

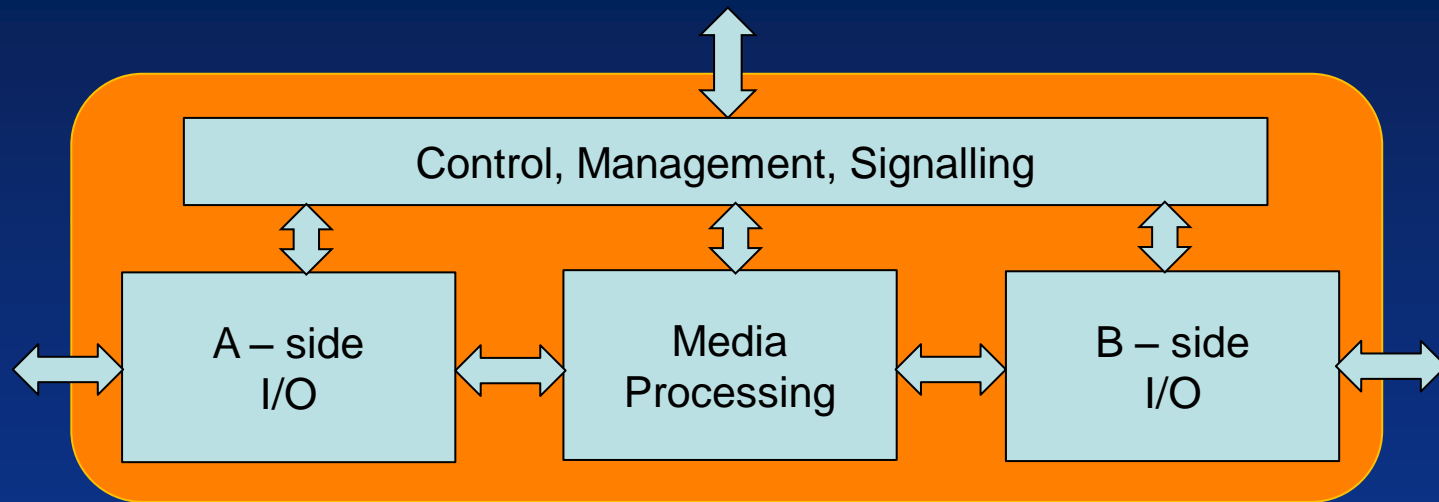
Workable Architectures for Media Processing Applications

Brian Carr, Emerson Network Power

Design Goals for Media Processing Elements

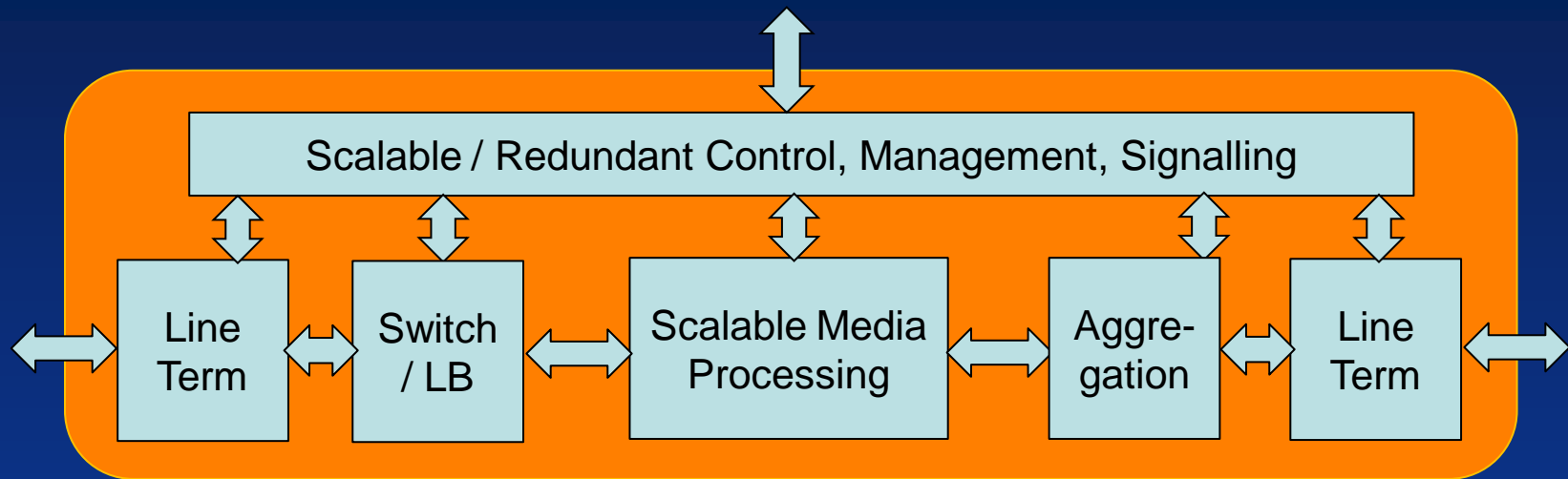
- Low cost per port / channel / transcode
- Low power per port / channel / transcode
- Scalable to big systems
- Low entry cost for small systems
- Redundancy / High Availability models vary but must be possible

