

Product Information

PCJ-JAM • *CompactPCI*® Serial System Slot Controller

Document No. 5600 • 2010-03

CompactPCI® Serial is a new PICMG® specification for modular computers based on high speed signals, comprising PCI Express®, SATA, Ethernet and USB channels. In hybrid systems, *CompactPCI*® Serial backplanes and modules can be used concurrently together with legacy *CompactPCI*® cards.

A typical EKF hybrid system provides two backplanes, with their system slots center aligned side by side. To the left, a *CompactPCI*® CPU card such as the CCM-BOOGIE controls the legacy section. To the right, the **PCJ-JAM** acts as the *CompactPCI*® Serial system slot controller. The PCJ-JAM is a side card (mezzanine board) to the CPU card, which results in a 8HP common front panel for the entire assembly.

The PCJ-JAM delivers 4 PCI Express® lanes to the *CompactPCI*® Serial backplane, configurable 4x1 or 1x4. Up to 8 SATA channels are available in total. 5 SATA channels are derived from a RAID controller, suitable e.g. for level 0/1/3/5/10 operation. The PCJ-JAM is equipped with two Gigabit Ethernet controllers, individually switchable either for backplane communication or front panel usage. In addition, 6 USB ports are routed to the backplane.

The PCJ-JAM is also a fully featured side card, e.g. with a secondary DVI video output, HD Audio Codec, and EIA 232 serial I/O. As a rugged on-board storage solution, either a 2.5-inch SATA drive or a 1.8-inch SATA Solid State Drive module fits on the PCJ-JAM.

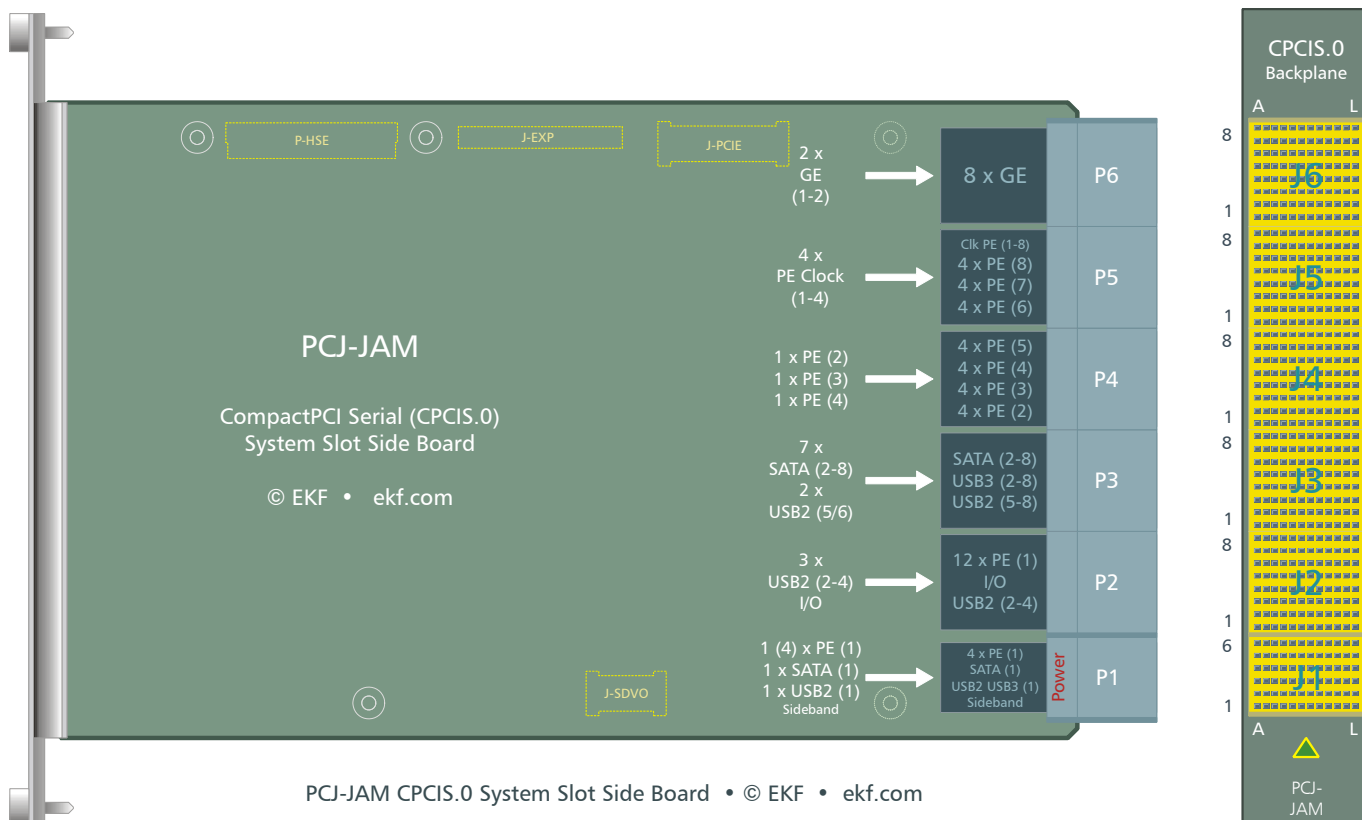


PCJ-JAM on CCM-BOOGIE, with C42-SATA SSD

The PCJ-JAM is a member of the EKF family of CompactPCI® PlusIO and CompactPCI® Serial products. The PICMG® CompactPCI® Serial specification (draft as of current) establishes high speed serial I/O across the backplane. The PICMG® CompactPCI® 2.30 PlusIO specification (released) may serve as a migration path from classic CompactPCI® to CompactPCI® Serial, by passing over a subset of high speed signals via J2 rear I/O to the serial backplane. Hence, hybrid systems comprised of both CompactPCI® and CompactPCI® Serial cards, can be configured either by means of a CompactPCI® PlusIO CPU card (such as the PC1-GROOVE) and a common hybrid backplane, or a classic CompactPCI® CPU card (such as the CCM-BOOGIE) with a suitable CompactPCI® Serial system slot side board such as the PCJ-JAM, together with a dual-backplane.

