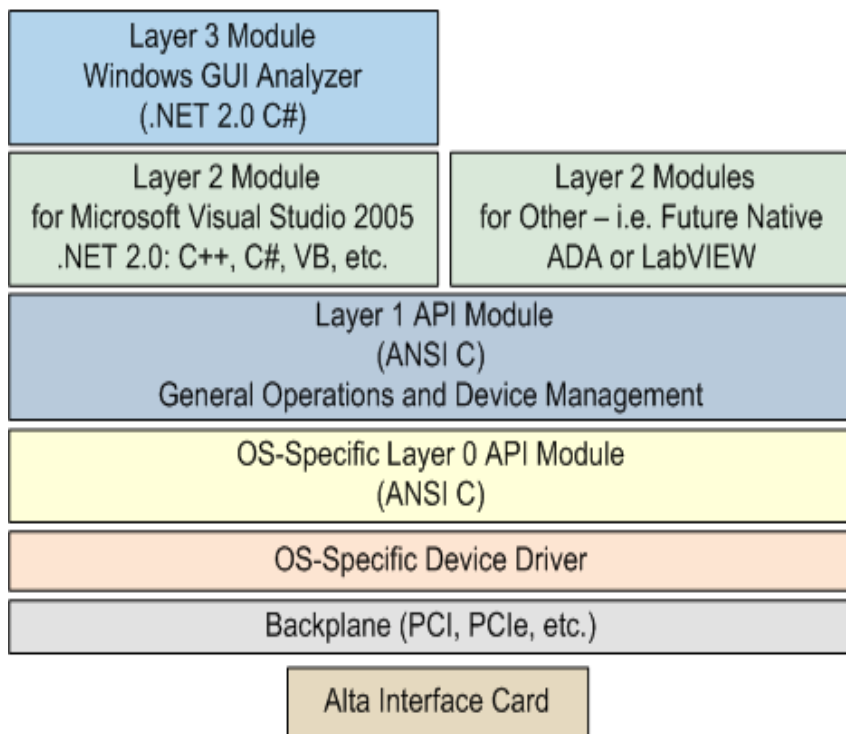Alta's 1553 and ARINC products come standard with the most advanced Application Program Interface (API) in the avionics industry. *AltaAPI*, provides a layered, modular software tool kit for fast and efficient application development – usually a code reduction exercise from other vendors. The API architecture 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/07/08/8.1/10/11**. **Contact Alta for latest operating systems versions supported.**
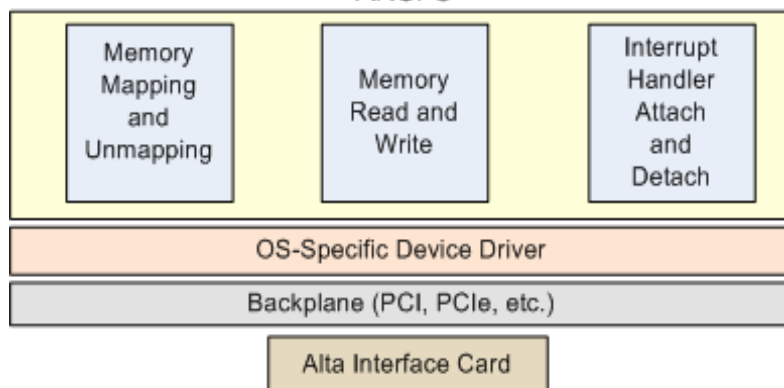
Key Features of *AltaAPI*

- Layered Design to Maximize a Flexible and Quick Integration
- Most Popular OS Environments Including 32/64 Linux 32/64, 32/64 Windows, VxWorks, Integrity, etc.
- RTOS support for VxWorks, Integrity, Lynx OS, RTX Windows/Shared Mode.
- Windows Managed .NET 3.5 DLLs Provides 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.

