DBFA8_MIF1 Super speed contact sensor

Technical description:

- Scan length: 308 mm.
- Resolution: 600 DPI, 300 DPI, 200 DPI.
- Capture method: true tri-linear 3 x 10-bit RGB color.
- Light source integrated.
- Maximum line rates:
  - 14.2 kHz @ 600 DPI
  - 26.5 kHz @ 300 & 200 DPI.
- Maximum object/paper speeds:
  - 23.8 "/s ~ 0.6 m/s @ 600 DPI
  - 88.3 "/s ~ 2.2 m/s @ 300 DPI
  - 132.5 "/s ~ 3.35 m/s @ 200 DPI.
- Two interface variants available: G-Link and CoaXPress.

Advantages:

- Sensor's built-in light and optical system may replace traditional camera lens, mirrors, and external lights.
- Compact size, easy to fit into machine.
- Very high performance – able to keep up with maximum object speeds of 0.6 m/s in 600 DPI and 2.2 m/s in 300 DPI.
- High image quality with true tri-linear RGB video capture (an advantage over Bayer matrix sensors and sensors with RGB light multiplexing during object movement).
- High quality with 3 x 10-bit image signal processing path in the sensor and image enhancement functions already built into the sensor. Among others: flat field correction and linearization, LUT curve tonal and color mapping, Color Correction Matrix, and color space conversion.
- Sensor may work with external line and/or frame triggers. It's also able to operate in a free-run mode with user programmable line cycle without external synchronization.
- Directly compatible with the BAP IE5G_SS image engine via G-Link interface. Compatible with the IE5G_SS engine with the DB5G_CXP4 daughter board via a CoaXPress 6.25 Gbps interface

G-Link interface:

- Uses low-cost Cat 7 Ethernet cable for video transmission and device configuration.
- Directly compatible with the IE5G_SS image processing board without any extension modules.
- Maximum performance in higher resolution modes and full line lengths limited by the interface's 2.25 Gbps bandwidth.
- G-Link maximum object speed:
  @ 200DPI: 3.35 m/s (132 in/s).
  @ 300DPI: 1.70 m/s (67 in/s) to 2.20 m/s (87 in/s), width dependent.
  @ 600DPI: 0.40 m/s (16 in/s) to 0.60 m/s (23 in/s), width dependent.
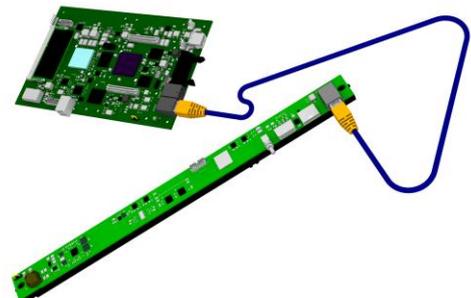
DBFA8_MIF1 Super speed contact sensor

CoaXPress interface:

- Video, configuration, and power connection using certified 75 Ohm coaxial cable.
- CoaXPress standard version 1.1 compliant.
- CoaXPress 6.25 Gbps over single link. Supports also 3.125 Gbps mode for lower performance grabbers.
- Supports PoCXP (Power over CoaXPress) to be supplied using data cable only (compatible grabber required).
- Compatible with IE5G_SS + DB5G_CXP4 daughter board set with 6.25 Gbps interface speed and PoCXP supply mode.
- Interface does not limit sensor performance in higher resolutions when running at 6.25 Gbps.
- CoaXPress maximum object speed
  @ 200DPI: 3.35 m/s (13 2in/s).
  @ 300DPI: 2.20 m/s (87 in/s).
  @ 600DPI: 0.60 m/s (23 in/s).
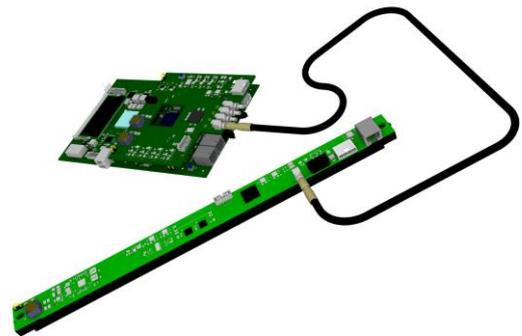
Example:

Sensor performance in documents per minute, assuming A4 size pages fed in landscape orientation and A3 size pages fed in portrait orientation using the IE5G_SS board as an image processing engine.

G-Link	simplex	duplex
A4@ 200 DPI	550 DPM	330 DPM
A3@ 200 DPI	273 DPM	163 DPM
A4@ 300 DPI	312 DPM	190 DPM
A3@ 300 DPI	152 DPM	93 DPM
A4@ 600 DPI	82 DPM	TBD

CoaXPress	simplex	duplex
A4@ 200 DPI	660 DPM	330 DPM
A3@ 200 DPI	328 DPM	163 DPM
A4@ 300 DPI	376 DPM	190 DPM
A3@ 300 DPI	184 DPM	93 DPM
A4@ 600 DPI	90 DPM	TBD

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.