



2021

“Things that might be obvious to one person might not be for another”

### **The main differences between Digital Computer Portable Platforms (MediaClone SuperImager Plus line of products) to Embedded Cloning Solutions.**

Portable Platforms are consolidated devices, usable for many tasks and therefore make it very economical, built with off the shelf hardware and a regular OS (Windows, Linux)

#### **Pros:**

- **Adaptation:** Portable Platforms has a faster and easier adaptation to new technologies (upgrade from i7-10th generation to i7-11th generation CPU can take a few days)
- **Better Hardware:** Portable Platforms have better performances since they take advantage of the faster hardware available in the market: Faster SATA (today using SATA-3 controllers), Faster PCIE bus (today using PCIE -4 bus), Faster Memory (today using DDR4 XMP), Faster USB (today using USB3.2 and TB4.0) and a much better multi-core CPU.
- **Balancing Multi-Cores CPU:** Running multi-session operations on Portable Platforms utilizing the multi-core CPU is an easy task to accomplish without the need for extra coding.
- **Network connectivity:** 10Gigabit/s, VPN, iSCSI are all automatic given with the OS of the Portable Platforms, compare to a lot of effort and coding to incorporated those in embedded systems
- **Encrypted Storage:** Easily can be supported by the OS of the Portable Platforms (like using USB, e-SATA Encrypted storage)
- **New storage Interfaces:** Portable Platforms avoid dealing with new storage interfaces on the hardware level. It saves a lot of debugging and headaches, and has a place for errors.
- **Time to Market:** The legging time between a new technology introduced to the market and the time that Forensic investigators will encounter those devices and will need some tools to support it is less than a year. (for Embedded solutions development can take two years)
- **Designs Cycle Time:** A Portable Platforms development can take a short frictional time that it can take to develop an Embedded solution
- **Data Accelerators:** Compress data and save space is an easy task on a Portable Platform using the OS to do the job.

#### **Cons:**

- **Cost:** Portable Platforms are expensive to make, primarily when it built with premium, high-quality hardware.
- **Rugged Designs:** Portable Platforms with a ruggedized design need to follow the COTS criteria. It is an electronics enclosures criteria with five categories of Shock and Vibration resistance, Electromagnetic Compatibility, Thermal Management, I/O cabling, Resistant to a harsh environment, Reliability and maintainability).  
Part of the challenge in designing a robust Portable Platform is the need to deal with

power dissipation. For example, Mobile CPU uses low power, but their performances do not match the full desktop CPU used by the Portable Platforms.

- **Security:** Some OS are more susceptible to malware attacks like Windows vs. Linux. But any unit connected to the internet will be at risk even if it is just for f/w or s/w updates, whether it is a Portable Platforms or Embedded Solution. Here are a few advices to avoid issues with viruses and malware: Plugging USB storage devices into the Portable Platform without automatic mounting is an excellent measure to prevent viruses and malware. Also, scanning and cleaning the malware from the Evidence drive before starting the Forensic Analyzing is a good practice.

### **Myth**

Performances are better and faster on embedded solutions. This myth belongs to the past. Today new technologies developed to different market segments (CPU, Memory, Storages) are much faster.

### **End-User, what is good for you?**

- Economical Solution
- Faster Solution
- Multi-Tasking
- Consolidate Solution
- Easy to Maintain
- Fewer Hardware Issues
- No Yearly Fees

### **The Challenges of today's Computer Forensic Investigator in the Field**

- Data become extremely large
- Encounter unknown hardware interfaces
- Encounter data in different platforms and formats
- Too many devices need to be "isolate" and then image in a short period
- Dealing with new NVMe storages
- Dealing with many types and encryptions of cellphones and tablets

Please check what we can offer as A Digital Forensic Platforms

<https://www.media-clone.net/Digital-Forensics-Imaging-Investigation-Platform-s/1477.htm>