

Image Processing Options for AIRS Smart IDCA's and Cameras

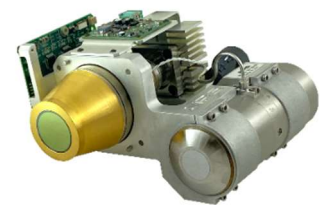


American IR Solutions offers a full strata of camera connectivity and control solutions for OEM system integration or stand-alone applications.

Our new Nyx Connect™ software simplifies set-up and control of critical sensor settings and digital video through a reliable Camera Link or USB3 Vision connection.

System integrators can experiment with custom integration times, advanced pixel replacement tools and other image optimization settings in a safe environment.

Video options include Camera Link, USB3 Vision, GigE, HDMI and HDSDI outputs.



Nyx Connect™ Level 1

The screenshot shows the Nyx Connect software interface with the following sections:

- Setup Info:** Includes FPA Control (FPA Power, Power When Hot, Clock: 6121222), Clock Control (In Div: 13, Out Div: 2, VCO Div: 62), Phase (0), FPA Channels (1, 2, 4, 8), and Outputs (EXP_3, EXP_4).
- Timing / Output Control:** Includes Video ON, External Sync, Trigger Rising Edge, Test Pattern, and Single Line Mode.
- FPA Timing:** Includes Integration (9840), Integration (docks: 60233), Frame Time (102020), LSYNC Delay (1333), LSYNC Period (98), Pixels Per Line (1280), Lines Per Frame (1024), Top Lines Skipped (0), Bottom Lines Skipped (0), and Left Pixels Skipped (107).
- Connect:** mini-Nyx 640x512-100Hz : Level 1, Ready. Data display shows Tx and Rx hex values for multiple frames.

Ideally suited for Smart IDCA and Camera integration and enables streamlined development for engineers, systems integrators, and OEMs. The Nyx Connect software provides a user-friendly GUI enabling control over important camera and ROIC settings.

