

SPC100 SERIES

SYNC SIGNAL GENERATOR

Black burst and tri-level sync reference for professional video systems.

1U MODULAR CHASSIS	6 CARD SLOTS	7-32 SYNC OUTPUTS	BB / TRI REFERENCE FORMATS
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MODULAR SYNCHRONIZATION PLATFORM

SPC100-7 / SPC100-12 / SPC100-17
SPC100-22 / SPC100-27 / SPC100-32

External genlock | Gain control | Redundant power

DOCUMENT RELEASE JULY 17, 2025

SECTION 01

PRODUCT OVERVIEW

A modular synchronization reference for professional video and production systems.

The SPC100 Series Sync Signal Generator provides multiple black burst (BB) or tri-level sync outputs using a chassis-and-card architecture. It serves as a high-quality synchronization source for video processors, studios, broadcast control systems and virtual production systems.

1U	6	7–32	6
RACKMOUNT FORMAT	MODULE SLOTS	RELEASED OUTPUT RANGE	MODEL OPTIONS

CORE CAPABILITIES

- Multiple synchronization-signal outputs
- External genlock support
- Gain control support
- External redundant power adapters for reliable operation

APPLICATION ENVIRONMENTS

Video processing systems • Studios • Broadcast control • Virtual production

PRODUCT ROLE A synchronization reference source in a synchronized video system. The application diagram in Section 02 shows the reference connections to Media Rendering Servers.

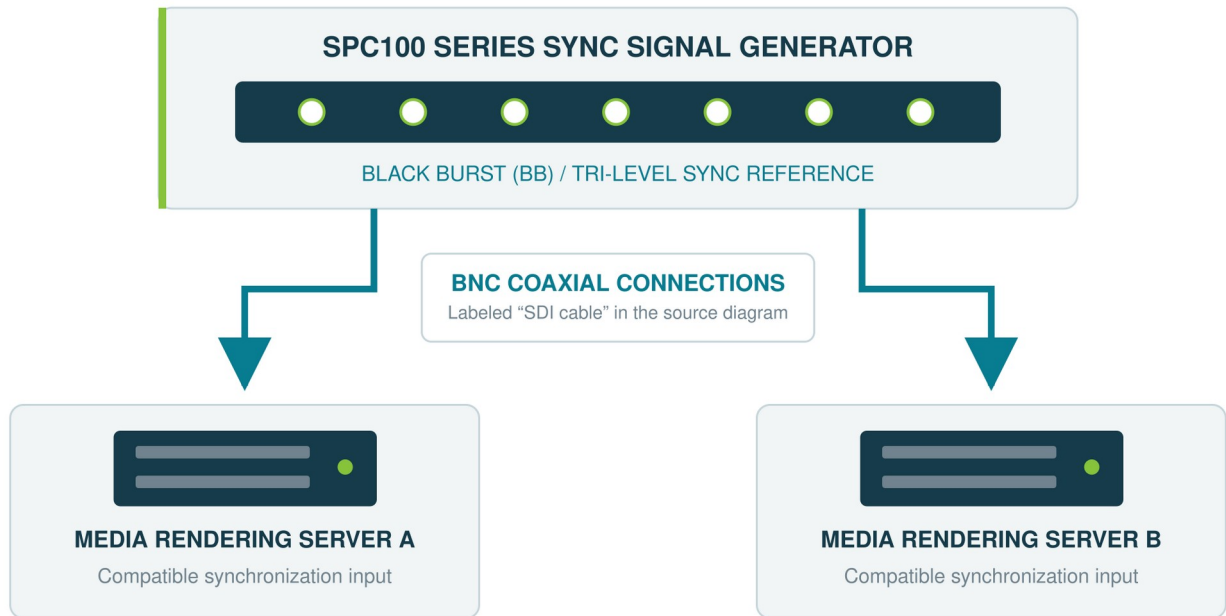
READING GUIDE

SECTION	CONTENT
02–03	System topology; chassis and module descriptions
04–05	Signal performance; six-model configuration matrix
06–07	Mechanical dimensions; general specifications and safety
08	Revision history and source-data notes

SECTION 02

SYSTEM TOPOLOGY

One synchronization source supplies reference signals to compatible rendering servers.



