Integrated Avionics Computer
Industry-leading signal-conversion and data-concentration

Korry’s NextGen Integrated Avionics Computer (IAC) is an evolutionary step in our already successful Data Concentration Unit (DCU) product line. The new IAC benefits from Korry’s mature and extensive experience in the field of airborne computing, allowing Korry to meet ever evolving and complex data processing needs.

Korry’s pedigree in signal and data conversion is derived from designing, manufacturing and fielding operational DCUs. Korry’s avionics computers are highly modular and incrementally certifiable, offering a wide array of interface options including field loadable software capabilities. Korry’s NextGen IAC scalable form factor and modular architecture is revolutionary and utilizes common VITA-74 small form factor modules as building blocks to meet the customer’s airborne computing needs.

The final form factor of the Korry IAC is driven by customer requirements detailing the number of I/O pinouts, computing, graphics requirements and associated connectors.
Modular “plug-and-play” design solution

VITA74 small form factor provides a low footprint, low power and low weight solution. The modular building block approach offers a high degree of modularity and system configurations.

Input-Output Modules
Manages all input/output signals including programmable digital signals and analog discrete signals

Power Supply Module
Power supply, conditioning and monitoring to the other common core modules

Common Processor Module
Provides general processing and hosting of application software

Graphics Processor Module
Processing signal set to provide and manage data to the graphical user interface

Features
- Proven interface circuits
- Passive cooling
- VITA-74 modular design
- Full BITE / health management
- Host 3rd party software modules (DAL A to DAL E)
- Fully environmentally tested
- ETSO-2C153 certified modules
- Robustly partitioned open architecture computing platform
- DAL A highly configurable & scalable computing platform
- ARINC-661 CDS graphics compliant
- Supports incremental certification (AC 20-170)

VITA-74 Standard module packaging scheme
- Module dimensions  89.0mm (W) x 78.0mm (L)
- Small form factor sizes  19.0mm or 12.5mm (H)
Applications

Korry’s unique approach using TSO certified modules allows for a number of different configurations, applications and end-uses while offering customers a high performance and a low risk approach to systems integration.

Circuit Interface Options

- Analog
- ARINC-429
- ARINC-664P7
- ARINC-717
- ARINC-818
- ARINC-825 (CAN bus)
- Chip detector
- Discrete input
- Discrete input or output
- Discrete output
- DVI
- Ethernet
- Frequency / Pulse
- IEEE-1394B
- Lamp driver
- MIL-STD-1553
- Multi-wire discrete
- Resistive
- RS-170
- RS-422
- RS-485
- Solid state relay
- Synchro
- Thermocouple

Standards

- AC 20-170
- ARINC-615A (Data load)
- ARINC-653 (RTOS)
- ARINC-661 (CDS)
- ARINC-664P7 (CDN)
- ARP-4754A
- ARP-4761
- DO-297
- ETSO-2C153
- ETSO-C214
- MIL-STD-461E
- MIL-STD-704F
- MIL-STD-810G
- RTCA-DO-160G
- RTCA-DO-178B/C Level A
- RTCA-DO-254 Level A
- VITA-74

The architecture is capable of hosting 3rd party software applications via an ARINC-653 robustly partitioned Real-Time Operating System (RTOS), including 3rd party ARINC-661 Cockpit Display System (CDS) graphics server applications to drive cockpit or mission system displays.
Versatile multi-platform NextGen open architecture with configurable I/O channels and multiple circuit interface options

Korry’s highly configurable NextGen Integrated Avionics Computers can accommodate any installation or application requirements. They are ideal for simple “store and forward” data concentration applications, as well as perfect for handling highly complex, high-volume, low-latency system solutions with high performance, connectivity and computing capabilities.

The IAC Architecture is capable of hosting 3rd party software applications to drive cockpit or mission systems via an ARINC-653 robustly partitioned real-time operating system (RTOS) and ARINC-661 Cockpit Display System (CDS) graphics server user applications.

**TSO Certified Modules**

- Common Processing Module (CPM)
  - ARINC-653 RTOS Computing Platform
- Graphics Processing Module (GPM)
  - ARINC-661 CDS Graphics Server
- Input / Output Module (IOM)
- Common Data Network (CDN)
- Power Supply Module (PSM)
  - 28VDC or 115VAC@400Hz Power Supply
- Power Supply Hold Up Module
- Mass Storage Module (MSM)
  - SATA Drive Mass Memory Storage

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FAA CERTIFIED

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