Benefits of the PCJ-JAM

- ▶ System Slot Controller for PICMG® CompactPCI® Serial (CPCIS.0) Systems
- ▶ Side Card for Legacy CompactPCI® CPU Card (e.g. CCM-BOOGIE, 8HP Assembly)
- ▶ Suitable for Dual- (Hybrid-) CompactPCI® and CompactPCI® Serial Systems
- ▶ Suitable CompactPCI® Serial Backplanes Available
- ▶ High Speed I/O to the Backplane: 4 x PCI Express, 8 x SATA, 2 x Gigabit Ethernet, 6 x USB
- ▶ Ethernet Ports Individually Configurable for Front Panel I/O or Rear I/O
- ▶ Powerful 5-Channel SATA RAID Controller (Level 0/1/3/5/10, JBOD, Clone, Auto-Rebuild)
- ▶ Carrier Board for a Single SATA Drive, Choice Between Two Options
- ▶ Option 2.5-Inch SATA SSD/HDD on-Board
- ▶ Option 1.8-Inch Micro-SATA SSD Module (EKF C42-SATA) on-Board
- ▶ Secondary DVI-D Video Connector (Dual Screen Operation, Option)
- ▶ HD Audio CODEC (Option)
- ▶ RS-232 Serial I/O (Option)
- ▶ Rugged Solution (Coating/Sealing Available on Request)
- ▶ RoHS compliant

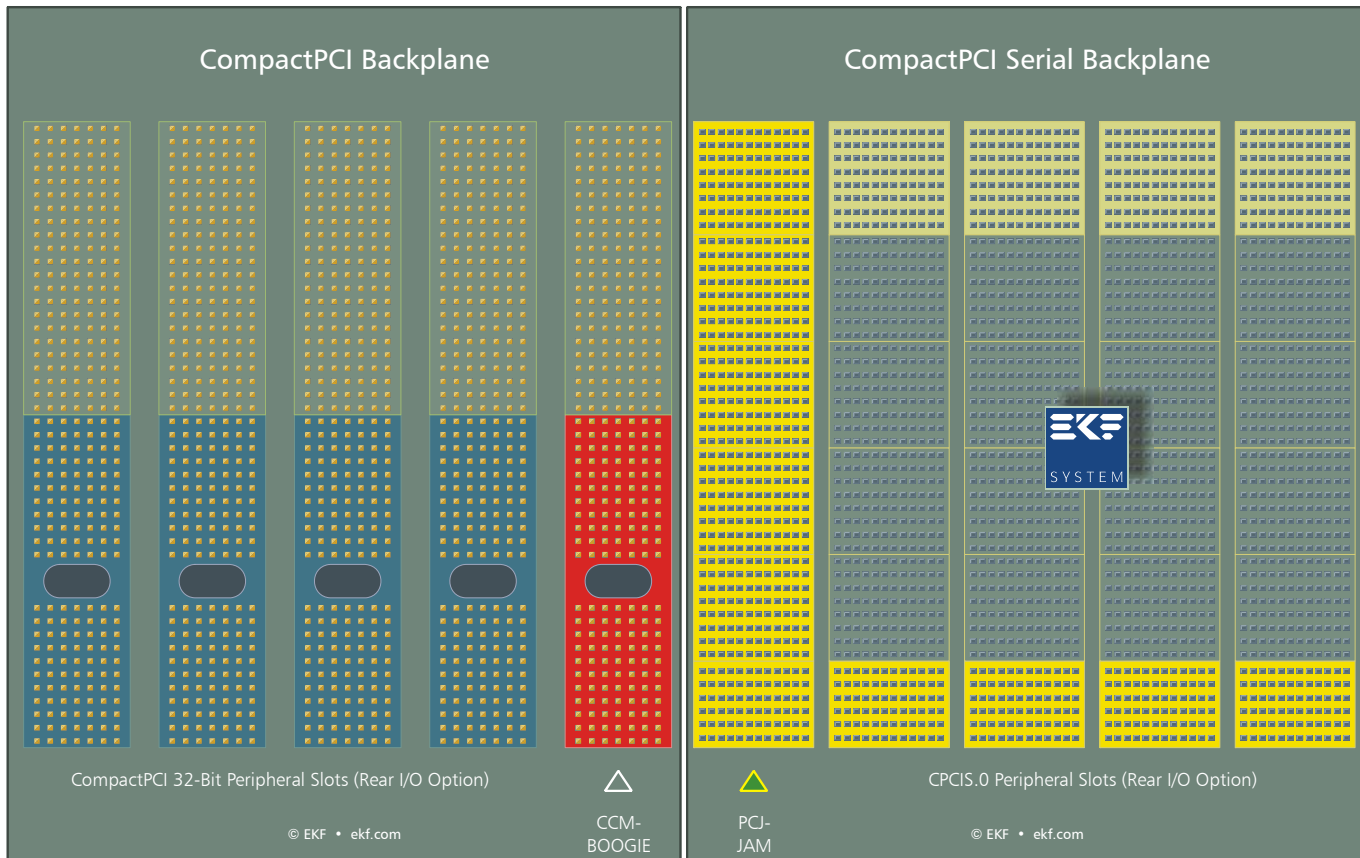




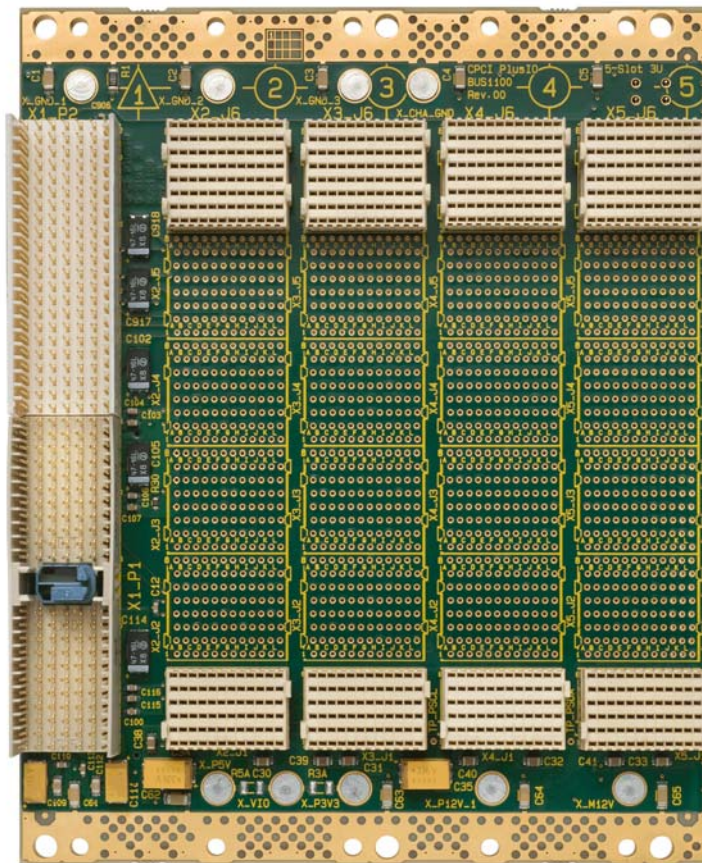
PCJ-JAM with CPCI Serial Connectors P1-P6

