

INSIGHT

INTEGRATED SHARP IMAGERY GIGABIT ETHERNET TOOL

The Integrated SHARP Imagery Gigabit Ethernet Tool (INSIGHT) is stand-alone hardware designed for testing and troubleshooting subsystems of the Shared Reconnaissance Pod (SHARP). These subsystems include the sensor, the digital storage system (DSS), Common Data Link (CDL), and the Advanced Reconnaissance Compression Hardware (ARCH) suite - SHARP's data compression system. INSIGHT can simulate sensor imagery as well as capture raw camera raster, NITF, and compressed DSS and CDL data. Incoming sensor data can be analyzed for valid format and timing. Additionally, data can be stored on INSIGHT for downloading to a host computer for further analysis. INSIGHT can connect directly to SHARP pod connectors to provide in-field analysis without the need to remove the subsystems from the pod.



FEATURES :

- Housed in a stand-alone chassis, AC powered
- All connections are MIL circular to match existing SHARP pin-outs
- High speed Gigabit Ethernet interface for rapid data flow

INPUTS :

- Sensor LVDS raster data
- Sensor LVDS NITF data
- DSS data and control
- CDL

OUTPUTS :

- Sensor LVDS raster data
- Sensor LVDS NITF data
- DSS data and control
- CDL

USER INTERFACES :

- Gigabit Ethernet (data flow and command/control)
- RS-232 (diagnostics)

INTERNAL MEMORY CAPABILITIES :

- FLASH memory for processor code, FPGA code, simulation & comparison data
- 512 MB SDRAM memory for storage of uncompressed raster data
- 64 MB SDRAM memory for NITF storage
- 128 MB SDRAM memory for storage of compressed and compare DSS data
- 128 MB SDRAM memory for storage of compressed and compare CDL data

BENEFITS AND FEATURES FOR SHARP :

- Testing of ARCH suites in preparation for deployment
- Testing of installed ARCH suites without removal from the SHARP pod
- Verification of sensor data and signal timing
- Simultaneous storage of raw sensor data & associated ARCH compressed output
- Can be used in the field to troubleshoot and maintain SHARP pods



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