

DATASHEET

# SPG-1801 Sync Pulse Generator



Space-saving, modular platform for advanced signal processing.

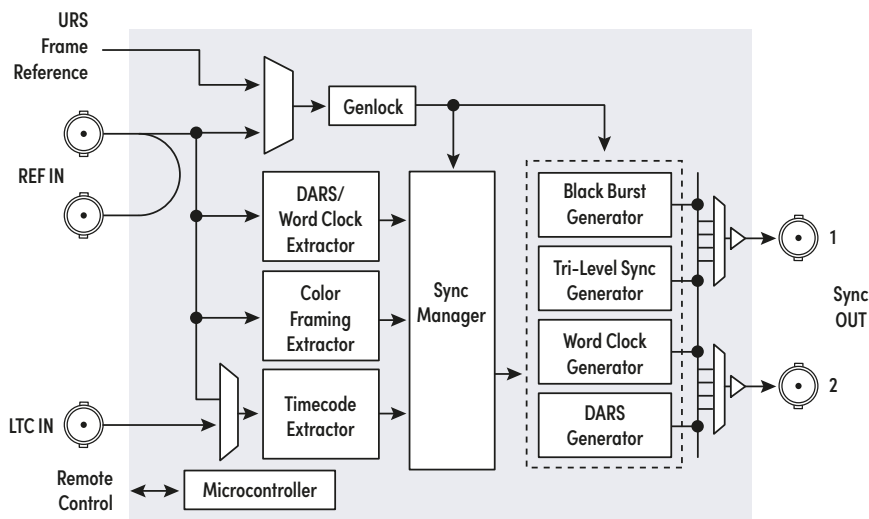
The Densité® Series SPG-1801 from Grass Valley® is a sync pulse generator card. It accepts an external reference input or a digital universal reference signal (URS) from the frame reference module REF-1801, if present. It features two fully independent outputs, with user selectable output format (blackburst, tri-level sync, DARS, Word Clock) and user configurable pixel by pixel output timing adjustment.

The SPG-1801 can lock on a blackburst or a tri-level sync signal. The output signal can be video (blackburst, tri-level sync) or audio (Word Clock, DARS). In the case of an audio output, the SPG-1801 can also lock on an external DARS or Word Clock.

The SPG-1801 is the ideal solution for generating multiformat synchronization signals that can be used in broadcast or production facilities. The combination of several SPG-1801 sync pulse generator cards and one REF-1801 frame reference module can transform the Densité frame into a highly-integrated solution for multisync generation and distribution.

## Key Features

- Up to 20 cards per frame
- Reference input
  - External: blackburst, tri-level sync, DARS, Word Clock
  - Internal (with a REF-1801 card): Universal Reference Signal (URS)
- Two fully independent sync outputs
  - Audio or video
  - Selectable format
  - Support for blackburst, tri-level sync, DARS, Word Clock
  - Timing adjustment: up to 1 frame, pixel by pixel
- Easy control and monitoring with GV Orbit®



SPG-1801 Functional Block Diagram



SPG-1801-SRP

## Specifications

### Genlock Input

**Load:** Passive loop-through

**Impedance:** 75Ω bridging

**Return loss:** >30 dB up to 30 MHz

**Signal type:** Composite NTSC-M, PAL-B blackburst with optional VITC

**Standard:** SMPTE ST 170, ITU-R BT.1700-1, SMPTE ST 318

**Signal level:** 1 Vp-p

**Signal type:** HD tri-level sync

**Standard:** SMPTE ST 274, SMPTE ST 296

**Signal level:** 600 mVp-p

**Signal type:** DARS AES-3id

**Standard:** SMPTE ST 276

**Signal level:** 1 Vp-p

**Signal type:** Word Clock

**Standard:** AES11-2003

**Signal level:** 2.3 Vp-p

### URS Input (from REF-1801)

**Signal type:** URS4D – Universal Reference Signal

**Standard:** Grass Valley proprietary

### LTC-In

**Connector:** BNC per IEC 60169-8 amendment 2

**Signal type:** LTC

**Standard:** SMPTE ST 12

**Signal level:** 0.5 Vp-p to 4.5 Vp-p

### Analog Reference Output

**Signal type:** Composite NTSC-M, PAL-B with optional VITC

**Standard:** SMPTE ST 170, ITU-R BT.1700-1, SMPTE ST 318

**Signal level:** 1 Vp-p

**Signal type:** HD tri-level sync

**Standard:** SMPTE ST 274, SMPTE ST 296

**Signal level:** 600 mVp-p

**Signal type:** DARS AES-3id

**Standard:** SMPTE ST 276

**Signal level:** 1 Vp-p

**Signal type:** Word Clock

**Standard:** AES11-2003

**Signal level:** 2.3 Vp-p

### No Reference

**Format 525: Min.:** 18.296 μs

**Adjustment:** +2 frames

**Format 625: Min.:** 18.296 μs

**Adjustment:** +2 frames

### Electrical

**Power:** 3.5W



## Ordering

Densité 2 Frame	Densité 3 Frame	Description
SPG-1801	SPG-1801-3RU	Sync pulse generator
SPG-1801-SRP	SPG-1801-SRP-3RU	Single rear connector panel
<b>Remote Control</b>	GV Orbit, iControl™, iControl Solo	

This product may be protected by one or more patents. For further information, please visit: [www.grassvalley.com/patents](http://www.grassvalley.com/patents)

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