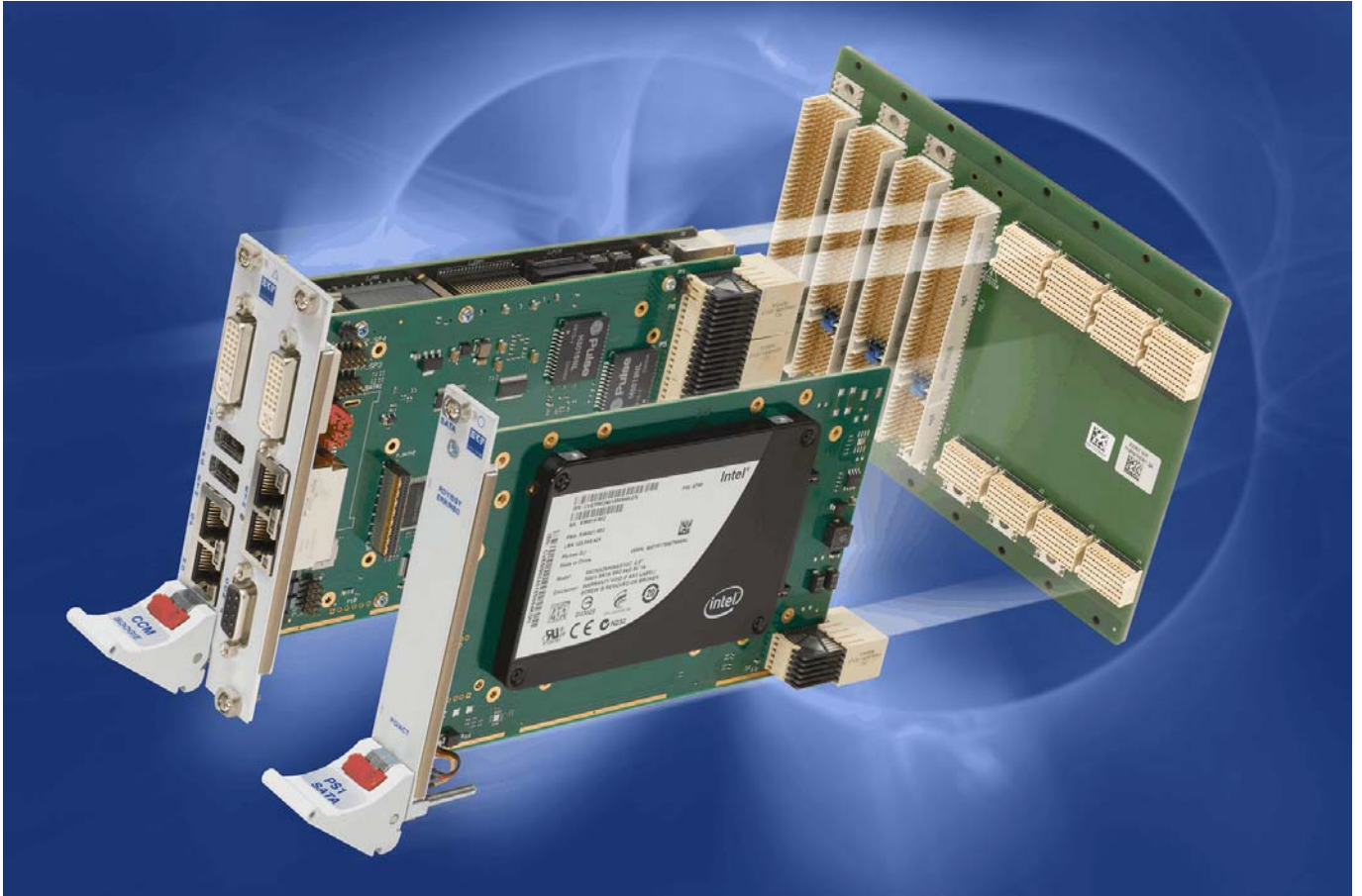


Typical Dual-Backplane

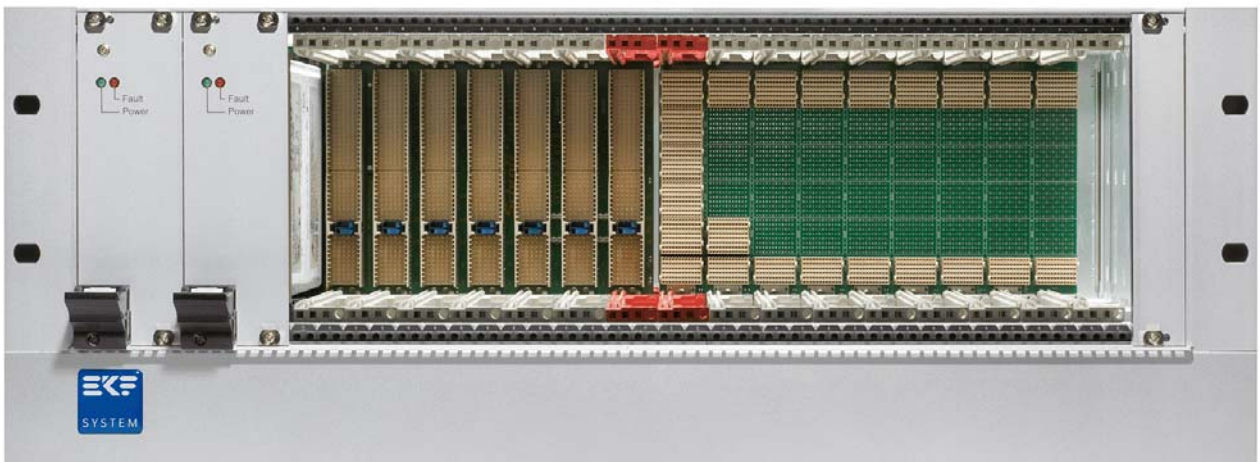


Dual Independent Backplane Solution



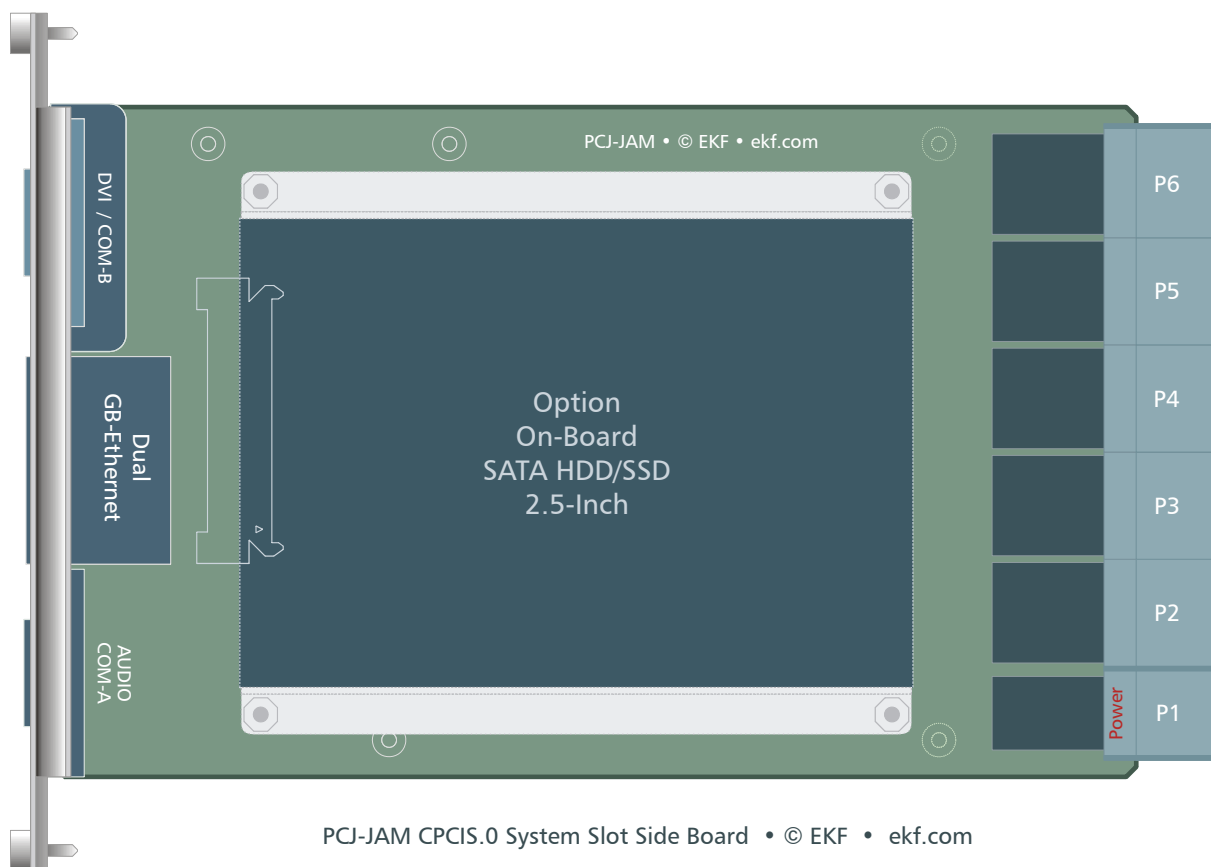


Hybrid Backplane CompactPCI® & CompactPCI® Serial



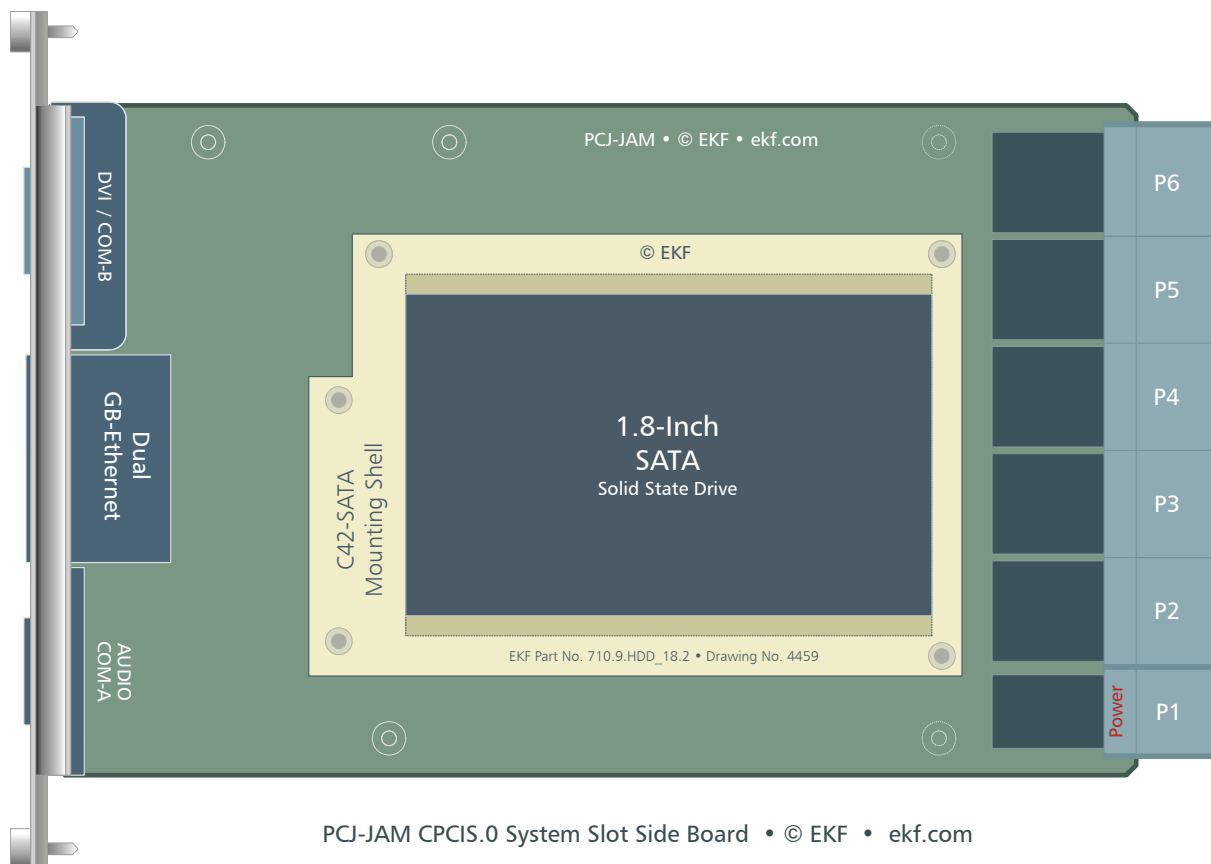
Hybrid System CompactPCI® & CompactPCI® Serial





