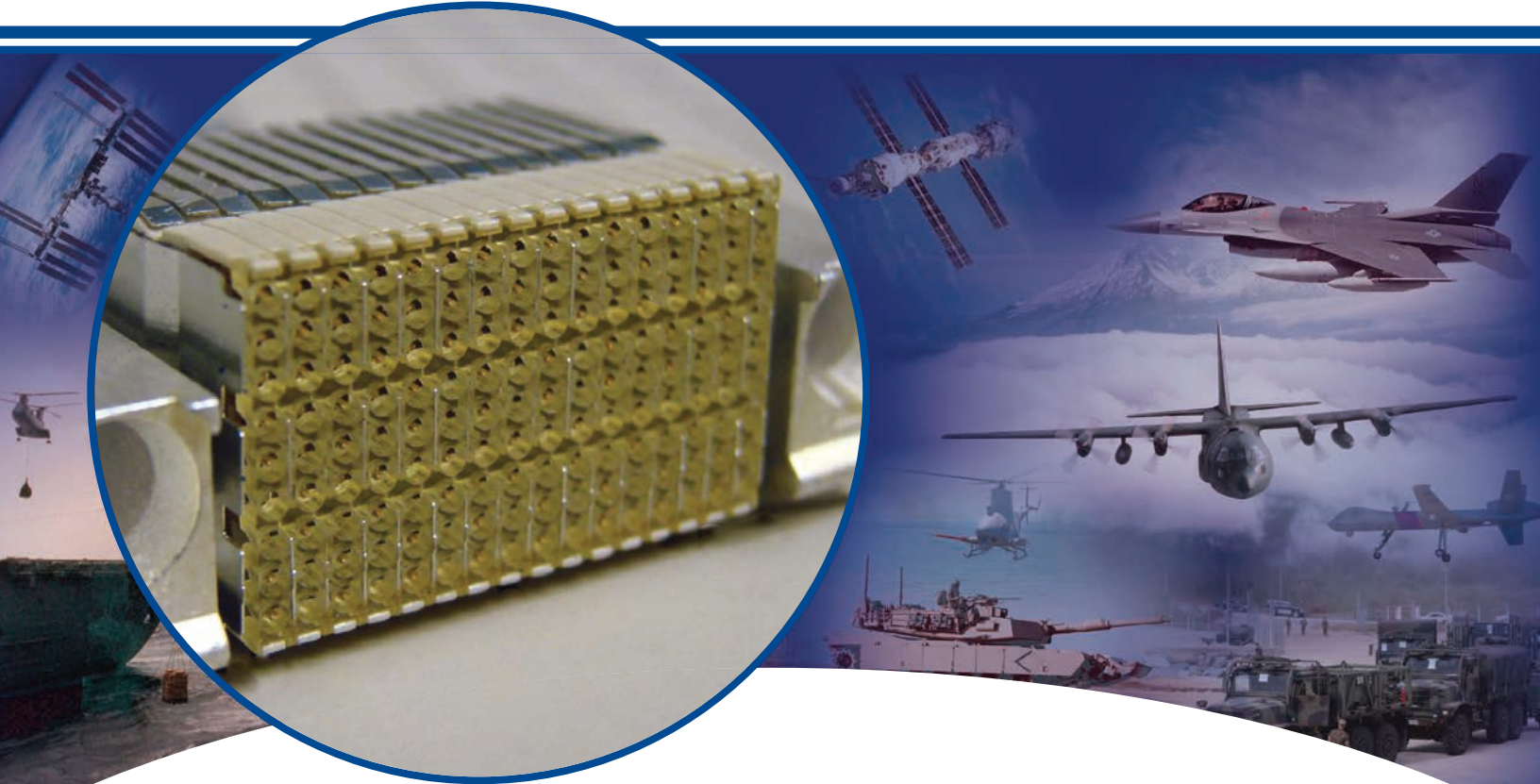


KVPX[®] Series Connectors

High Speed, High Density, Rugged Interconnects



Hypertronics introduces the KVPX Series or embedded system interconnects to provide a drop in replacement for use in high-reliability VITA 46/49 back-plane architectures.

Fretting corrosion caused by the relative movement of contacts during continual shock and vibration in harsh environments is the leading cause of failure in aerospace and defense systems platforms. This is especially problematic at the back-plane interface of embedded computers such as avionics, radar, sensors, motor controls, data storage, communications and weapon systems.