Generic Media Gateway / Transcoding Element



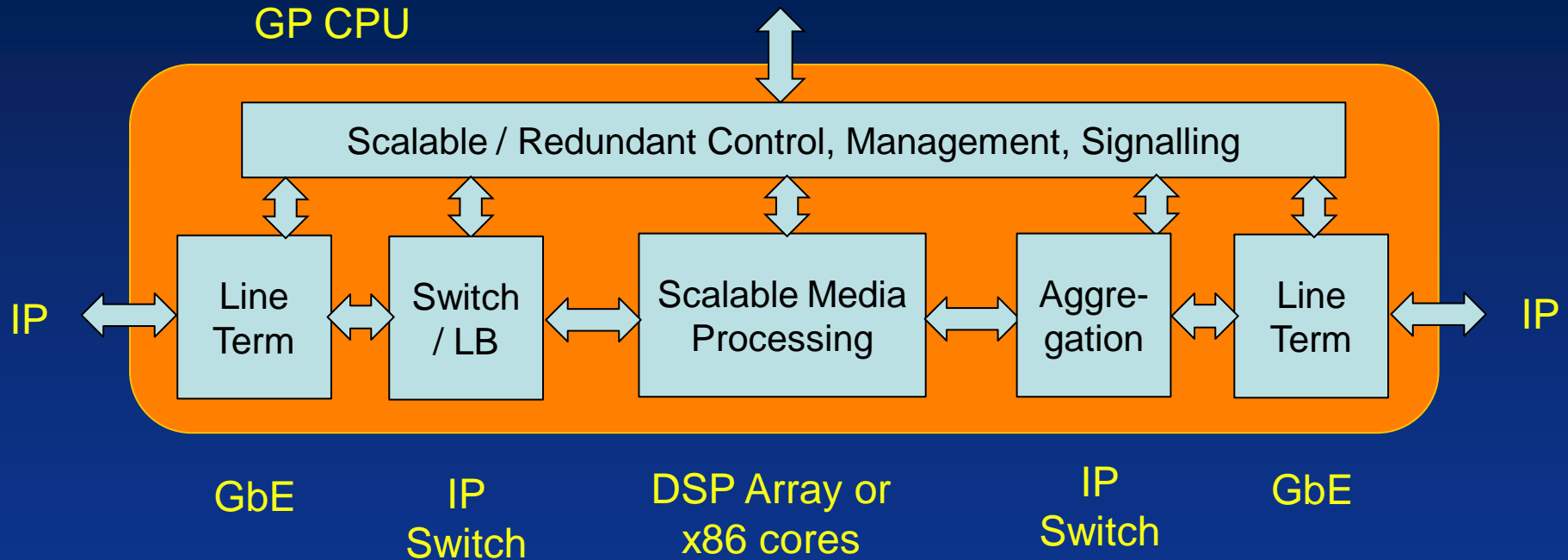
- Consider:
 - Asymmetric and symmetric flows
 - Different physical termination characteristics

Practical Media Gateway / Transcoding Element Architecture



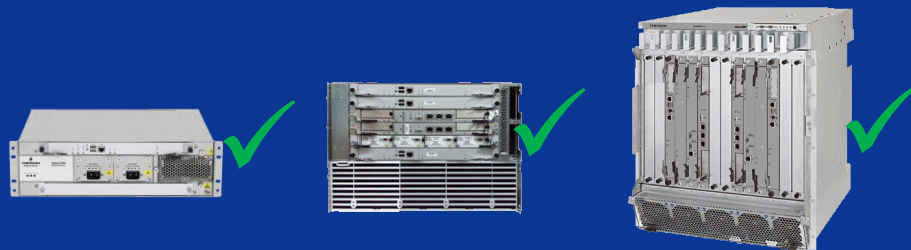
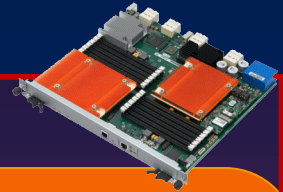
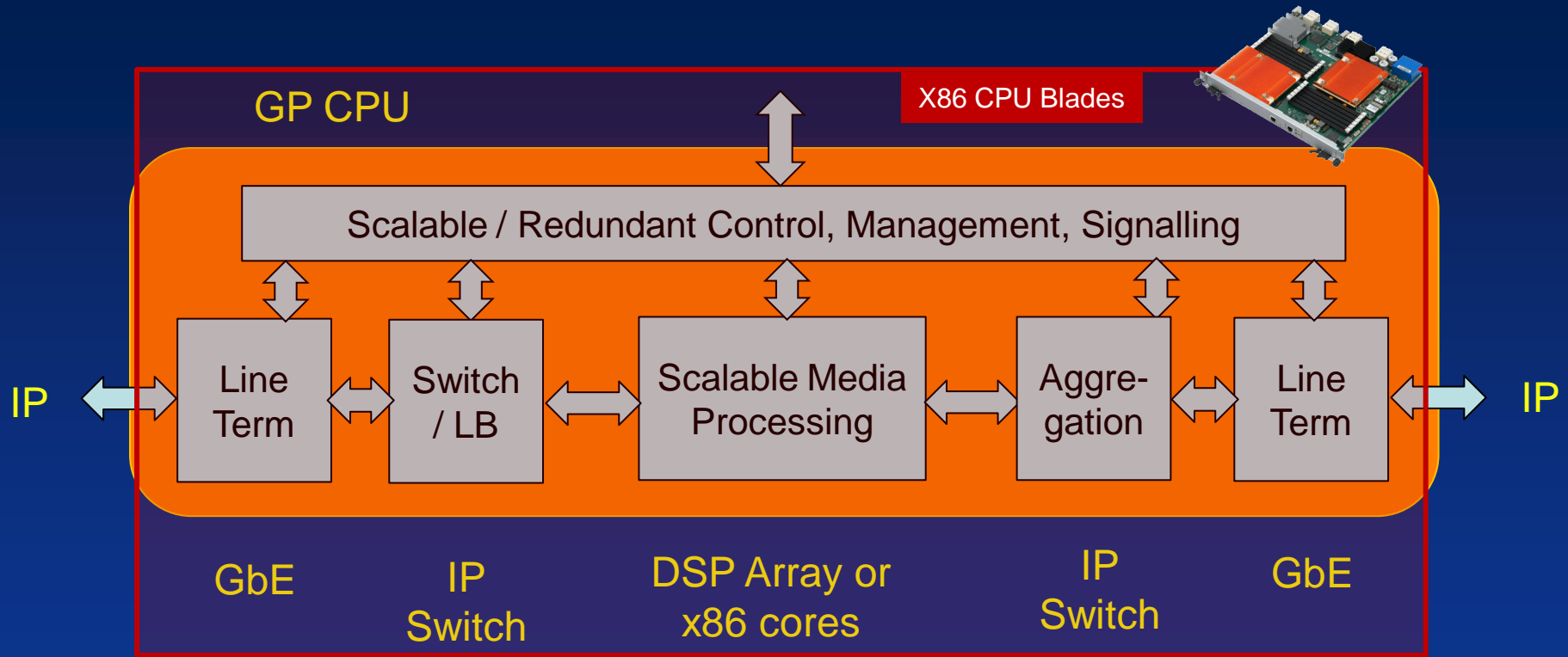
- Application determines the relationship between capacities of media processing and line terminations