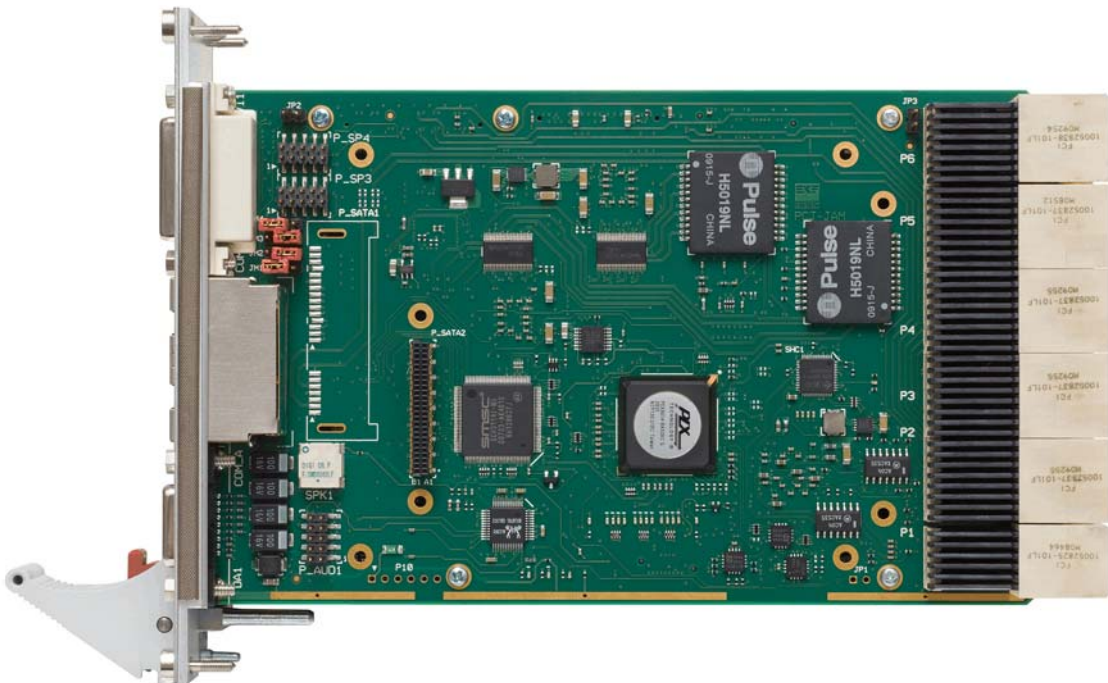
PCJ-JAM CPCIS.0 System Slot Side Board • © EKF • ekf.com

