Digital Intelligence®

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FRED 1R with HotSwap Forensic Drive Trays

Our Mission

At Digital Intelligence, we combine the knowledge gained from years of providing digital forensics and eDiscovery services with a deep understanding of digital technology to build and deliver solutions that *Give Voice to Digital Evidence™*.

FRED Imaging Shelf shown with SATA HDD

FRED™ AMD

FORENSIC RECOVERY OF EVIDENCE DEVICE

Sets the Bar for Digital Forensic Workstations

Digital Intelligence FRED systems are designed, built, and optimized for digital forensics work. Regardless of the forensic task - acquisition, analysis, reporting, or archiving - FRED systems are unmatched in features, capabilities, and performance.

FRED AMD - Now with Threadripper Power

Digital forensic software is evolving to better utilize processor cores and threads. Forensic investigators with a need for single CPU, core dense systems can now configure their FREDs with AMD processors. The entry point FRED AMD ships with a Threadripper PRO 5955WX with 16 cores (4.0/4.5 GHz clock, 64 MB cache), 128 GB PC4-25600 RAM, and a GTX 1050i GPU. Processor, RAM, and GPU upgrades are available.

Standard FRED AMD (non-RAID) systems have capacity for nine (9) drives: four (4) internal and five (5) HotSwap drive trays.   Base FRED AMD systems are populated with four (4) drives:
- 500 GB M.2/NVMe (Operating System)
- 1 TB M.2/NVMe (Database/Cache/Temp/user defined)
- 1 TB M.2/NVMe (Database/Cache/Temp/user defined)
- 4 TB 7200 RPM (Data/user defined)

FRED AMD systems can be configured with one ("1R") or two ("2R") five-drive RAID chassis. Please refer to the tech specs page for additional details.

Exclusive to FRED Systems: UltraBay 4d and Forensic Drive Trays

Standard on each FRED AMD is the UltraBay 4d integrated write blocker. The UltraBay 4d supports forensic imaging of SATA, SAS, IDE, USB, FireWire, and PCIe devices directly or with appropriate adapters. Exclusive to DI FREDs, the UltraBay 4d includes a built-in touchscreen that enables accessing and presenting connected device information indpendent of the operating system.

Additional SATA or M.2 NVMe data acquisition capacity is available using the USB 3.2 connected Forensic Drive Trays. These trays are user-selectable read/write or read only, doubling their system utility. Using modern forensic imaging software, speeds in excess of 24 GB/min have been attained.

Change Features On the Fly with the Drive Tray Ecosystem

FRED'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	FRED™ AMD - Forensic Recovery of Evidence Device Technical Specifications
Processors	Standard CPU: AMD® Threadripper PRO 5955WX, 16 core, 4.0/4.5 GHz, 64 MB cache Optional CPUs: AMD Threadripper PRO 5965WX (24 core), 5975WX (32 core), or 5995WX (64 core)
Memory	128 GB PC4-25600 DDR4 3200 MHz standard. Upgrades to 512 GB
Chipset	AMD WRX80
Software	Microsoft Windows® 11 Professional 64-bit, openSUSE Linux 64-bit, Symantec® Ghost
Graphics	NVIDIA® GeForce™ GTX 1050Ti 4GB 128-bit DDR5, 768 CUDA cores. GPU upgrades available. Contact DI for details.

Hard Drive Storage	Up to nine (9) storage drives in non-RAID FRED systems, including three (3) internal M.2 NVMe storage locations:
	    Operating System - 500 GB internal M.2 NVMe PCIe SSD
	    Database/Cache/Temp/user defined - Two (2) 1 TB internal M.2 NVMe PCIe SSD
	    Case/DATA/user defined - 4 TB 7200 RPM SATA III hard drive
	Extra drive slots: One (1) SATA connected HotSwap and four (4) USB 3.1 connected SATA HotSwap drive bays. Many drive capacities/types are available