Video Gateway / Transcoding Element Architecture

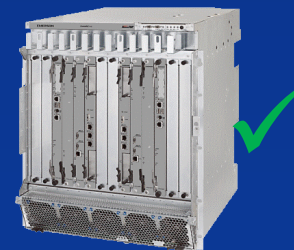
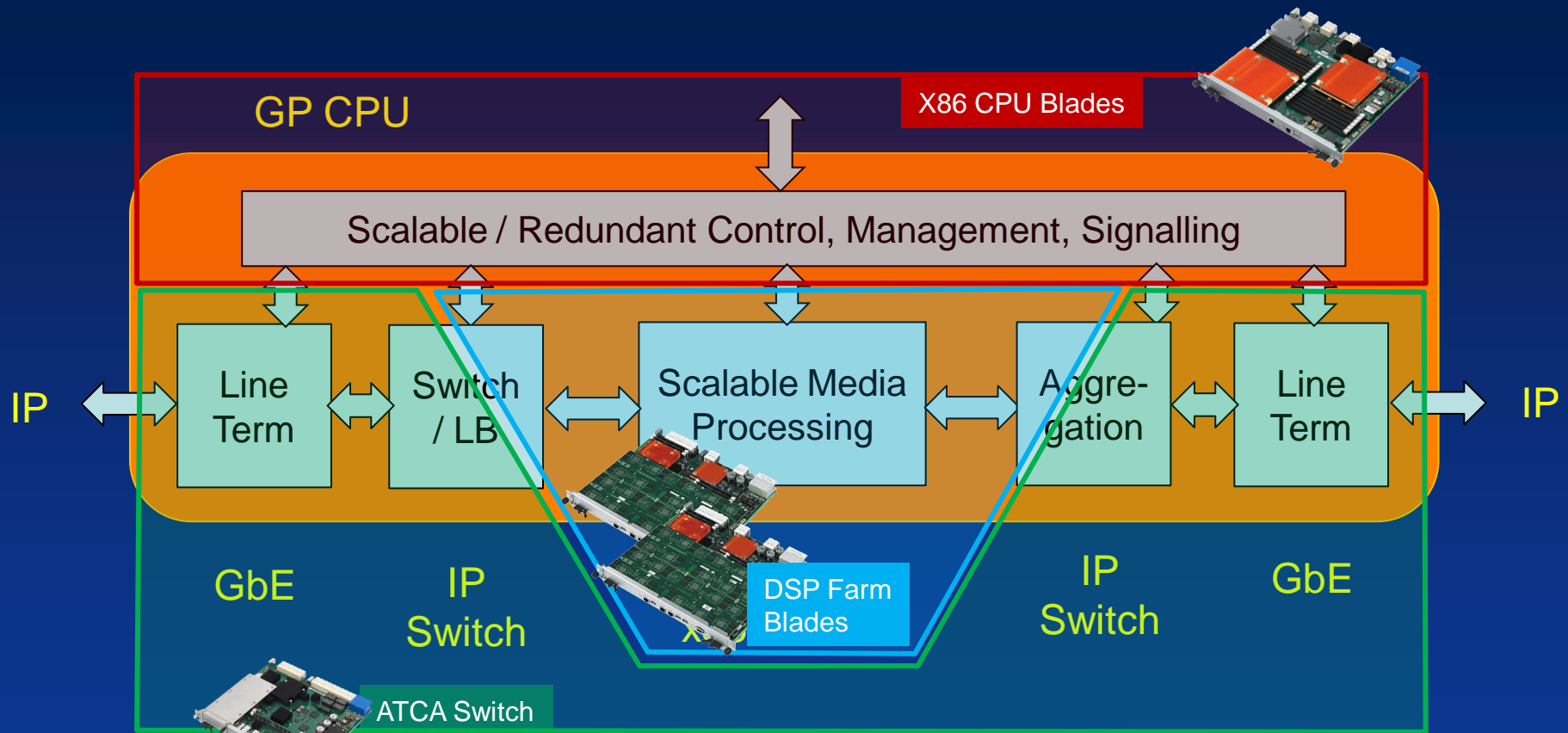


