

FOR IMMEDIATE RELEASE:

ANSI and VITA Ratify ANSI/VITA 48.8 Air-Flow-Through Cooling Standard for VPX

Mechanical standard for electronic plug-in units provides lower weight, reduced cost cooling technology.

VITA, October 9, 2017 — VITA, the trade association for standard computing architectures serving critical and intelligent embedded computing systems markets, announces the ratification by ANSI and VITA of ANSI/VITA 48.8-2017 “Mechanical Standard for Electronic VPX Plug-in Modules Using Air Flow Through Cooling”. This standard has completed the VITA and ANSI processes reaching full recognition under guidance of VITA. The VITA 48.8 Working Group was sponsored by Lockheed Martin, Curtiss-Wright Defense Solutions, and Abaco, and chaired by Curtiss-Wright Defense Solutions.

ANSI/VITA 48.8-2017 describes an open standard for the design requirements for an Air Flow Through (AFT) cooled plug-in module having 3U and 6U form factors while retaining the VPX connector layout. VITA 48.8 is the first open standard AFT technology to support small form factor 3U VPX modules, which are preferred for use in SWAP-C sensitive rotorcraft and unmanned platforms. Based on technologies developed by Lockheed Martin Rotary and Mission Systems, Owego, New York, VITA 48.8 helps reduce weight and cost for high density, high power dissipation 3U and 6U module based systems by eliminating the use of wedgelocks and ejector/injector handles, instead using light weight jack screws for insertion and extraction into a chassis. VITA 48.8 also supports alternative air-flow arrangements, allowing air inlet at both card edges, as well as the top edge (opposite the VPX connectors). Because VITA 48.8 does not use module-to-chassis conduction cooling, it also promises to help drive innovative use of new lightweight polymer or composite material based chassis.

ANSI/VITA 48.8 addresses previous design challenges for AFT cooling, such as air cooling, air flow intake, heat exchanges, and exhaust paths. ANSI/VITA 48.8 compliant modules use a finned

heat exchanger frame located within the central section of the assembly to top-cool primary circuit board and mezzanine board components.

Air Flow-Through overview:

- 3U and 6U, using VPX connectors
- SWaP-C optimized
 - Jackscrews instead of insertion/extraction levers
 - Option of lighter materials for chassis (e.g. additive manufacturing)
- Alternate air flow arrangements permitted
- Fixed slot pitches of 1.0”, 1.2” and 1.5”

Copies of the standard are available for purchase at the VITA Online Shop (<http://shop.vita.com/>).

About VITA

Founded in 1984, VITA is an incorporated, non-profit organization of suppliers and users who share a common market interest in critical embedded systems. VITA champions open system architectures. Its activities are international in scope, technical, promotional, and user-centric. VITA aims to increase total market size for its members, expand market exposure for suppliers, and deliver timely technical information. VITA has American National Standards Institute (ANSI) and International Electrotechnical Commission (IEC) accreditation to develop standards (VME, VXS, VPX, OpenVPX, VPX REDI, XMC, FMC, VNX, Reliability Community, etc.) for embedded systems used in a myriad of critical applications and harsh environments. For more information, visit www.VITA.com.

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Source: VITA

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