

SDI-104 Status

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Overview

- SDI Design
 - Hardware configuration
 - Software configuration
- Satellites signals and SDI-104 availability

Hardware Configuration

- PC/104-Plus
- 1 GHz CPU
- Boot from compact flash
- Ethernet:
10/100/1000 BaseT
- Connectors for
monitor and
keyboard
- Mounted in 2U
rack box



Hardware Configuration



Data rates up to 30 Mbits/s

- Connectors:
 - D15P
 - BNC
- Configuration:
 - Single ended (TTL)
 - RS422 (differential)
- Data types
 - NRZ-L, NRZ-M, NRZ-S
 - Jumper configurable



Software Configuration

- Linux
- Ingestor software modified slightly from previous SDI systems
- ADDE server software is unchanged
- Can be configured as a standalone ingestor/server, or to write data to an external disk (via NFS, for example)

Event Notification

- Notifications are dependent on signal type:
 - Image start (not for POES)
 - Image end (not for GVAR Imager)
- Three types of notifications:
 - Send an email
 - Write notification to a file (log messages)
 - Run a program or script

SDI-104 Status for Current Satellites

- GOES: no change; adapting servers for the final two GVAR satellites
- MTSAT:
 - HiRID format: no longer available
 - HRIT format: modifications for rapid scan
- POES Relay
 - Current through NOAA-19
 - Unable to test direct reception

SDI-104 Status for Current Satellites

- FY-2C: Chinese geostationary
 - Ingestor in use in Japan
- MSG: not available, although we are investigating hardware and software needed to receive
- Metop
 - Current satellite does not have direct broadcast
 - SSEC does not have a direct readout station, but we may in the future

SDI-104 Status for Current Satellites

- Meteosat-5 and -7: not available
- DMSP: not available

Future Polar Satellites

We are monitoring the status and data delivery of future polar orbiting satellites NOAA-N', NPP, and NPOESS. We expect these to have a Direct Broadcast mode and are investigating having SDI-104s available.

Future Geostationary Satellites

We are monitoring the status and data delivery of GOES-R. We expect it will use an industry-standard delivery (such as CCSDS), which the SDI-104 can ingest. Also, the SDI-104 handles data rates up to 30 Mbits/s.