- Capacities:
 - Up to 50 HD channels in ATCA blade
 - Nominally 10Mbps / HD channel

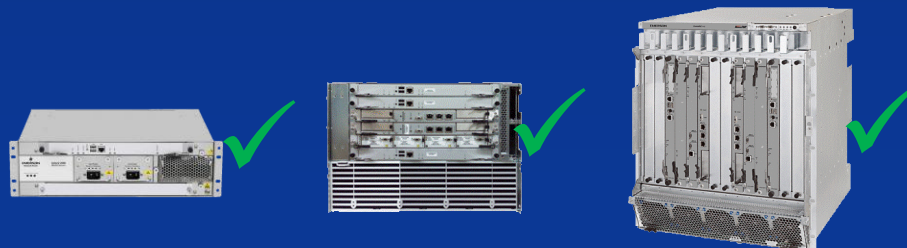
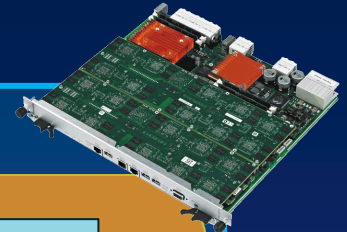
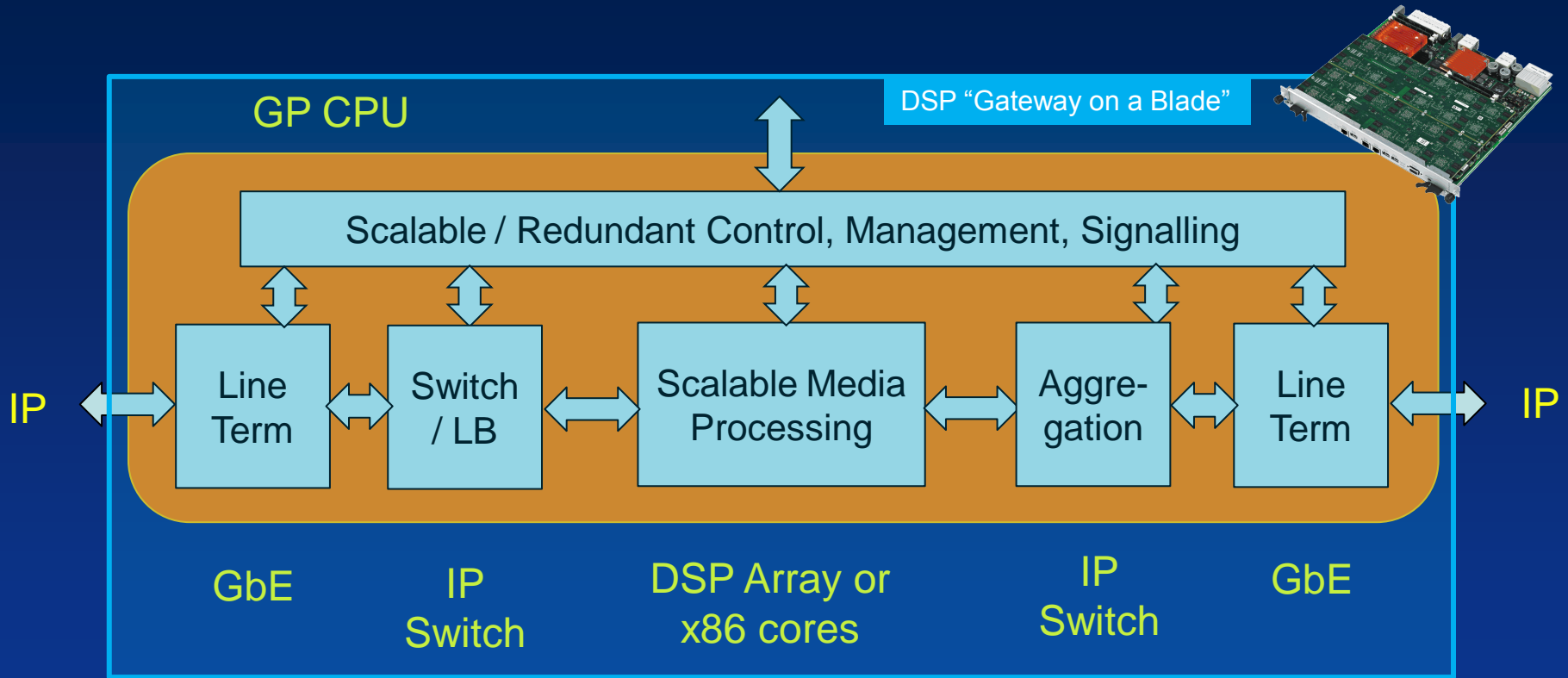
Video Gateway / Transcoding Element Architecture