To combat this problem, Hypertronics has integrated its legendary Hypertac[®] contact system into a VITA 46/48 form factor by evolving its space proven cPCI connector technology. In doing so, Hypertronics has succeeded in achieving an interconnect system which meets all of the high-speed electrical requirements of VITA 46/48 while vastly increasing the

mechanical reliability and physical ruggedness of unmated connectors and modules.

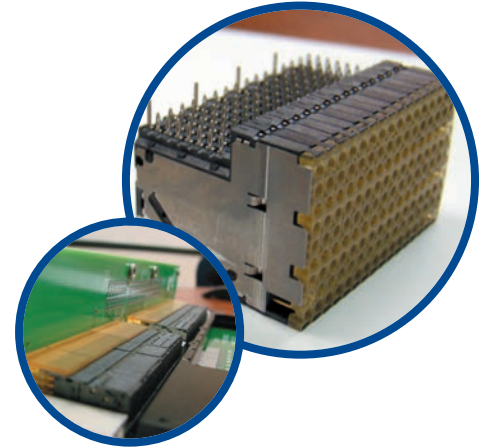
To that end, the KVPX daughter-card connectors incorporate a front face plate which prevents damage to the male contacts in an unmated condition as well as excellent ESD protection, ideal for two-level maintenance required in many military systems. In addition, the KVPX back-plane connectors utilize Hypertronics space qualified 0.4mm hyperboloid sockets, known to provide immunity to shock and vibration fretting, numerous linear paths of contact, low-forces, high mating cycles, and a self wiping cleaning action that results in consistently better integrity in extreme environments.

Like all Hypertronics products, the KVPX Series is highly engineered to guarantee top performance under the most severe conditions in aerospace, defense, and industrial applications where failure is not an option.

- Immune to Shock and Vibration Fretting
- High Speed – 6.25+ Gbps
- Space Proven Technology

Features

- Fully footprint-compatible with VITA 46 and VITA 48 standards
- Utilizes industry guide hardware
- Verified for 6.25 Gbps data rate performance
- 100 ohm impedance for differential pair configuration
- Differential, Single-ended and Power Modules
- Reliable Hypertac® Hyperboloid contact technology
- ESD protection supports 2 level maintenance designs
- 0.56 (0.022mm) diameter via for backplane connector
- Flexible modular design for standard 3U and 6U as well as custom configurations
- Press fit compliant tail



General Specifications	
Number of Contacts	8 column 72 16 column 144
Pitch	1.8mm
Current Rating	1 Amp per contact 6 Amp per wafer
Extraction Force	1.2 oz. per contact typical
Temperature Rating	-55° C to 125° C
Insulator Material	LCP (Liquid Crystal Polymer)
Contact Plating	50 µin gold over nickel
Flammability Rating	UL94-V0
Dielectric Withstanding Voltage	500 VAC
Low Level Circuit Resistance	8 milliohms maximum
Insulation Resistance	500 megohms maximum
Vibration Sinusoidal	10Grms 2 hours per axis followed by 23Grms 15 mins per axis
Mechanical Shock	35 G 2.5 milliseconds 3 Shocks/Direction followed by 25 G 6 milliseconds 500 Shocks/Direction

Male / Daughtercard

- KX1HEP01C1TH: KVPX Daughtercard Half Power Module with Gold Press-Fit Tails
- KX1FCS01C1TH: KVPX Daughtercard Full Single Ended Module with Gold Press-Fit Tails
- KX1FCD01C1TH: KVPX Daughtercard Full Differential Pair Module with Gold Press-Fit Tails

Female / Backplane

- KX2HEP01C1TAH: KVPX Backplane Half Power Module with Gold Press-Fit Tails
- KX2FCS01C1TAH: KVPX Backplane Full Single Ended Module with Gold Press-Fit Tails
- KX2FCD01C1TAH: KVPX Backplane Full Differential Pair Module with Gold Press-Fit Tails

Hypertac Features & Benefits

- Immunity to shock & vibration
- Low insertion/extraction forces
- Low contact resistance
- Industry leading mating cycles
- Self-clean wipe action for better signal integrity



Wire sleeve before insertion of pin



Pin partially inserted into sleeve



Pin completely inserted into sleeve