OVERVIEW

The AG 5800 card-based receiver decoder provides an ideal solution for 4:2:2 video decoding where rack space is limited. The platform supports up to 10 decoder cards in the industry-standard 2RU openGear® OG-3 chassis.

With independent per-card GUIs and a full-featured satellite input with BISS and DVB-CI descrambling, the decoder is uniquely suited for applications in master control or occasional downlink facilities. Support for all MPEG-4 and MPEG 2 formats up to 10-bit 422 AVC, up to 16 audio channels in any common format, and tested interoperability with all major encoder vendors mean this is the last contribution decoder you’ll ever need.

The AG 5800 is also a future-proof solution for multichannel primary distribution where video quality is at a premium. With the ability to upgrade to 4:2:2 or 1080p50/60 decoding in the future via a simple software license, the card is a safe choice for the long haul.

Add Sencore’s tradition of receiver decoder design and best-in-class ProCare support, and the AG 5800 provides the most compelling value package in the industry.

KEY FEATURES

- Unique dense design with per-card inputs and Web GUIs ideal for multi-user satellite receiver applications
- Shared software and feature-set with Sencore 1RU decoders ensure reliability and interoperability
- Latest generation decoding technology enables support for nearly any video feed
  - H.264 4:2:2 8-bit or 10-bit video
  - MPEG-2 4:2:2 8-bit video
  - MPEG-2 or H.264 4:2:0 video
  - Up to 100 Mbps of video data
- Up to 8 PIDs of audio decoding with support for all major audio formats
- Dual 3G/HD/SD-SDI auto-switching outputs
- ASI, IP, and satellite options
- Full complement of ancillary data output in ANC and VBI
- Full control, status, and alarm monitoring via SNMP

APPLICATIONS

- Decode and Descramble Up to 10 Satellite Feeds in 2RU
  Pull in high-bitrate, high-quality 4:2:2 video feeds with up to 8 associated audio PIDs via DVB-S or S2. Decode to SDI for local production, editing, and eventually distribution.

- Receive IP Video from Dedicated Fiber Connections
  Decode backhaul video from long-haul IP connections. Decoder cards can be fitted with redundant Gigabit Ethernet inputs with automatic failover.

- Create a Future-Proof Distribution Solution
  Prepare for the inevitable transition to advanced Technologies such as 1080p50/60, 4:2:2 10-bit AVC, 16/32APSK, with the industry’s most future-proof, powerful decoder platform.
### VIDEO DECODER CARD

**AG 58021A**

**Base Decoding (HD 4:2:0 and SD 4:2:2/4:2:0):**
- MPEG-2 MP@HL, 422P@ML
- H.264 up to HP@L4.2, Hi422P@L3.2

**4:2:2 HD Decoding License:**
- MPEG-2 422P@ML
- H.264 up to Hi422P@L4.2

**Additional Profile/Levels:**
- MPEG-2 MP@HL, 422P@ML, 420P@ML
- H.264 up to HP@L4.2, Hi422P@L3.2

**Additional Base Video Features:**
- CAVLC Entropy Coded - 100Mbps
- CABAC Entropy Coded - 80Mbps

**Frame Synchronization Modes:**
- PCR-Recovered Clock
- Genlock Reference (with License)

**Aspect Ratio Conversion:**
- Manual Selection: Letterbox, Center-Cut, Anamorphic
- Automatic Selection: Follows AFDC Codes

**Output Formats:**
- 1920x1080p @ 60 (with License)
- 1920x1080i @ 25, 29.97, 30
- 1920x1080p @ 23.97, 24, 25, 29.97, 30
- 1280x720p @ 50, 59.94, 60
- 720x576i @ 25
- 720x480i @ 29.97

**Output Interfaces:**
- SD/HD/3G-SDI: 2x 75Ω BNC
- SDI Format Support: Determined by Decode License
- Digital Video: 1x HDMI-type Connector

**Genlock License:**
- AG 58701
- Enables genlock synchronization: Sourced by openGear® Frame

**1080p50/60 Video Output License:**
- AG 58740
- 3G-SDI Level A
- 1920x1080p @ 50, 59.94, 60

**Video Overlay Support:**
- Closed Caption Overlays: CEA-608, CEA-708, or SCTE-20
- DVB-Subtitile Overlays: HD/SD with Auto Scaling (EN 300743)