AltaAPI Architechture

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.
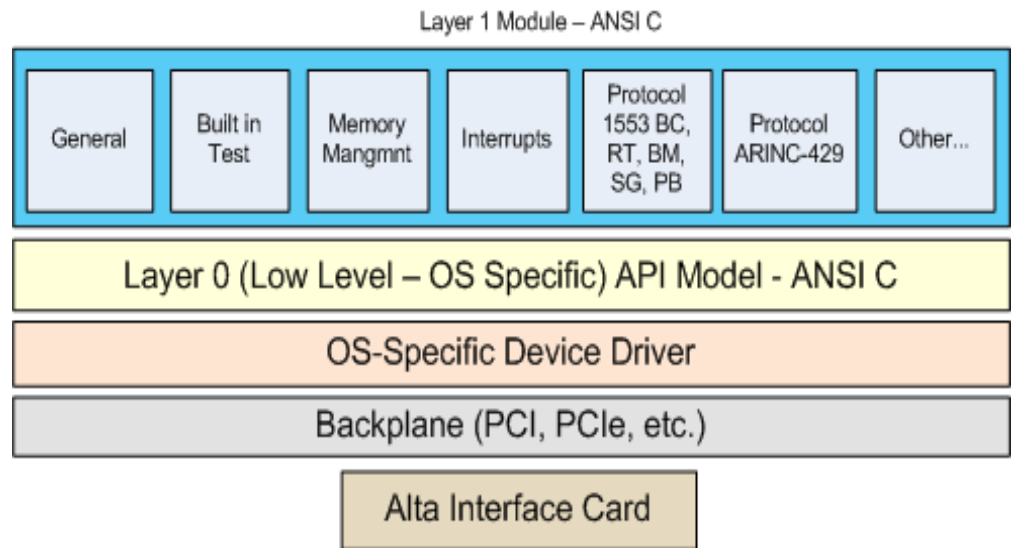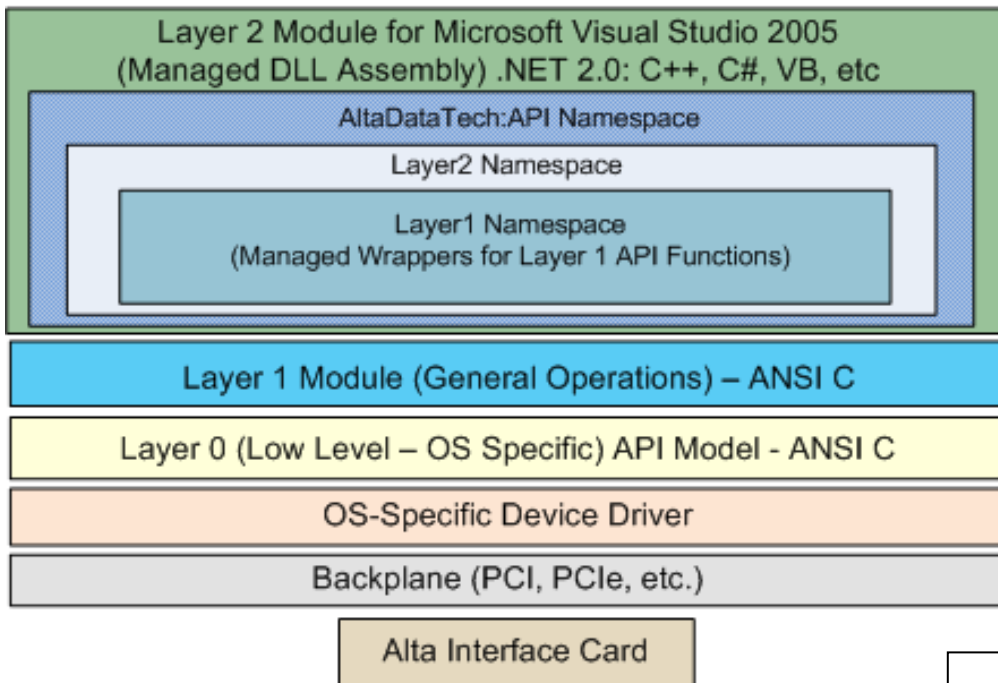
Layer 0 (Low Level – OS Specific) API Model ANSI C

AltaAPI™
Advanced Avionics API Tool Set

Alta\dt
data technologies

Layer 1 Module – ANSI C

General	Built in Test	Memory Mangmnt	Interrupts	Protocol 1553 BC, RT, BM, SG, PB	Protocol ARINC-429	Other...

Layer 0 (Low Level – OS Specific) API Model - ANSI C

OS-Specific Device Driver

Backplane (PCI, PCIe, etc.)

Alta Interface Card

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 Model

Layer 2 Module for Microsoft Visual Studio 2005 (Managed DLL Assembly) .NET 2.0: C++, C#, VB, etc

AltaDataTech:API Namespace

Layer2 Namespace

Layer1 Namespace
(Managed Wrappers for Layer 1 API Functions)

Layer 1 Module (General Operations) – ANSI C

Layer 0 (Low Level – OS Specific) API Model - ANSI C

OS-Specific Device Driver

Backplane (PCI, PCIe, etc.)

Alta Interface Card

Layer 2 (two) of the API provides the Windows .NET interface. .NET offer 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/07/08/8.1/10/11 (no NT) 1GByte RAM