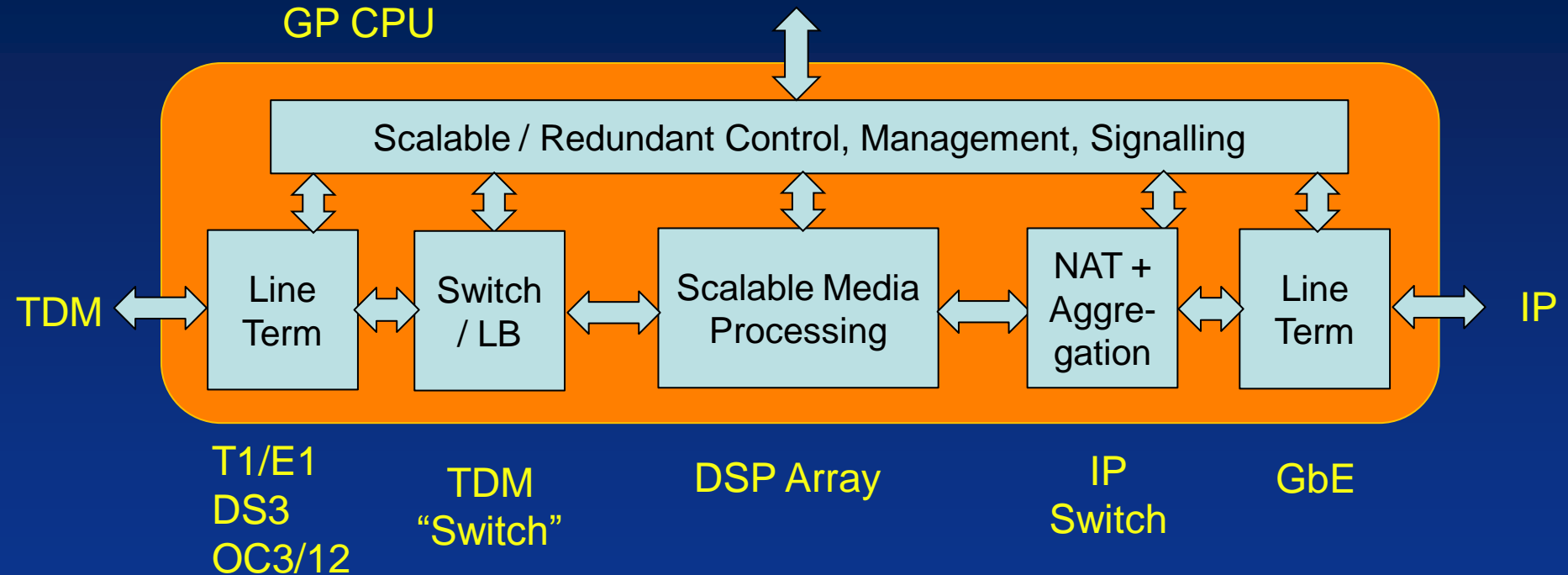
Video Gateway / Transcoding Element Architecture



