



Standards

Different Philosophies
Designer vs. Integrator



Designer

- “Designer” standards have a lot of options that may or may not provide interoperability across the interface boundary.
- They offer the designer a wide range of options (flexibility) to meet design requirements.



Designer Standards

- Designer standards are good from the point of view of the designer who needs to meet a wide range of application requirements for a customer that requires a “standards” based design.



Integrator Standards

- These standards are designed with interoperability as the goal.
- Options are eliminated or carefully constructed to make sure that all combinations are interoperable.
- Options that are not interoperable and cannot be eliminated are clearly identified so the choice is clear to the Integrator.



Integrator Standards

- Good from the system integrator's point of view. The chance that the integrator will inadvertently selected non compatible options is eliminated or at least reduced.
- Encourages the development of a plug&play off-the-shelf market.
- Simplifies the decision of the manufacturer in what to make.



Typical Options

- Frequency
- Mechanical Format
- Parallel Data Path Widths (8, 16, 32, etc.)
- Serial Channels - 1X, 4X, etc.



Example - VITA 42.0

XMC Mechanicals

- Available Options
 - Size (short, long)
 - PCI (yes, no)
- Possible Combinations
 - Long with PCI (L-wPCI)
 - Long without PCI (L-woPCI)
 - Short without PCI (S-woPCI)
 - Short with PCI is not possible

XMC.0

Compatibility Matrix

Mezz Carrier	L-wPCI	L-woPCI	S-woPCI
L-wPCI	X	X	X
L-woPCI	X	X	X
S-woPCI	O	O	X



Summary

- Designer Standard
 - Favors designer
 - Lots of Options
 - Provides a lot of choices to satisfy customer
 - May or may not produce interoperable combinations
 - Makes it difficult for the development of a off-the-shelf market



Summary (cont)

- Integrator Standard
 - Favors the integrator
 - Strives for interoperability of all options
 - Reduces the danger of selecting non-compatible configurations
 - Spurs the development of off-the-shelf market
 - Limits perceived flexibility.