IRIG 106 Chapter 10 Data Format

The Model 820 is the newest generation of Chapter 10 recorders. The Model 820 provides a scalable architecture that supports a wide range of applications such as telemetry, weapons testing, aerospace, military, and intelligence gathering.

With standard features including high speed recording, large channel capacity, an intuitive graphical user interface, network connectivity, and numerous storage and archive options, the Model 820 provides users with a recorder designed to meet a large variety of testing requirements.

Features

- Up to 38 channels
- 1.6 Gbps internal RAID
- Various signal types
- Windows® NTFS file system
- IRIG 106 Chapter 10 packet structure
- Remote control via Ethernet or RS-232
- Large storage capacity
- Archive data to standard computer peripherals such as DVD, DLT, LTO, USB drives, etc.
- Networked distribution and archive of data over gigabit Ethernet
Specifications

- **Display color:** LCD screen
- **User interface:** graphical user interface
- **Data format:** user selectable between IRIG 106 Chapter 10 and ARMOR mode
- **File format:** Windows NTFS
- **Module slots:** Nine modules
- **Remote control:** Ethernet or RS232
- **Operating system:** Windows XP
- **Network port:** gigabit Ethernet
- **Auxiliary/voice channel:** analog signal
- **Time channel:** IRIG A, B, G, GPS
- **Data confidence:** data loopback

Serial Digital PCM Module

The serial PCM module provides four independent asynchronous input/output channels per module.

- **Sampling rate:** 25 kSPS to 24 MSPS
- **Bandwidth:** 10 kHz to 10 MHz
- **Bit resolution:** 8, 10, 12

Low Frequency Analog Module

The analog module provides four independent input/output channels per module. Each channel provides programmable sample rates and bit resolution. Input/output filters are also available.

- **Sampling rate:** 25 kSPS to 24 MSPS
- **Bandwidth:** 10 kHz to 10 MHz
- **Bit resolution:** 8, 10, 12

Video Module

The video module provides one channel of video input/output encoding/decoding.

- **Video MPEG 2 encoding/decoding:** 1 Mbps to 15 Mbps
- **Input/output:** composite, Y/C, SDI
- **Video standard:** NTSC/PAL
- **Audio:** analog, AES

High Frequency Analog Module

The analog module set provides one input/output channel per card set.

- **Sampling rate:** 56 MSPS
- **Bandwidth:** 100 kHz to 24 MHz
- **Bit resolution:** 14

Architectural

Open and flexible architecture supports integration of commercial interface cards such as MIL-STD1553, ARINC 429, FPDP, etc.

Environmental

**System Environmental**

- **Operating temperature:** 41°F to 104°F (5°C to 40°C)
- **Storage:** −40°F to +158°F (−40°C to +70°C)
- **Humidity:** 5% to 80%, noncondensing

**Physical Characteristics**

- **Size:** 7” (H) × 17” (W) × 24” (D)
- **Weight:** 55 pounds (typical)
- **Voltage:** 90 VAC to 135 VAC, 180 VAC to 270 VAC, 47 Hz to 63 Hz

Circuits from the Lab Reference Designs

Circuits from the Lab® reference designs are built and tested by ADI engineers with comprehensive documentation and factory-tested evaluation hardware.