PCJ-JAM w. 2.5-Inch SATA on-Board Drive

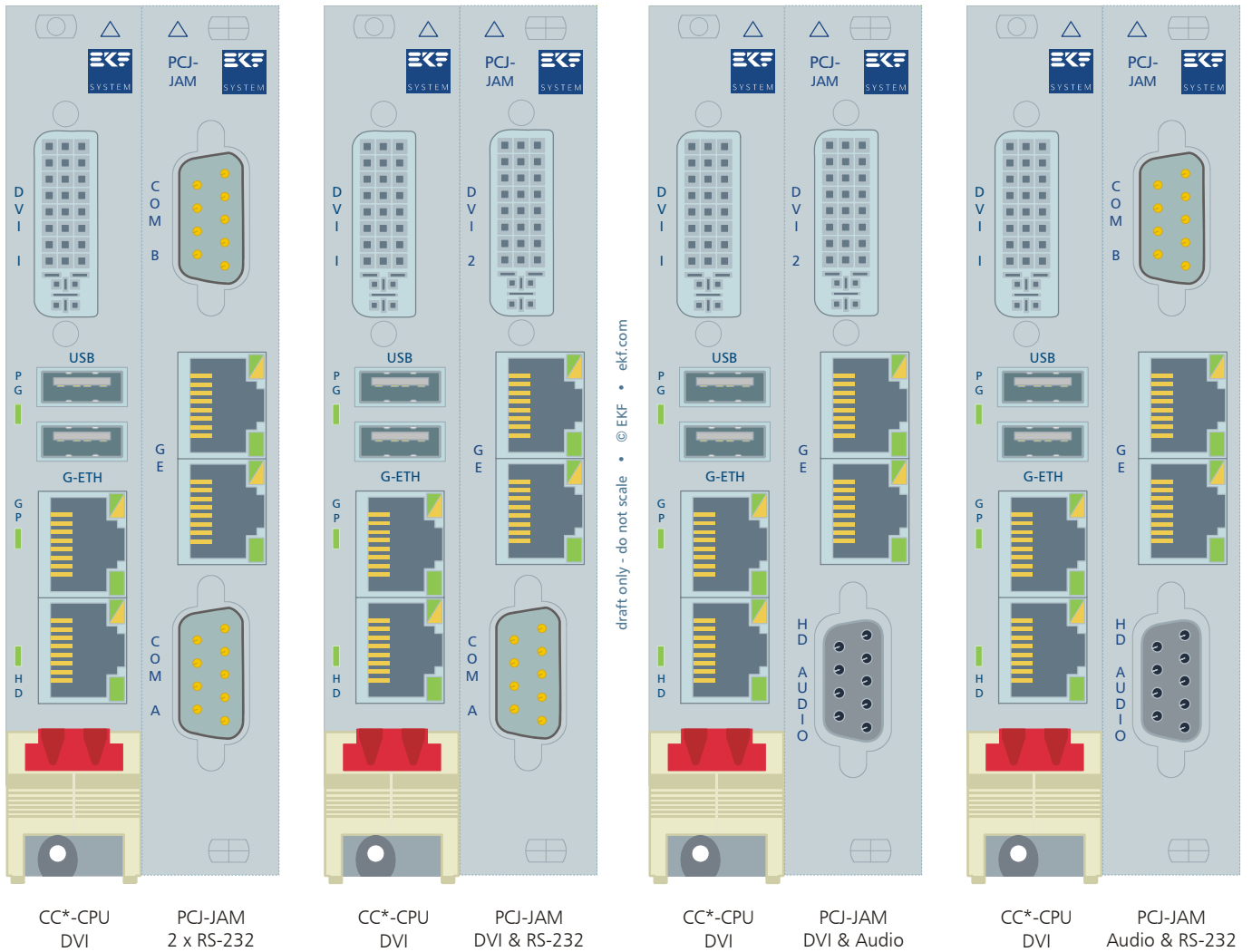


PCJ-JAM CPCIS.0 System Slot Side Board • © EKF • ekf.com

PCJ-JAM w. 1.8-Inch SATA SSD Module

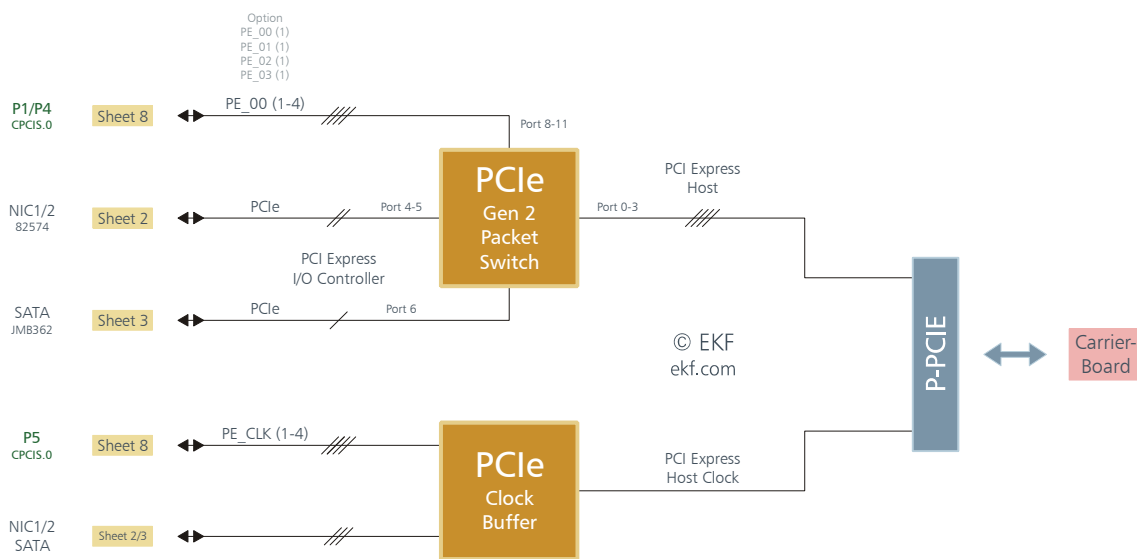


Front Panel Options