Drive Bays	2 native SATA, shock-mounted, keyless, removable 4 HotSwap universal USB 3.2 (SATA/IDE compatible), shock-mounted, keyless, removable Hard drive options: rotational or SSD in various capacities
DVD/CD/Blu-ray	BD-R/BD-RE/DVD±RW/CD±RW Blu-ray burner, dual-layer combo drive

Forensic Imaging / Write Blocking	DI UltraBay 4d™ forensic bridge - write blocks SATA, SAS, USB 3.0/2.0/1.1, IDE, FireWire and PCIe SSD storage devices
	Touchscreen user interface supports on-screen access of:
	    • Connected storage device information
	    • LUN selection
	    • Management of HDD protected regions
	    • File system and partitions (independent of the FRED OS)
	Supports simultaneous or sequential drive imaging of multiple storage devices, supports HotSwap device connection, available exclusively from DI on FRED systems

Hard Drive Cooler Shelf	DI exclusive extendable/retractable imaging work shelf with integrated ventilation for drive cooling
Media Card Reader	DI Forensic Media Card Reader - user-selectable read/write or read only access
Networking	Dual Intel 10/100/1000 Mbps gigabit Ethernet adapters (1 or 2 port Intel 10 Gb Ethernet adapter options available)
Connections & Expansion	3 USB 3.2 Gen 1 9 USB 3.2 Gen 2 2 USB 3.2 Type C 1 USB 3.2 Gen 2x2 Type C 1 write blocked SATA port - front access, read/write switchable through UltraBay 4d 1 write blocked SATA or SAS port - front access, read/write switchable through UltraBay 4d 1 write blocked PCIe port - front access, read/write switchable through UltraBay 4d 1 write blocked USB 3.0/2.0/1.1 port - front access, read/write switchable through UltraBay 4d 1 write blocked IDE port - front access, read/write switchable through UltraBay 4d 1 write blocked FireWire 1394 A/B (400/800 MB/s) port - front access, read/write switchable through UltraBay 4d
Drive Tray Ecosystem	Five (5) unique USB 3.2 connected HotSwap forensic drive trays: 1) 3.5"/2.5" SATA drive tray (read/write or read only switchable), 2) 3-port, USB 3.0 general purpose hub, 3) 5-port *Dongle Vault* for software license dongles, 4) NVMe/M.2 PCIe SSD (write blocked switchable), and (5) Forensic Media Card Reader.
Storage Controller	3 x M.2 slots (Key M), type 2242/2260/2280/22110 (supports PCIe 4.0 x 4, SATA modes); 2 x U.2 connectors; 8 x SATA 6 Gb/s ports
Audio	Realtek® ALC2250 8-channel high definition audio CODEC featuring Crystal Sound 2
Keyboard / Mouse	Microsoft wireless desktop keyboard and mouse
Display	Optional: 22" (21.5" Vis) ergonomic LED monitor, 1920 x 1080 full HD resolution, adjustable height, tilt and swivel, built-in speakers
Power	1200 watt modular power supply
Warranty and Support	36 months from date of purchase, extended warranty options available, lifetime technical support
Dimensions and Weight	24" High x 8" Wide x 25" Deep, 80 lbs
Accessory Toolbox	Adapters and cables - SAS, SATA, IDE, microSATA, PCIe SSD m.2 NVMe, PCIe SSD MacBook Pro (2013 and newer), server class PCIe SSD, SATA LIF, and MacBook Air Blade SSD Security screwdriver set: Assorted security bits for opening computer enclosures Restore DVD containing Windows 10 Pro & Linux OS images. Original OEM SW/HW installation manuals and disks

OPTIONS	FRED AMD - Forensic Recovery of Evidence Device Optional Feature Technical Specifications
FRED 1R and 2R Raid Options	12 channel PCIe 12 Gb/s SAS/SATA RAID Controller 5 bay RAID chassis (Qty 1 - 1R, Qty 2 - 2R) 1R - Using 18 TB: 90 TB, (raw), 72 TB (RAID5) 2R - Using 18 TB: 180 TB (raw), 162 TB (RAID5) Additional hard drive options available