**Base Audio Decoding Features:**
- Number of Audio PIDs: 4 Standard, Up to 8 Available
- Audio Codecs Supported: Dolby Digital (AC-3) & Plus (EAC-3), AAC-HE, HE-AAC, HE-AACv2, Linear PCM & Dolby E (Pass-through)

**Output Formats:**
- Digital Pass-through PCM
- Analog
- 5.1 Channel Services Downmixed
- Per Service, +100/-35 ms

**Audio Delay/Advance:**
- 8 Service Audio Decode License
- 4 Additional PIDs (Total of 8)

**Base Audio Output Features:**
- AES Outputs: 2x 75Ω BNC
- SDI Embedded Audio Output: 8 Audio Pairs

**Including Transport Stream Input/Output Features:**
- ASI Input/Output: 1x In, 1x Out - 75Ω BNC
- Supported Bitrate: 250 Kbps to 200 Mbps

**BISS Descrambling License:**
- AG 58921
- Supported Modes: Mode 1, Mode E, Injected ID
- Multi-BISS Support: Up to 12 Separate Keys

### VIDEO DECODER CARD, CONTINUED

**Ancillary Data Support:**
- AFD ( SMPTE 2016)
- SDI ANC Data Types: Closed Captions (CEA-708), OP-47 ( SMPTE RDD-08), SMPTE RDD-11, VANC Passsthrough ( SMPTE 2038), SCTE 127 ( SMPTE 2031), EN301775 ( SMPTE 2031)
- Time Code ( SMPTE 12M-2)

**VBI Wavesforms (SDI/Composite):**
- Line 21 Captions (CEA-608), TVG2X, AMOL-48/96 (SCTE-127), Teletext/ WSS/VPS (EN301775), Timecode in VBI ( SMPTE 12M-1)

**SCTE 35 to SCTE 104 Output License:**
- AG 58992

**Cablelabs ESAM POIS Interface License:**
- AG 58993

**PID/Service Filtering License:**
- AG 58928

**Filtering:**
- 10 Independent TS (MPTS or SPTS) created; output via IP or ASI

**Table Regeneration (MPEG Mode):**
- PAT regeneration
- Table Pass-through (MPEG Mode): PMT, CAT, NIT pass-through Table Regeneration (DVB Mode): PAT, SDT
- Table Pass-through (DVB Mode): PMT, CAT, NIT, EIT, RST, TDT, TOT