Block Diagram

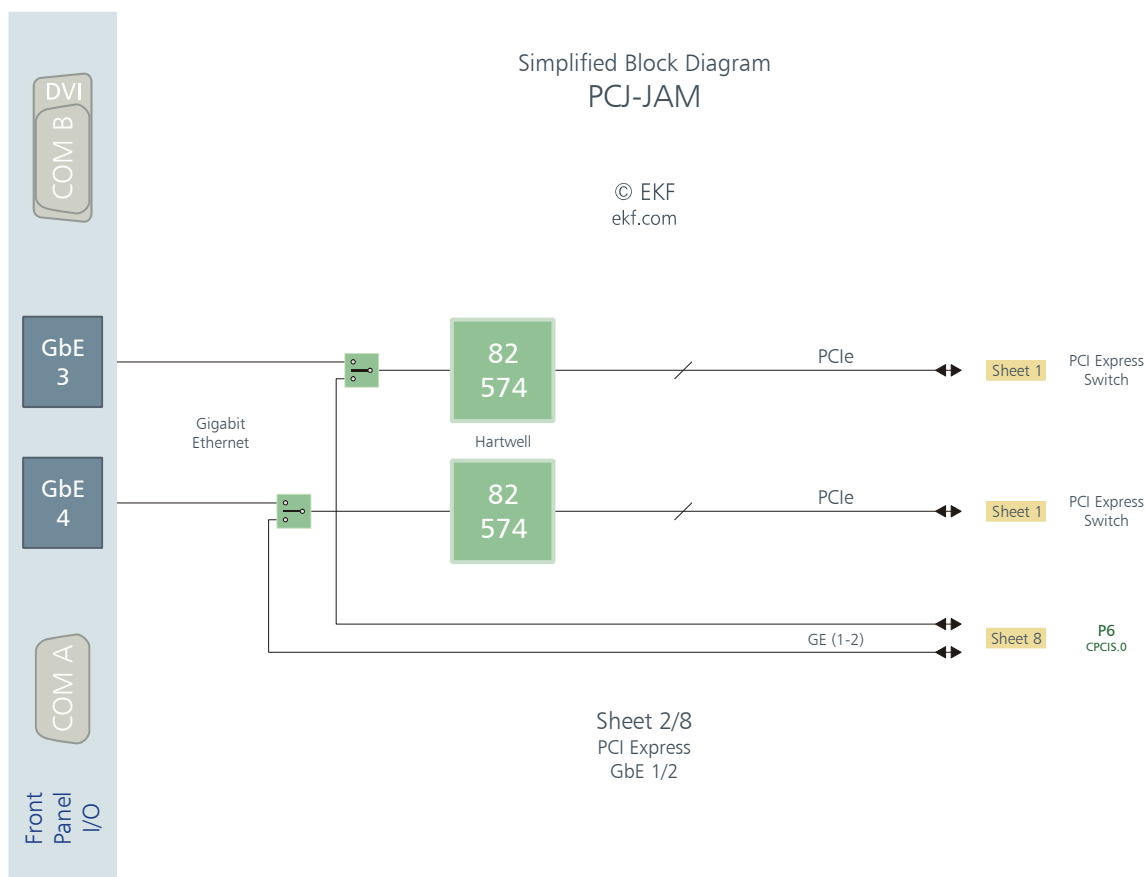
Simplified Block Diagram
PCJ-JAM



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P-PCIE
PCI Express

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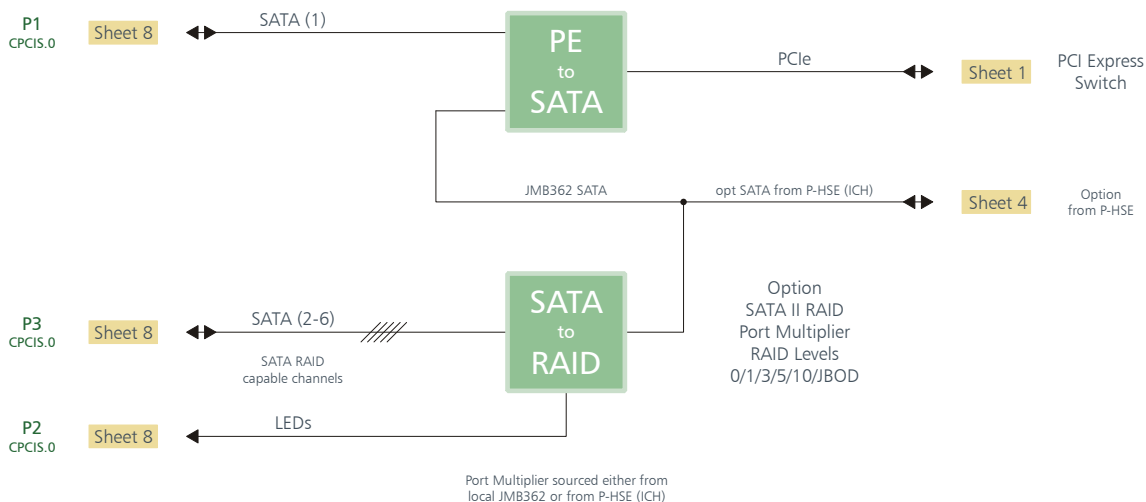
