



# **NexGen Mezzanine**

Hot Swap Mezzanine

High Speed Serial Mezzanine



# **NexGen Mezzanine**

- Business Case
- Target Markets
- Configurations
- Dimensions
- I/O
- Connector
- Guides, Injector, Ejector & Latch



# Business Case

- Drive up the volume, this is the biggest issue with Telecom market
- As volume goes up cost go down
- As cost go down margin goes down
- QED Who thinks volume can be held down?
- Who would want to when profits will go up?



# Target Markets

- VME
- Compact PCI
- PICMG 3.X
- VITA 34
- Proposed NexGen Mezzanine Chassis Standard



# Sponsors

- Artesyn
- Motorola???
- Force???
- ???????



# Configurations Proposal

- Two Types
  - **Standard 13mm x 74mm x 147mm**
  - **Double 27mm x 74mm x 147mm**
  - **Note 1mm module separation?**
- Max of 2 per for 6U
- Max of 8 or 4 doubles per for 8U
- In order to 27 mm support the carrier must be a short card (about 140mm)



## **Configuration (cont.)**

Perspective drawing of carrier with  
two standard mezzanines,  
a double mezzanine and  
four empty slots



# Dimensions

- Two Types

- Standard 13mm x 74mm x 147mm**
- Double 26mm x 74mm x 147mm**

- Possibilities

- Double Width Version**
- Extended Length Version**
- None of these fit in the same chassis!**

- Fewer types means greater volume



# I/O

## ■ Power

- Single supply?**
- Unregulated 12V?**

## ■ Control

- I<sup>2</sup>C?**
- Ethernet 10/100 or 10/100/1000?**

## ■ Data

- 4 Receive pairs & 4 Transmit pairs minimum**
- If switching function multiply by n ports**



# Connector

- I/O Cross Sectional Area 13mm x 75mm
- Pin Lengths, 3 pin lengths minimum for hot swap, DS
- Number of Differential Pairs
  - **Data 4 rcv & 4 snd + control 2 rcv & 2 snd**
- Number of Single Ended Signals
  - **4 control 2 I<sup>2</sup>C**
- Power & GNDs
- Shields, must they be contiguous through the connector  
/how bad is the reflection?



# **Guides, Injector, Ejector & Latch**

- Need to estimate board spacing as next step
- Guide might possibly be part of connector
- Does the guide need ESD discharge function?
- Is injector necessary?
- Could retention screws be eliminated if latch mechanism is part of ejector