### DVB-S/S2 INPUT MODULE

**AG 116A**

**Physical Interface:**
- 2x 75Ω BNC

**Frequency Range:**
- 950-2150 MHz

**Symbol Rates:**
- 1-45 MSps

**DVB-S Modulation Modes:**
- QPSK (All FEC Rates)

**DVB-S2 Modulation Modes:**
- QPSK/8PSK (All FEC Rates)
- 16/32APSK (with License)

**LNB Power:**
- Off/13/14/18/19VDC @ 450mA

**Control Tone Support:**
- 22 kHz On/Off

**Supported Roll-off Factors:**
- 0.35, 0.25, 0.20, 0.15, 0.10, 0.05

**DVB-S2 Advanced Feature License:**
- AG 58916

**Additional Modulation Modes:**
- 16APSK/32APSK (All FEC Rates)

**VCM Demodulation Support:**
- Multistream (Single ISI)

### DVB-S/S2 INPUT MODULE WITH DVB-CI

**AG 137A**

**Physical Interface:**
- Adds one DVB-CI CAM Slot

**Without Multi-Service License:**
- Descrambles Decoded Service Only

**With Multi-Service License:**
- Number of Services limited by CAM

**DVB-CI Multi-Service Descrambling License:**
- AG 58991

**With DVB-CI Capable Input:**
- Enables multi-service descrambling

### IP INPUT/OUTPUT MODULE

**AG 127A**

**Physical Interface:**
- 2x RJ45, 10/100/1000 Auto-Negotiate

**Input Format:**
- UDP or RTP

**Output Format:**
- MPE De-encapsulation: Up to 2 PIDs

**Addressing:**
- Up to 60Mbps per MPE PID

**Multicast:**
- Version 1, 2 & 3

**Per TS Bitrate:**
- 250 Kbps to 200 Mbps

**MPEG/IP FEC Output License:**
- AG 58925

**Additional Output Formats:**
- RTP with SMPTE 2022/CoP3 FEC

**605.978.4600**

www.sencore.com
**SPECIFICATIONS**
Advanced Receiver Decoder Card AG 5800

**8VSB/QAM-B INPUT MODULE**

**AG 101A**
- **Physical Interface:** 1x 75Ω BNC-Type
- **Frequency Range:** 50-1000 MHz
- **Sensitivity:** -34 to +40 dBmV (A74 Compliant)
- **8VSB Standard:** ATSC A/53E
- **8VSB Channel Plans:** Broadcast
- **QAM Standard:** ITU Annex B/SCTE DVS-031
- **QAM Channel Plans:** FCC, IRC, HRC
- **QAM Constellations:** QAM64, QAM256

**DVB-T/T2/C/C2/ISDB-T INPUT MODULE**

**AG 115A**
- **Physical Interface:** 1x 75Ω BNC-Type
- **Frequency Range:** 42-1002 MHz
- **Bandwidth:** 1.7MHz, 5 MHz, 6MHz, 7MHz, 8MHz
- **Constellations:**
  - **DVB-T:** QPSK, QAM16, QAM64 (All FEC Rates)
  - **DVB-T2:** QPSK, QAM16, QAM64, QAM256 (All FEC Rates)
  - **DVB-C:** QAM16, QAM32, QAM64, QAM128, QAM256 (All FEC Rates)
  - **DVB-C2:** QAM16, QAM64, QAM256, QAM1024, QAM4096 (All FEC Rates)
  - **ISDB-T:** QPSK, QAM16, QAM64 (All FEC Rates)

**DVB-S/S2/S2X INPUT MODULE**

**AG 116B**
- **Physical Interface:** 2x 75Ω BNC
- **Frequency Range:** 950-2150 MHz
- **Symbol Rates:**
  - 1-72 MSpS with 8PSK/QPSK
  - 1-60 MSpS with 16APSK and higher
- **DVB-S Modulation Modes:** QPSK (All FEC Rates)
- **DVB-S2/S2X Modulation Modes:** QPSK/8PSK (All FEC Rates)
  - 16/32/64APSK (with License)
- **LNB Power:** Off/13/14/18/19VDC @ 450mA
- **Control Tone Support:** 22 kHz On/Off
- **Supported Roll-off Factors:** 0.35, 0.25, 0.20, 0.15, 0.10, 0.05

**DVB-S2/S2X Advanced Feature License**

**AG 58916**
- **Additional Modulation Modes:** 16/32/64APSK (All FEC Rates)
- **VCM Demodulation Support Multistream (Single ISI)**

**DVB-S/S2/S2X INPUT MODULE WITH DVB-CI**

**AG 137B**
- **Physical Interface:** Adds two DVB-CI CAM Slots
- **Without Multi-Service License:** Descrambles Decoded Service Only
- **With Multi-Service License:** Number of Services limited by CAM

**DVB-CI Multi-Service Descrambling License**

**AG 58991**
- **With DVB-CI Capable Input:** Enables Multi-service Descrambling

**DVB-T/T2/C/C2/ISDB-T INPUT MODULE WITH DVB-CI**

**AG 115B**
- **Physical Interface:** Adds one DVB-CI CAM Slot
- **Without Multi-Service License:** Descrambles Decoded Service Only
- **With Multi-Service License:** Number of Services limited by CAM

**DVB-CI Multi-Service Descrambling License**

**AG 58991**
- **With DVB-CI Capable Input:** Enables Multi-service Descrambling

**MANAGEMENT**

**User Interfaces:**
- Full control via web GUI

**Automation Interfaces:**
- SNMP status, control, traps
- Syslog alarm output
- HTTP Web services API

**ENVIRONMENTAL CONDITIONS**

**Power:**
- 100-240 VAC 50/60 Hz
- Dual, Redundant Supply Available
- 0° to 50°C