Video Gateway / Transcoding Element Architecture

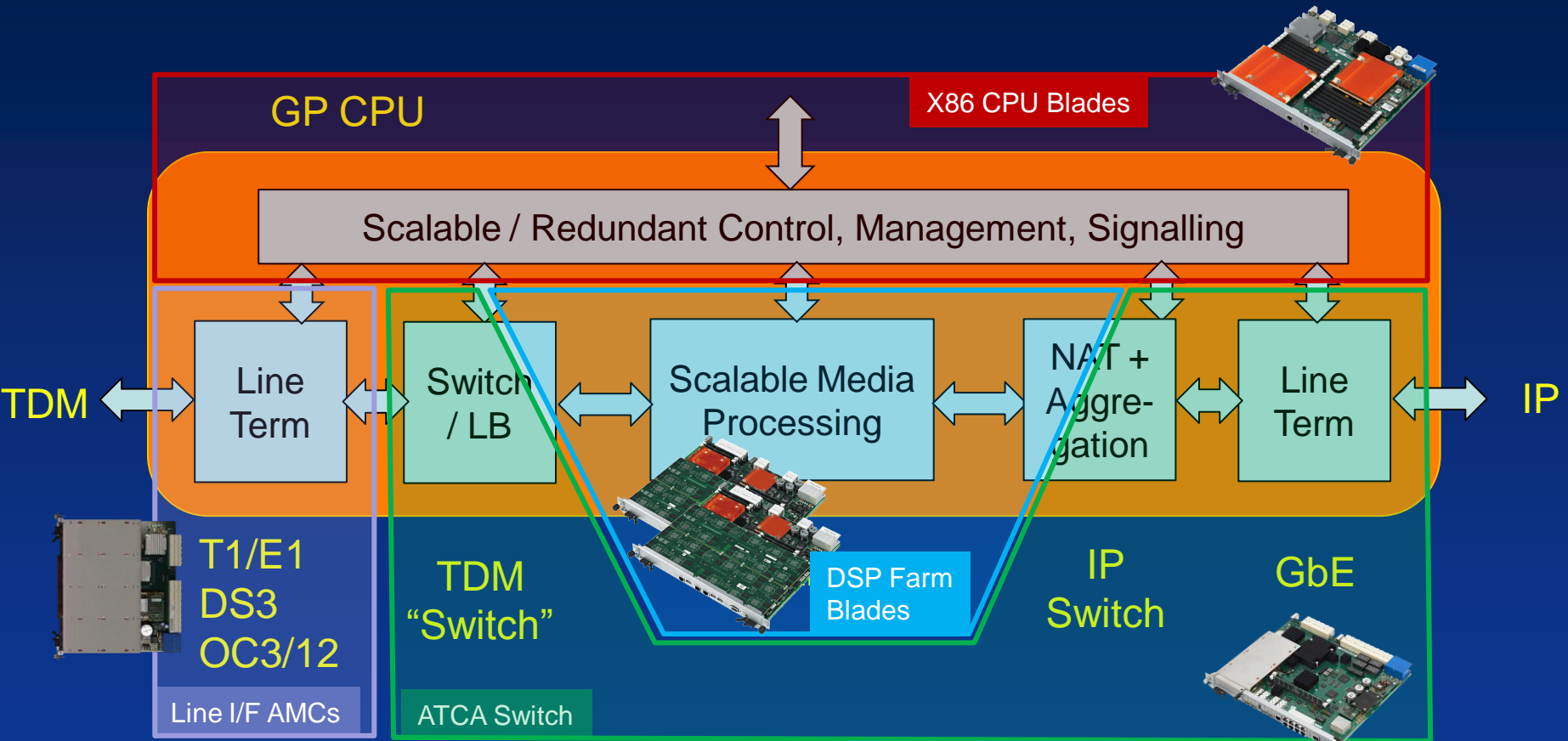


Voice Gateway / Transcoding Element Architecture

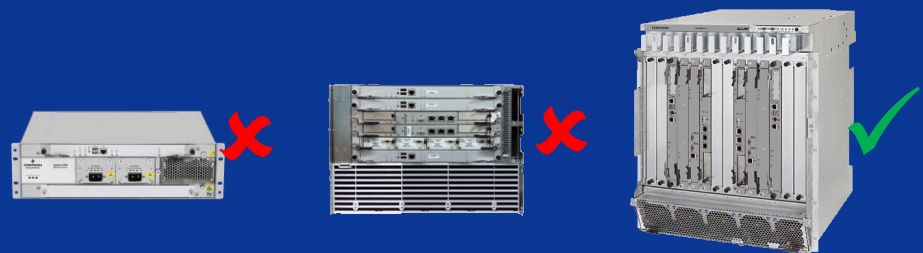


- Up to 8000 voice channels in ATCA blade
- Depending on codec and application

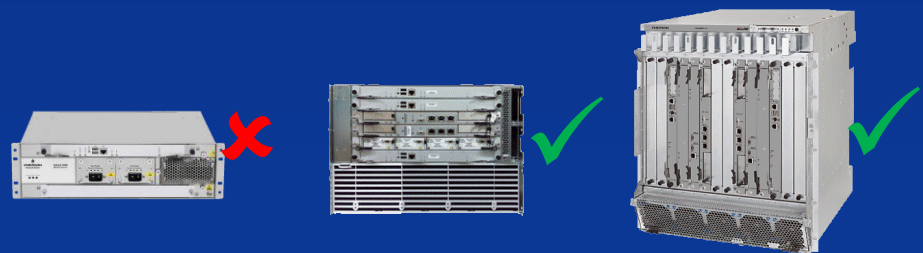
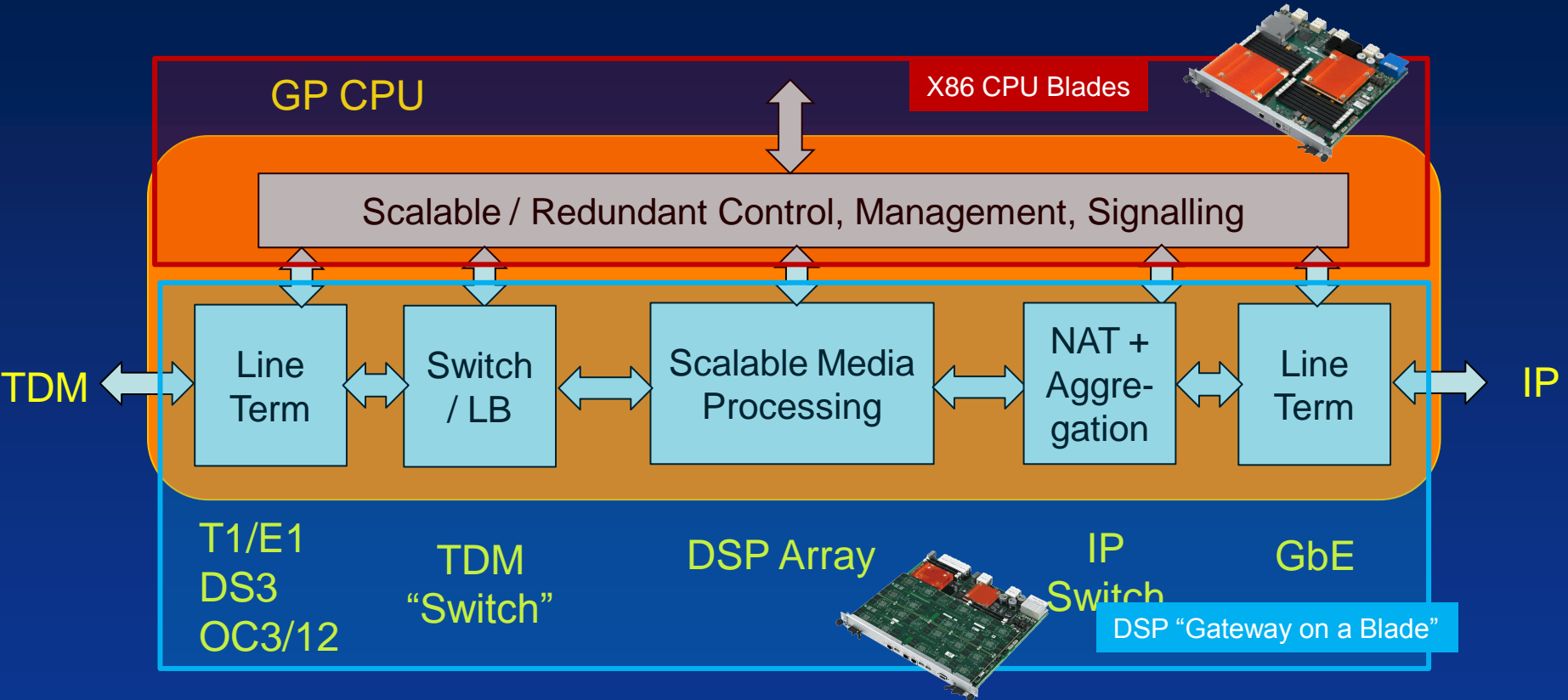
Voice Gateway / Transcoding Element Architecture