Simplified Block Diagram
PCJ-JAM



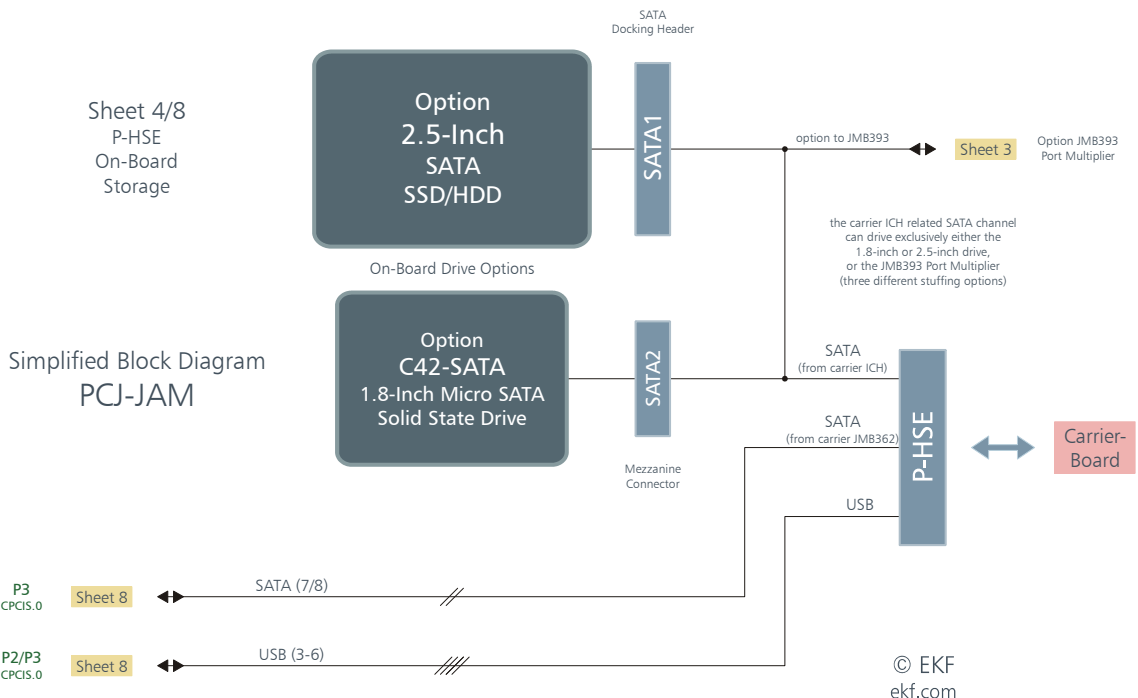
Sheet 2/8
PCI Express
GbE 1/2

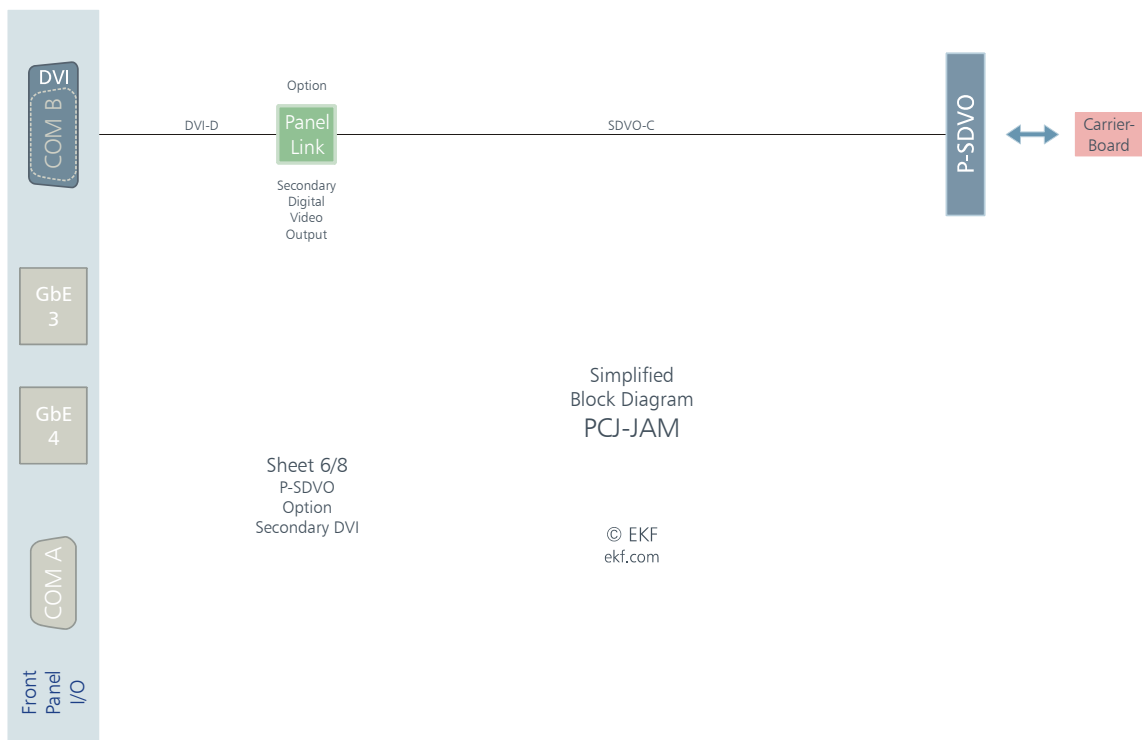
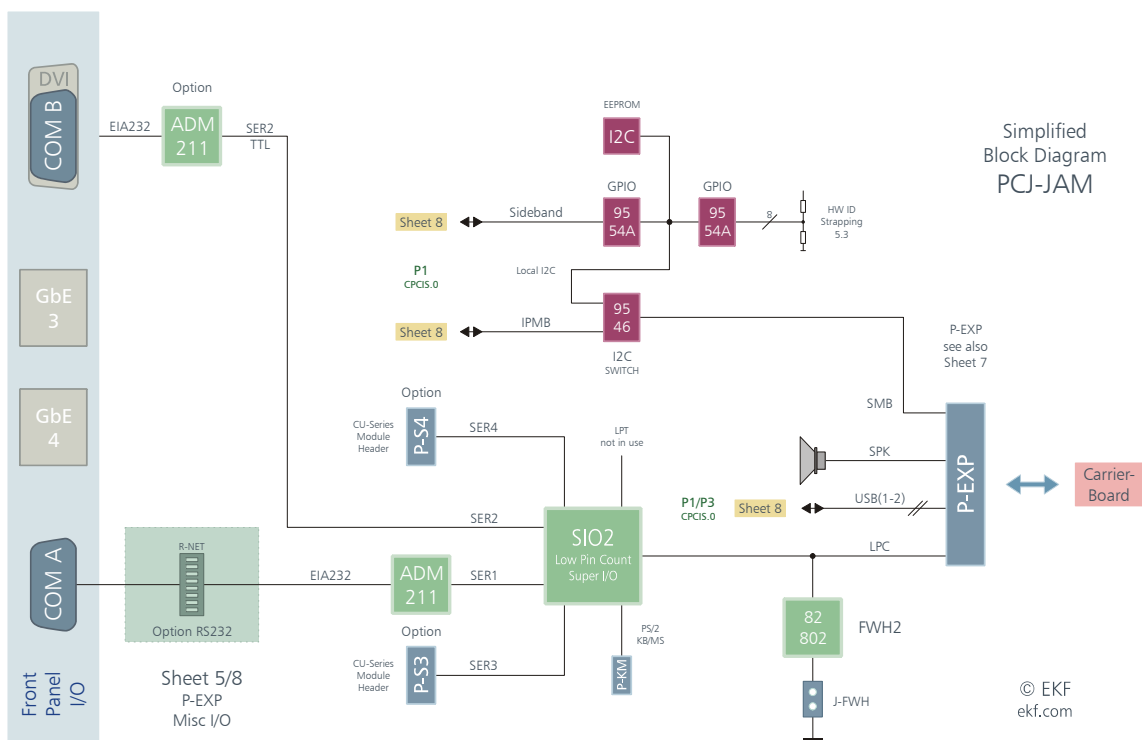
Simplified Block Diagram
PCJ-JAM

