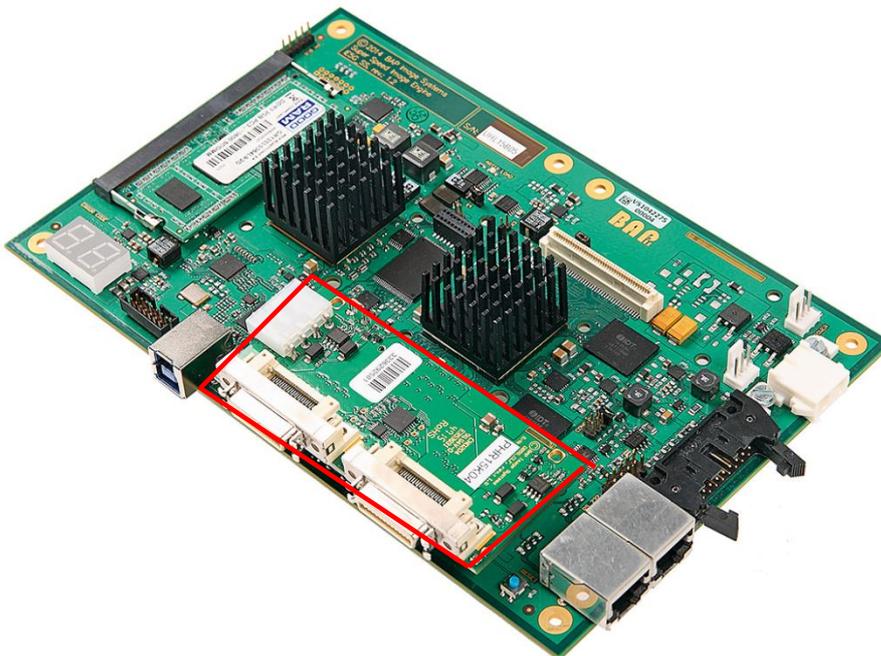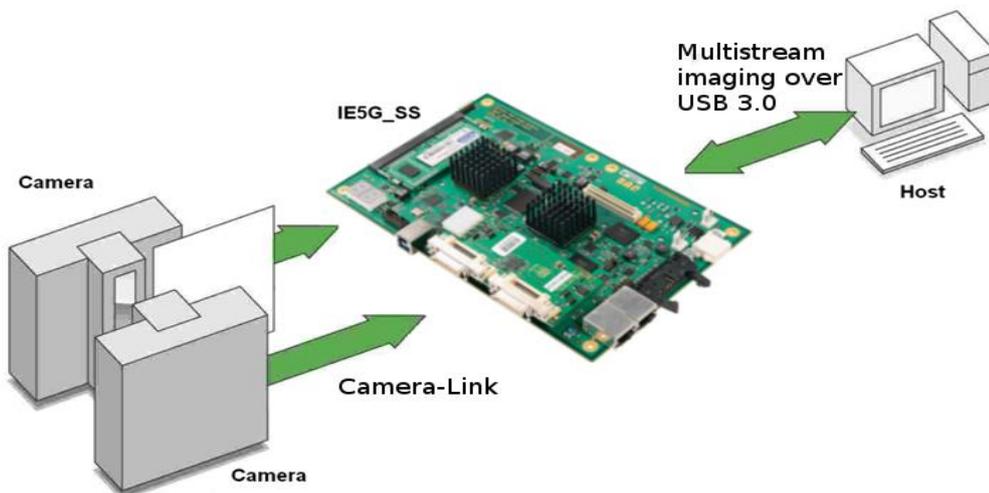# DB5G_CLF - Camera Link interface for IE5G_SS

Technical description:

- Camera Link version 2.0 compliant.
- Supports cameras in Camera Link Base, Medium, and Full configurations.
- Supports camera pixel clocks up to 85 MHz, with up to 8 pixels in parallel in a single cycle.
- Supports PoCL (Power over Camera Link) mode for supplying cameras using the data cable only (requires compatible camera and compatible cabling).
- Various image processing, video manipulation and detection algorithms are available in the master IE5G_SS unit.
- Native mode with 24-bits per pixel color input at up to 85 MHz with a complete set of IE5G_SS processing features available.
- High-throughput mode with 8x8 bits or 8x10 bits per cycle at up to 85 MHz mode with a limited set of IE5G_SS processing features.
- Image multistreaming (color + bi-tonal output from the same source document), up to 64 output windows per document available.
- Flexible image output formats: color or grayscale JPEG, JPEG2000, TIFF grayscale, TIFF color uncompressed, and TIFF bi-tonal with and without CCITT T6 compression.
- Customization of algorithms available.
- USB 3.0 interface to host from the base IE5G_SS board. Backwards compatible with USB 2.0. Actual data rate to host over 200 MB/s.
- USB driver and DLL for MS Windows (32-bit and 64-bit) with Linux optional.

DB5G_CLF - Camera Link interface for IE5G_SS

The DB5G_CLF daughter board for the IE5G_SS image processing engine adds support for third party cameras with a Camera Link interface. The Camera Link Base, Medium, and Full modes are supported with pixel frequencies up to 85 MHz (maximum data rate up to 6.8 Gbps). Line and area cameras with both color and grayscale video output are supported. The wide range of processing, detection, and compression features of the embedded IE5G_SS engine are now available for third party Camera Link camera models.

The system consisting of the IE5G_SS plus the DB5G_CLF interface daughter board is designed not only as a high-performance embedded image grabber but also for embedded video processing, image detection (with real-time decisions), and compression for various output formats.

The IE5G_SS is able to generate many images simultaneously from one scanned object. The processed images are sent to the host through a USB 3.0 Super Speed interface. MS Windows drivers are supported. Optionally, BAPis can provide drivers for other operating systems. The IE5G_SS can be installed as an embedded system in any device which has to perform complicated image processing functions within a limited timeframe. The IE5G_SS was designed to work with digital color cameras from BAPis, and with third party cameras. With a performance of over 600 PPM (1200 IPM) 300 DPI DIN A4 simplex dual-stream (JPEG color + T6 bi-tonal) the IE5G_SS can be used in high-speed duplex color scanners. The IE5G_SS board has many additional image processing functions, such as compressions, image enhancement, Color Correction Matrix for perfect color matching, advanced color filters, advanced asymmetric image sharpening, color saturation control filter, color de-correlation, barcode and mark recognition, and others.

BAP Image Systems (BAPis) is a dependable and reliable imaging products and solution provider with highly proven industry experience. BAPis develops and manufactures cameras based not only on high speed CCD and CMOS line sensors, but also on area CMOS/CCD sensors. BAPis cameras are used in the machine vision industry, as well as in the film industry. Additionally, BAPis develops and produces image grabbers and processing boards based on DSP and FPGA technologies using its own algorithms. Image processing boards are matched with camera performance and when combined, are able to reach the highest possible throughput.