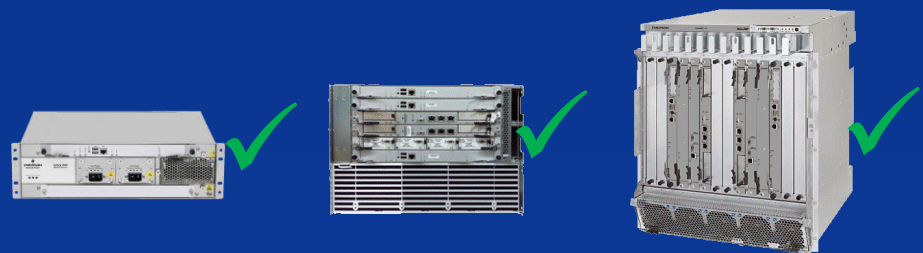
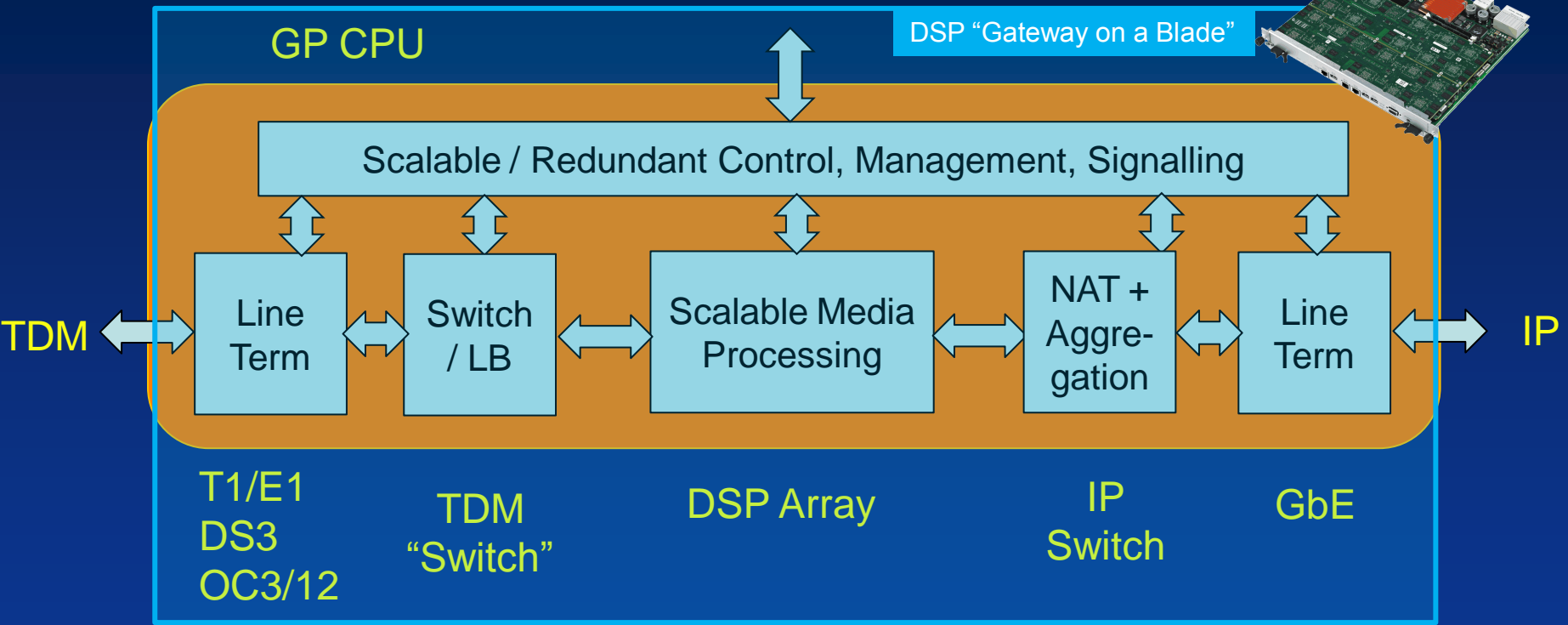
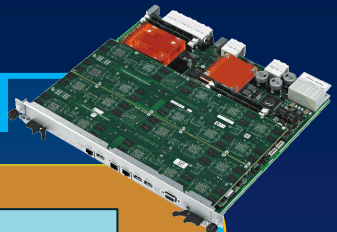
TDM=>iTDM



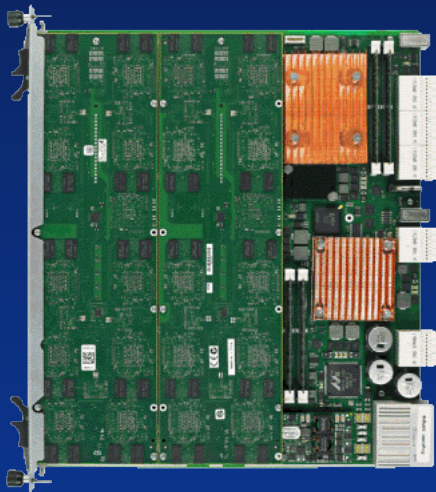
Voice Gateway / Transcoding Element Architecture



