional USB 3.2-connected drive bays: 1) 3-port, USB 3.0 general purpose hub, 2) 5-port Dongle Vault for software license dongles, 3) NVMe/M.2 PCIe SSD (write-blocked switchable), and 4) Forensic Media Card Reader.

DVD/CD/Blu-ray	*Optional external USB-connected Blu-ray burner is available.*
Forensic Imaging / Write Blocking	DI UltraBay 4™ Forensic Bridge write blocks SATA, SAS, USB 3.0/2.0/1.1, IDE, FireWire, and PCIe SSD storage devices. Supports HotSwap device connection; UltraBay write-blocking products available exclusively with DI FRED systems.
Networking	1 Integrated 2.5 GbE RJ-45 LAN (10/100/1000/2500 Mb/s) Intel® Wi-Fi 7 (802.11be) + Bluetooth 5.4
External Ports & Connectors	1 Thunderbolt™ 4 port (USB Type-C) - back-mounted 1 USB 20 Gb/s port (Type-C) - back-mounted 3 USB 10 Gb/s ports (Type-A) - one (1) back-mounted, two (2) front-mounted 2 USB 10 Gb/s ports (Type-C) - front-mounted 3 USB 5 Gb/s ports (Type-A) - back-mounted 2 USB 2.0 ports (Type-A) - back-mounted 1 write-blocked SATA port - front-mounted on UltraBay 4 1 write-blocked SATA or SAS port - front-mounted on UltraBay 4 1 write-blocked PCIe port - front-mounted on UltraBay 4 1 write-blocked USB 3.0/2.0/1.1 port - front-mounted on UltraBay 4 1 write-blocked IDE port - front-mounted on UltraBay 4 1 write-blocked FireWire 1394 A/B (400/800 MB/s) port - front-mounted on UltraBay 4
Storage Controller	Intel® 6 Gb/s SATA controller M.2 socket key M type 2260/2280 (PCIe Gen5 x4 mode) M.2 socket key M type 2242/2260/2280 (PCIe Gen4 x4 mode & SATA)
Adapters & Accessories	SATA, SAS, IDE, FireWire, USB, and PCIe power / signal cables. PCIe SSD m.2 NVMe, PCIe MacBook Pro (2013+), PCIe server class SSD, and FireWire adapters.
Audio	7.1 channel HD audio (Realtek® ALC897 audio CODEC); two (2) audio jacks (line out, microphone input)
Keyboard / Mouse	*Optional Microsoft wireless desktop keyboard and mouse combination available.*
Display	*Optional 22" ergonomic LED monitor, 1920 x 1080 resolution, height adjust, tile, and swivel with built-in speakers.*
Power	750 watt ATX modular power supply
Warranty & Support	Hardware warranty is 36 months from date of purchase. Extended warranty options available. Lifetime technical support.
Dimensions and Weight	11.5" High x 9" Wide x 17" Deep, 18 lbs

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