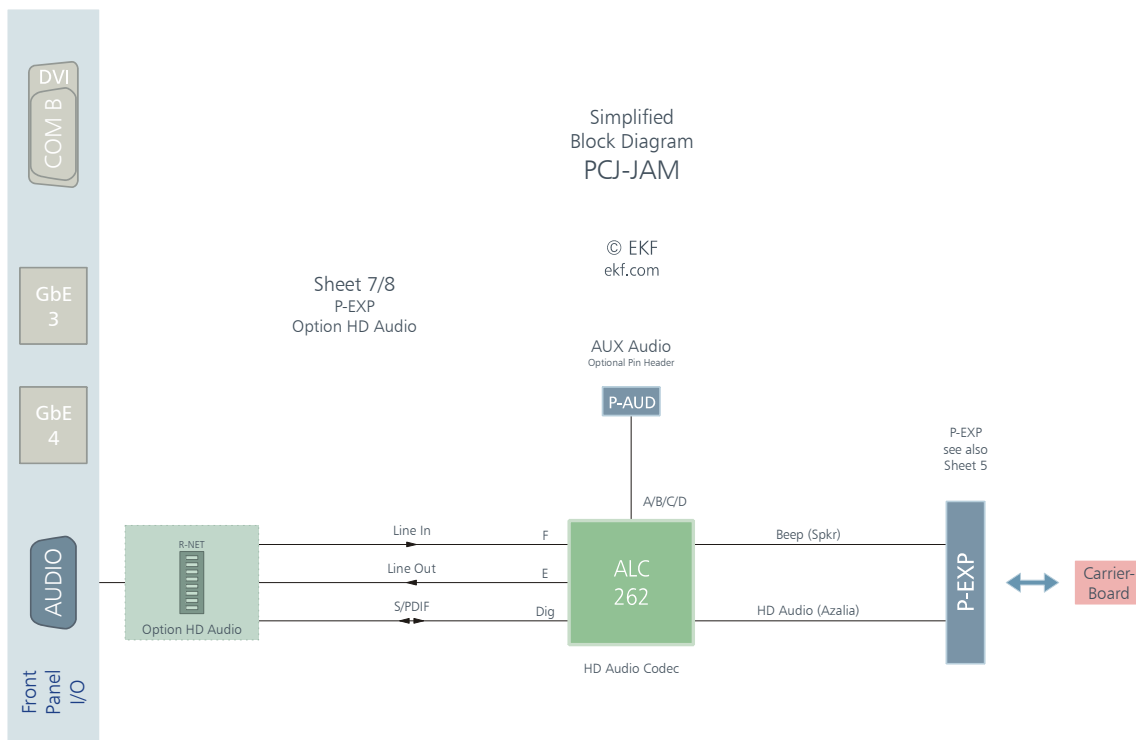
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On Board SATA II





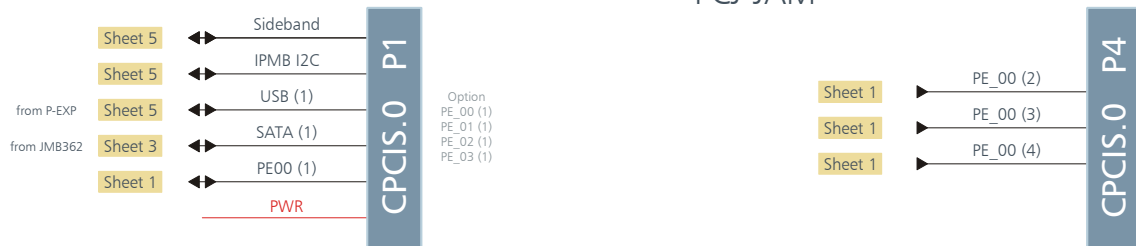


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CPCIS.0 P1-P6

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Simplified Block Diagram
PCJ-JAM





Industrial Computers Made in Germany
boards. systems. solutions.



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