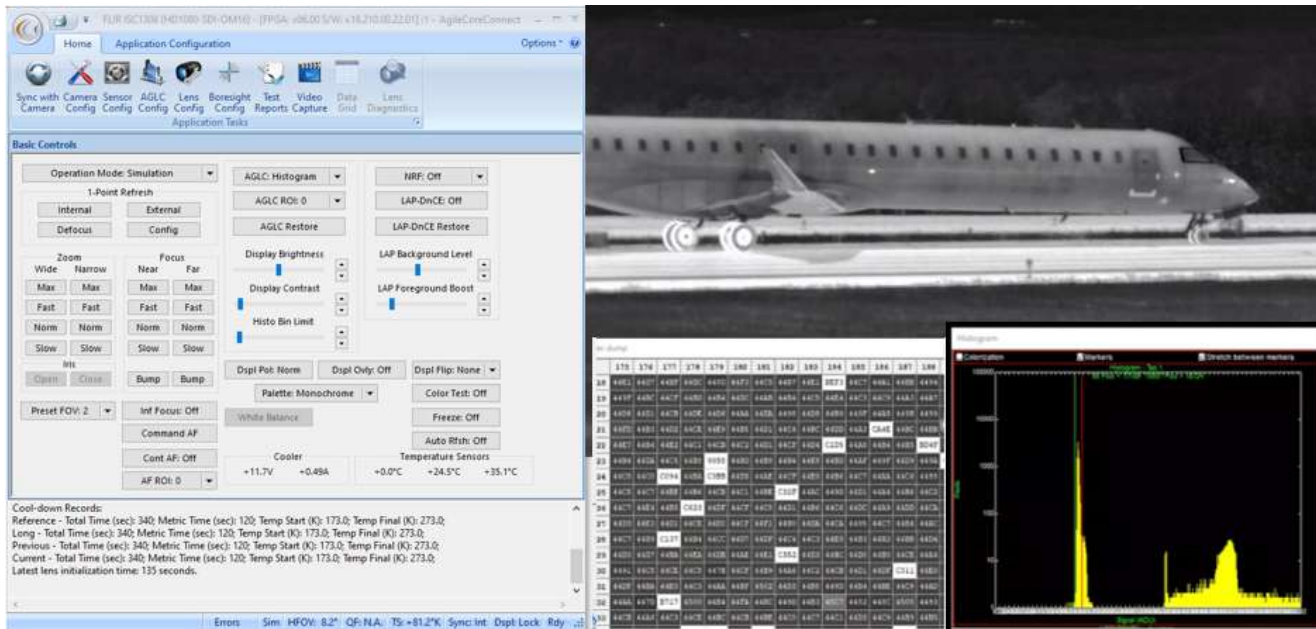
Nyx Connect™

Nyx Connect™ Level 2



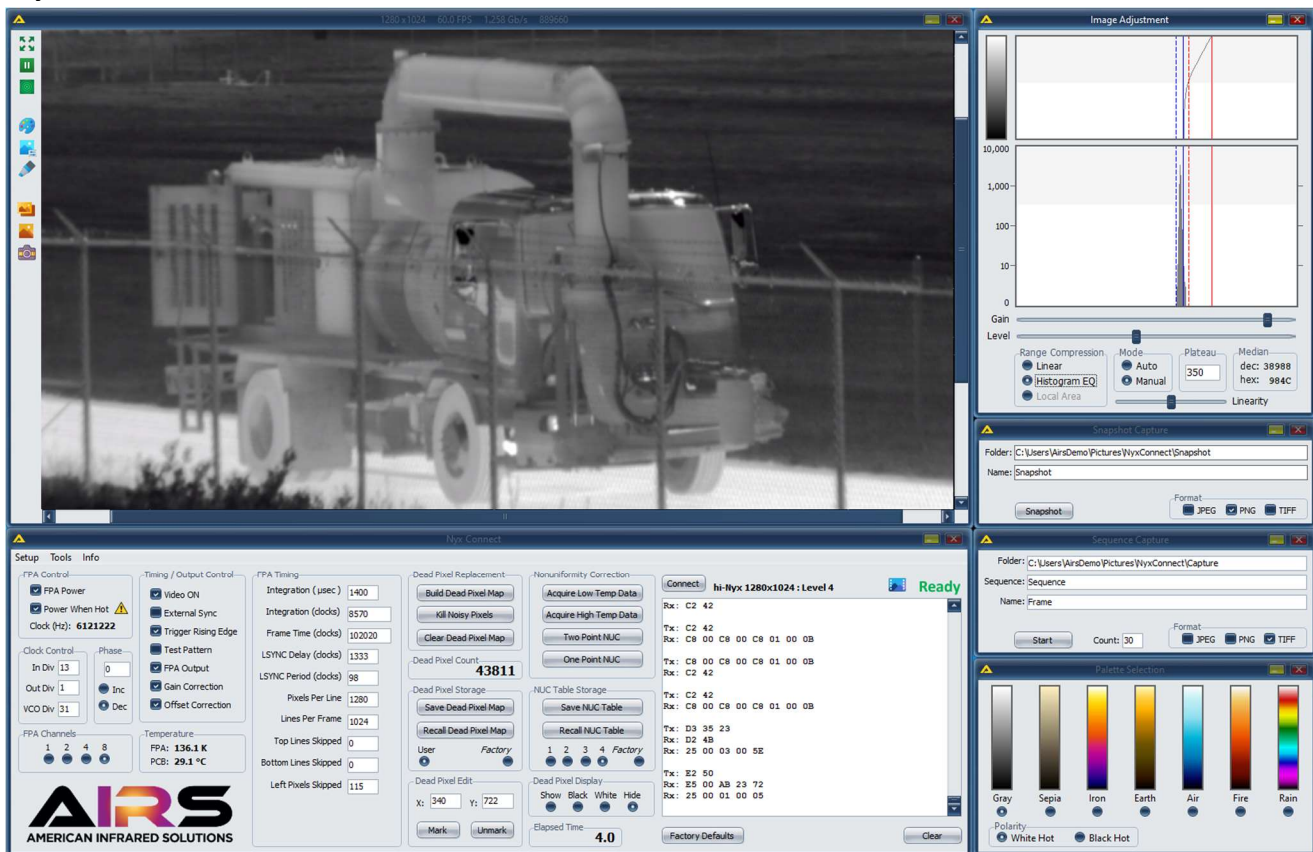
Enables a comprehensive set of tools for integrators, OEMs, and end users. This includes non-uniformity correction, dead pixel replacement, and four programmable NUC tables, in addition to the features included in Level 1 dashboard.

Nyx Connect™ Level 3



Provides a full suite of video processing options including lens control. A second video output channel can be configured to support HDSI, GigE, HDMI, or USB3. Camera Link video is managed through a Imperx frame grabber, enabling live video management, scene ranges, pixel replacement and image enhancements.

Nyx Connect™ Level 4



Offers comprehensive access and control over all system attributes and crucial image management, including proprietary AIRS contrast enhancement and pixel replacement tools. Advanced pixel correction features include intuitive tools that automatically identify and replace dead pixels, along with the capability to manually mark individual pixels. Select any of seven pseudo color palettes. Save snapshots or frame sequences in JPEG, PNG, or TIFF format.

IDCA and Camera Connectivity and Control Features

Feature	Level 1	Level 2	Level 3	Level 4
Programmable Integration Time	✓	✓	✓	✓
Uncorrected Data Output	16b	16b	14b	16b
Corrected Data Output	-	16b	14b	16b
Camera Link Base Data Interface	✓	✓	✓	✓
USB3 Vision	-	-	✓	✓
2nd Video Output Option: HD-SDI, HDMI, GigE or USB3 Vision	-	-	✓	-
Pixel Correction	-	✓	✓	✓
Advanced Pixel Correction	-	-	-	✓
Linear AGC	-	-	✓	✓
Histogram Equalization	-	-	✓	✓
Local Area Processing	-	-	✓	-
Color Palettes	-	-	✓	✓
User Programmable NUC Tables & Camera States	-	4	6	4
Restore from factory NUC Table	-	✓	-	✓
Store Imagery to PC	-	-	✓	✓
Live Video in GUI	-	-	-	✓
Camera Control – RS232	✓	✓	✓	✓



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