

# CONDUCTION COOLED ASSEMBLIES

nVent SCHROFF Conduction Cooled Assemblies (CCA's) consist of a conduction cooled frame, feature Calmark Card Loks, extractors and conduction cooled keys. They are designed for circuit boards requiring cooling in severe environments where convection cooling cannot be used. The assembly also provides needed structural support of the plug-in module in high shock and vibration environments.

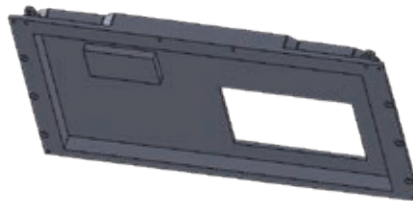
## NVENT SCHROFF CONDUCTION COOLED ASSEMBLY BENEFITS:

- » Downloadable standards compliant CAD templates for easy modification
  - » Includes peripheral components such as Card Loks and extractors
  - » 3U and 6U templates available for Vita 46, Vita 48.2, VME, and CPCI
- » Save time and sourcing costs by managing the entire assembly with one part number
  - » ESD protected packaging available
  - » Kits can also include thermal pads, EMC gaskets, and labeling per customer requirements
- » High performance options with High Clamp Force Card Loks and tolerance compensating extractors
- » Overcome design and thermal challenges by working with in-house engineering team
- » Manufactured in an AS9100 compliant facility



## THREE STEP DESIGN PROCESS:

- 1** Leverage SCHROFF full design services or download standards compliant, pre-configured CAD template.
- 2** Modify based on board layout and cooling needs.
- 3** Order and manage CCA assembly using one part number. CCA assembly may include:
  - » Heat frame and clam shell
  - » Card Loks
  - » Extractors
  - » ESD packaging
  - » Thermal pads
  - » EMC Gaskets



## OPTIONS TO INCREASE PERFORMANCE:



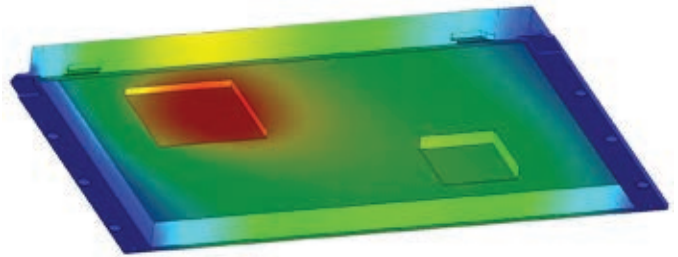
Improve clamp force by 3X with small profile, High Clamp Force Card Loks



Maintain positive pressure on connectors during Card Lok actuation with tolerance compensating extractors. Ideal for 2nd level maintenance and can be operated with a gloved hand

## IN-HOUSE DESIGN ENGINEERING EXPERTISE:

- » Collaborate with our experts to perform thermal analysis using software such as 6Sigma and overcome cooling challenges
- » Partner with our experienced engineering team to ensure your design is compliant with required standards
- » Accelerate your design process with 3D printed CCA's and frames for fit checks



## KEY CONDUCTION COOLED ASSEMBLY FEATURES:

- » Manufactured in an AS9100 compliant facility
- » Conduction frames available in 3U or 6U
- » Available in black anodize, chem film, or electroless nickel plating for excellent corrosion resistance
- » 6061-T651 aluminum provides high thermal conductivity as well as lightweight support
- » Threaded inserts secure board fasteners in extreme vibration environments
- » High Clamp force Card loks provide high clamping force (up to 3X the clamping force of similarly sized Card Loks) with even pressure distribution for low thermal resistance
- » Frame and backing plate are each machined from a solid piece to assure high heat transfer and robust structural integrity
- » Silkscreen available
- » ESD packaging enables kit to be pulled from inventory and brought directly to work environment for assembly without concerns of static electricity generation
- » All components needed for assembly can be included in the kit bagged and tagged per customer requirements

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