Alta’s 1553 and ARINC products come standard with the most advanced Application Program Interface (API) in the avionics industry. **AltaAPI**, provides a layered, modular software tool kit for fast and efficient application development – usually a code reduction exercise from other vendors. The API architecture is extremely flexible for easy porting between various operating systems, such as VxWorks 5.X/6.X/7.X MILS (non RTP), Integrity, LynxOS RTOS, 32/64 Linux, Solaris 10, NI LabVIEW™, RTX Shared/Windows and 32/64 Windows XP/2003/Vista/07/08/8.1/10. Contact Alta for latest operating systems versions supported.

**Key Features of AltaAPI**

- **Layered Design to Maximize a Flexible and Quick Integration**
- Most Popular OS Environments Including 32/64 Linux 32/64, 32/64 Windows XP/2003/Vista/07/08/8.1/10 and Solaris.
- RTOS support for VxWorks, Integrity, Lynx OS, RTX Windows/Shared Mode.
- Windows Managed .NET 2.0 DLLs Provide Quick Integration with Visual Basic, .Net, C++, etc…
- Key ANSI C Layer 1 with source code provides easy integration and porting – over 80 example programs to jump start your application (regardless of OS).
- Same API Used for Multiple Protocols (1553 and ARINC).
- Easily port from other avionics vendors to AltaAPI – Porting Guides Provided.
- See **AltaAPI-LV™** for LabVIEW™ support.

**Layer 0 (zero) of the API is where all OS dependencies reside. This layer is kept as simple as possible to make the API as portable as possible. This is an ANSI C layer and source code, when possible, is provided. In most cases the user never needs to interface to the Layer 0 files unless special porting is required.**

**AltaAPI Architecture**

- **Layer 3 Module**
  - Windows GUI Analyzer
  - (.NET 2.0 C#)
- **Layer 2 Module**
  - for Microsoft Visual Studio 2005
  - .NET 2.0: C++, C#, VB, etc.
- **Layer 2 Modules for Other – i.e. Future Native ADA or LabVIEW**
- **Layer 1 API Module**
  - (ANSI C)
  - General Operations and Device Management
- **OS-Specific Layer 0 API Module**
  - (ANSI C)
- **OS-Specific Device Driver**
- Backplane (PCI, PCIe, etc.)

**Layer 0 (Low Level – OS Specific) API Model**

- **ANSI C**
- **Memory Mapping and Unmapping**
- **Memory Read and Write**
- **Interrupt Handler Attach and Detach**
- **OS-Specific Device Driver**
- Backplane (PCI, PCIe, etc.)

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Layer 1 (one) is where most applications start their program calls/interface. This layer has all the advanced library options for device management and functional setup and control. Source code and DLLs are provided for this layer. Example builds/makefiles and application programs are provided for all OSes.

Layer 2 (two) of the API provides the Windows .NET interface. .NET offers powerful object oriented advancements in application development. See AltaAPI-LV™ for LabVIEW™ support. This layer provides the user an unprecedented choice of local and network controls. AltaView™ and AltaRTVal™ are developed with these same tools.

AltaView & AltaRTVal Reduce Integration/Test. Explore the possibilities with these advanced software programs.
- Next Generation in Analyzer and Validation Software
- Download Upgrades Via Alta Web – New Features are Added to Support Your Requirements
- XML Setup Files Allow External Configuration
- Windows XP/2003/Vista/07/08/8.1/10 (no NT) – 1GBYTE/System RAM