

Key Features

- **High-quality downconverter with synchronizer for robust signal handling**
- **Image enhancement and pixel-level motion adaptive conversion for superb picture quality**
- **Full video proc. amp functions, including RGB and component color controls, video gain, chroma gain, phase control (hue), Y/C White and Y Black clip level controls, and color space conversion (ITU 601, ITU 709)**
- **Embedded audio can be adjusted for gain, delay, channel pairing, and output processing, then re-embedded into the video output stream**
- **Minimum delay (1 frame conversion) for low-latency live applications**
- **Maximum adjustable delay up to 9 frames**
- **Fiber-ready – accepts an optional SFP fiber device providing optical inputs or outputs**
- **Optional genlock reference input submodule for reference timing that supports loop-through, Tri-level sync and color black**

FiberReady

The 8995DNC is a compact, broadcast-quality fiber-ready downconverter. Conversion is of the highest quality, with pixel-adaptive motion processing. In addition, the 8995DNC provides the most robust signal handling with the low hysteresis synchronizer, redundant reference, and perfect-picture mode of the 8985FS.

It is fully featured with color-space conversion and a powerful video proc. amp, including RGB color correction with gamma and component adjustments with Y/C clip level adjustments.

Powerful embedded audio handling includes channel-level and Dolby E stream routing. PCM audio processing eliminates the clicks caused by the video synchronizer dropping or repeating frames. This module silences the effects of hot upstream video switching using a V-fade.

VITC and closed caption conversion are supported for same frame-rate downconversions, making this an ideal module for playout applications.

One of three types of optional SFP fiber optic submodules can be installed in the fiber optic rear cage connector to provide two fiber inputs (Dual Receiver), two fiber outputs (Dual Transmitter), or one fiber input and one fiber output (Transceiver).

Refer to the module pinout and block diagram on the next page.

Applications

- **Where incoming feeds may be in either 1080 and 720 HD video formats**
- **For live production where low latency conversion is required**
- **For conversion of signals with embedded audio**
- **Incoming lines ingest of any signal format into an HD system, including synchronization conversion and proc. amp adjustment**

Specifications

Supported Frame Types

GeckoFlex with 8900NET (Net Card) for configuration

Power Rating and Size

18 Watts – dual slot

Inputs

HD-SDI: One electrical or optional fiber optic

- Input equalization: up to 125m
- Auto-sensing: Yes
- Return loss: >15 dB, 5 to 270 MHz; >15 dB typical, to 1.5 GHz

Optical: Single-mode (optional)

Outputs

SD-SDI: Four electrical and up to two additional optional fiber optic

- Auto-sensing: yes
- Return loss: >15 dB, 5 to 270 MHz; >15 dB typical, to 1.5 GHz
- Signal level: 800 mVp-p \pm 10%
- Rise/fall time (20-80%): 140 ps typ for HD, 500 ps typical for SD
- Output jitter in frame sync mode, low jitter applied: < 0.2 UI p-p HD > 100 kHz < 1.0 UI p-p HD > 10 Hz

Optical: Single-mode (optional)

Electrical Length (delay)

Fixed delay mode: Nominal: 2 frames (\pm 1 pixel)
User-adjustable range: 2 frames minus 5 lines to 3 frames minus 5 lines

Synchronizing mode (asynchronous input):

Minimum: 2 frames minus 5 lines
Maximum: 3 frames minus 5 lines

Fixed delay mode = in minimum delay mode:

Nominal: 1 frame (\pm 1 pixel)
User-adjustable range: 1 frame to 2 frames minus 5 lines

Synchronizing mode = in minimum delay mode (synchronous input): Nominal: 1 frame (\pm 1 pixel)

User-adjustable range: 1 frame to 2 frames minus 5 lines

Additional adjustable delay: 0 to 6 additional frames

Conversion

Method: Motion adaptive

3:2/2:2 cadence: Automatic detection

Input: 1080i @ 59.94 Hz, 1080p @ 23.98, 1080sf @ 23.98, or 720p @ 59.94 Hz

Output choices: 480i @ 59.94 Hz

Input: 1080i @ 50 Hz or 720p @ 50 Hz

Output choices: 576i @ 50 Hz

Aspect Ratio Conversion

Conversion modes: 1:1, letterbox, pillarbox, anamorphic, 14:9

Synchronization (Genlock)

- Standard frame bus genlock or external reference if genlock submodule is installed (note at least one front module per frame must have genlock submodule)
- Adjustment: 0 to 1 frame in 1 SD pixel steps

Timecode and Closed Caption

VITC timecode and Closed Caption HD to SD translation: for same frame rate and output line select for VITC and Closed Caption. NOTE: VITC and CC may not work accurately in 23.98 Hz 3:2 pulldown from higher frame rate conversion

Control And Monitoring

SNMP: Yes

Web page configuration: Yes

Local configuration: No

Newton support: Yes

NetConfig support: Yes

NetCentral support: Yes

Ordering Information

This module can be mounted in a GeckoFlex frame but not in other 8900 series frames, including Gecko-A or Gecko-V frames. As this module has no card-edge controls and in order to configure this module an 8900NET (Net Card) Network Interface module is required.

8995DNC

SD/HD video format downconverter, front module and dual wide rear module set

8900GEN-SM

Genlock submodule. This submodule mounts to the front module to provide the reference input for the module and frame reference bus. This is required for frame synchronizing operation

SFP-13103G-M1TRX

Fiber transceiver. Low-power 1310 nm single-mode optical transceiver submodule (one fiber input/one fiber output)

SFP-13103G-M1DTRX

Dual fiber transmitter. Dual low-power 1310 nm single-mode optical transmitter submodule

SFP-13103G-M1DRX

Dual fiber receiver. Dual low-power 1310 nm single-mode optical receiver submodule

For detailed specifications, installation, and setup instructions see:

www.grassvalley.com/docs/modular

