



**Salem Automation**  
Legacy Systems Emulation

# TITAN VM & TITAN VM PLUS

## Legacy Computer Virtualization



The TITAN VM Virtualization on modern computer hardware provides a software based virtual computer identical in function to the existing legacy computer. TITAN VM enables the old, legacy operating system and all of the legacy applications to be migrated over to the new computer environment with no changes at all! System disks or tapes become virtual disks files and appear to the legacy OS as the original disk or tape drive. If any peripherals such as serial ports or Ethernet ports are required, they are mapped to the new host computer systems components. If there are legacy I/O boards, they are virtualized in software using the TITAN IO module which precisely matches I/O timing, physical connections and signal levels. TITAN VM is designed to extend the life of legacy computer applications by moving them to a new, modern computer server platform without any conversion effort. TITAN VM has many benefits including:

- Avoids costly, extended, unplanned downtime due to legacy computer failing unexpectedly!
- Improve performance of applications, sometimes dramatically, by running them on a new, faster computer platform with faster disks, memory & network!
- Free up expensive computer room floor space and reduce computer room heating & cooling costs!
- Eliminate expensive legacy computer maintenance cost!
- No Source Code Required!
- Avoid costly software rewrite that may never be successful.
- Greatly speed up backups and reliability of backups by using new tape or optical technology for backups.
- Virtualize not only the legacy computer but also any third party legacy hardware with TITAN software and the TITAN IO interface.
- Us owned company, located in the US, with source code in the US.
- Enable utilization of new computer technologies such as SAN, RAID, Disk Mirroring & Gigabit networking that were not available when the legacy computer was being manufactured.



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The TITAN VM software virtualizes numerous legacy computers including:

- Mil-Std-1750A (Air Force processor)
  - L-304  
(Litton computer processor used on E2C)
  - CYBER 170 (Supercomputer)
    - Z-8002  
(Zilog 8002 used in airborne applications)
  - EHSP (ASPRO) (signal processor)
    - IBM AP101F & 4 PI  
(same processor family successor to the IBM 360)
    - AYK-14  
(Navy F18 aircraft mission computer)
    - TI-2520  
(Texas Instruments similar to the Mil-Std-1750A)
    - AAMP  
(Rockwell Collins commercial processor)
    - HP 1000  
(RTE Real Time Operating System)
  - Milli/131 (E2C bit sliced processor)
  - - CLC (designed by Bell Labs)

TITAN VM (Virtual Machine) PLUS Includes Faster Dynamic Instruction Translation type virtualization beyond the capability of the base TITAN VM offering. TITAN VM PLUS supports virtualization of the following computing platforms:

- PowerPC (made by Motorola and IBM)
- I960 (Intel RISC processor)
- 80X86 (80286 I/O coprocessor)
- 68060 (Used on the F15 fighter jet and other applications)

The TITAN VM PLUS provides a software based virtual computer identical in function to the existing, original, legacy computer with the additional function of Dynamic Binary Instruction Translation to speed processing over the base TITAN VM. TITAN VM PLUS enables the old, legacy operating system and all of the legacy applications to be migrated over to the new computer environment with no changes at all! System disks or tapes become virtual disk files which appear to the legacy OS as the original disk or tape drive. If any peripherals such as serial ports or Ethernet ports are required, they are mapped to the new host computer system. Computer I/O boards are virtualized in software and the TITAN IO module is used to enable physical connections to precisely match I/O timing, electrical signal levels and physical connectors.

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