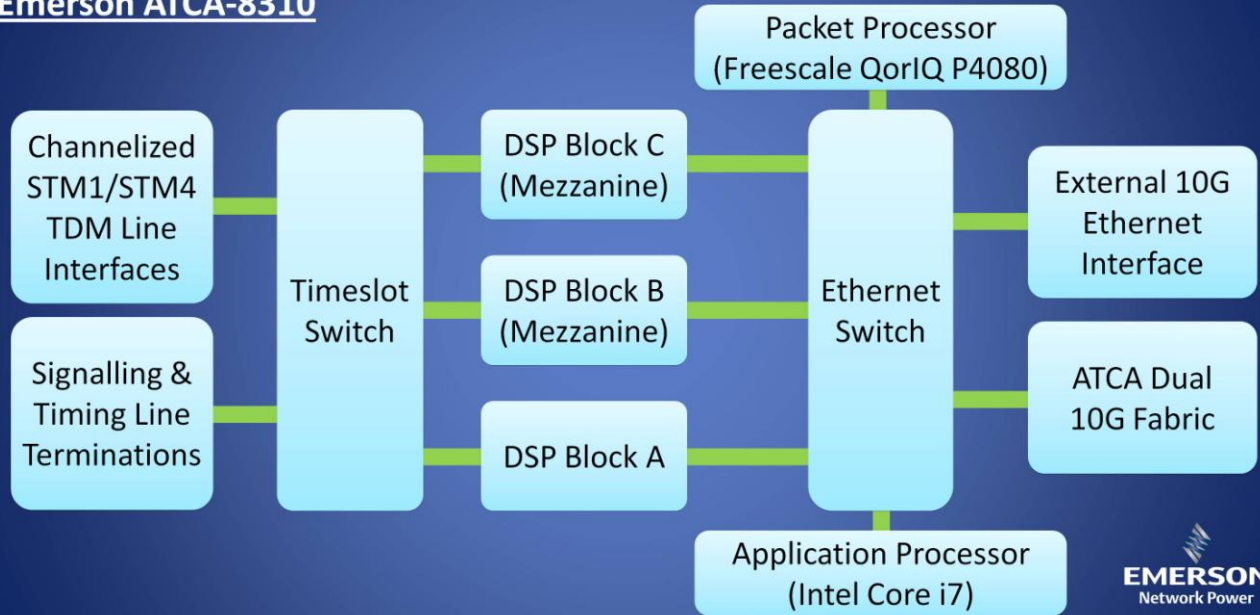
Voice Gateway / Transcoding Element Architecture



“DSP Farm” or “Gateway on a Blade”



Emerson ATCA-8310

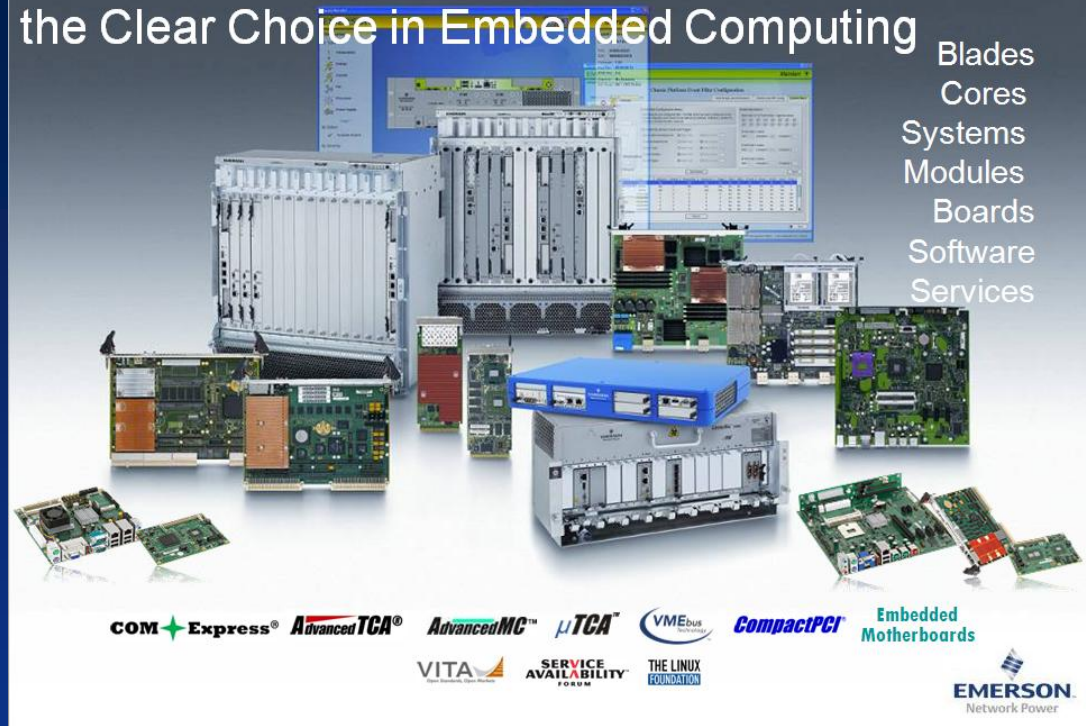


... Or both.

Thank You

Emerson Network Power – the Clear Choice in Embedded Computing

Blades
Cores
Systems
Modules
Boards
Software
Services



COM Express[®] Advanced TCA[®] AdvancedMC™ μTCA™ VMEbus CompactPCI Embedded Motherboards
VITA SERVICE AVAILABILITY FORUM THE LINUX FOUNDATION
EMERSON Network Power

Find out more at www.emersonembeddedcomputing.com

Brian Carr, Strategic Marketing Manager
Embedded Computing, Emerson Network Power
Brian.Carr@Emerson.com