Reference-signal paths only. Media and image-data connections are not shown.

CONNECTION INTERPRETATION

- The two Media Rendering Servers receive separate synchronization-reference connections from the SPC100 system.
- The source diagram labels the connection medium as "SDI cable". This identifies the cable used in that diagram; the specified reference formats remain black burst and tri-level sync.

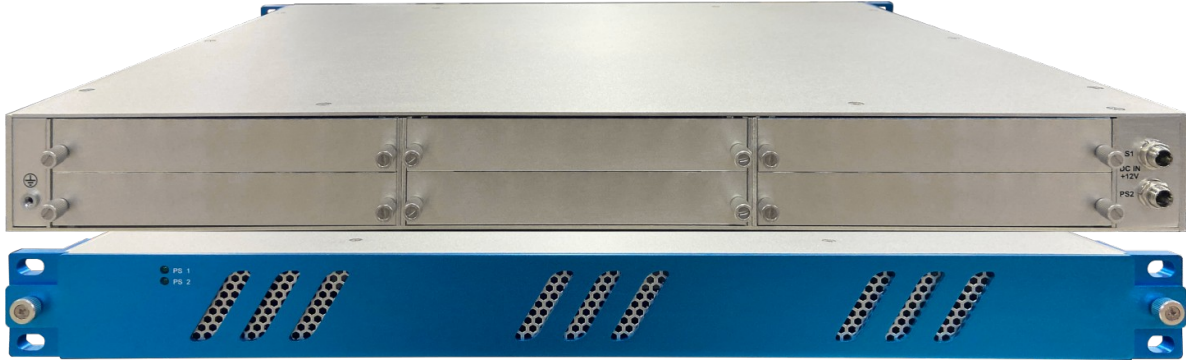
SYSTEM MATCHING Use receiving equipment compatible with the selected reference format. The original specification does not define model-specific server compatibility, cable length limits or a complete commissioning procedure.

SECTION 03

CHASSIS & MODULES

A six-slot 1U platform with sync generation and analog video distribution modules.

1U CHASSIS



Six card slots; redundant power; aluminium-alloy enclosure for low weight and efficient heat dissipation.

SYNC SIGNAL GENERATOR CARD



Seven-output black burst sync generator with seven BB outputs; tri-level synchronization signals are also supported.

ANALOG VIDEO DISTRIBUTION AMPLIFIER CARD



One analog video input and six analog video outputs. Supports cable equalization, PAL/NTSC adaptation and gain control.

Product images are for reference only. The delivered product prevails.

SECTION 04

SIGNAL PERFORMANCE

Released signal formats, electrical interface characteristics and performance values.

PARAMETER	SPECIFICATION
Output reference formats	Black burst (BB) or tri-level sync
Signal standards	SMPTE 170M; ITU 624-2 (source designation)
Video standards	PAL / NTSC
Connector / impedance	BNC / 75 Ω
Input signal amplitude	100 mV $\pm 10\%$
Return loss	>40 dB over 0.1 MHz to 6 MHz
Differential gain	<0.5%
Differential phase	<1% (as stated in the source)
External reference locking	Supported
Gain control	Supported

MODULE FUNCTIONS

The sync generator card provides seven reference outputs. The analog video distribution amplifier card accepts one analog video input and provides six analog video outputs, with cable equalization and PAL/NTSC adaptation.

SOURCE-DATA NOTE The original specifies differential phase as <1%. That value and unit are preserved without converting the percentage to an angle. See Section 08 for the release-check note.

SECTION 05

MODEL CONFIGURATIONS

Six released configurations share the same 1U chassis architecture.

MODEL	CHASSIS	MAX. SYNC GENERATOR CARDS	MAX. ANALOG DISTRIBUTION CARDS	SYNC OUTPUTS
SPC100-7	1U	1	—	7
SPC100-12	1U	1	1	12
SPC100-17	1U	1	2	17
SPC100-22	1U	1	3	22
SPC100-27	1U	1	4	27
SPC100-32	1U	1	5	32

“—” reproduces a blank cell in the original SPC100-7 configuration table.

CONFIGURATION REFERENCE

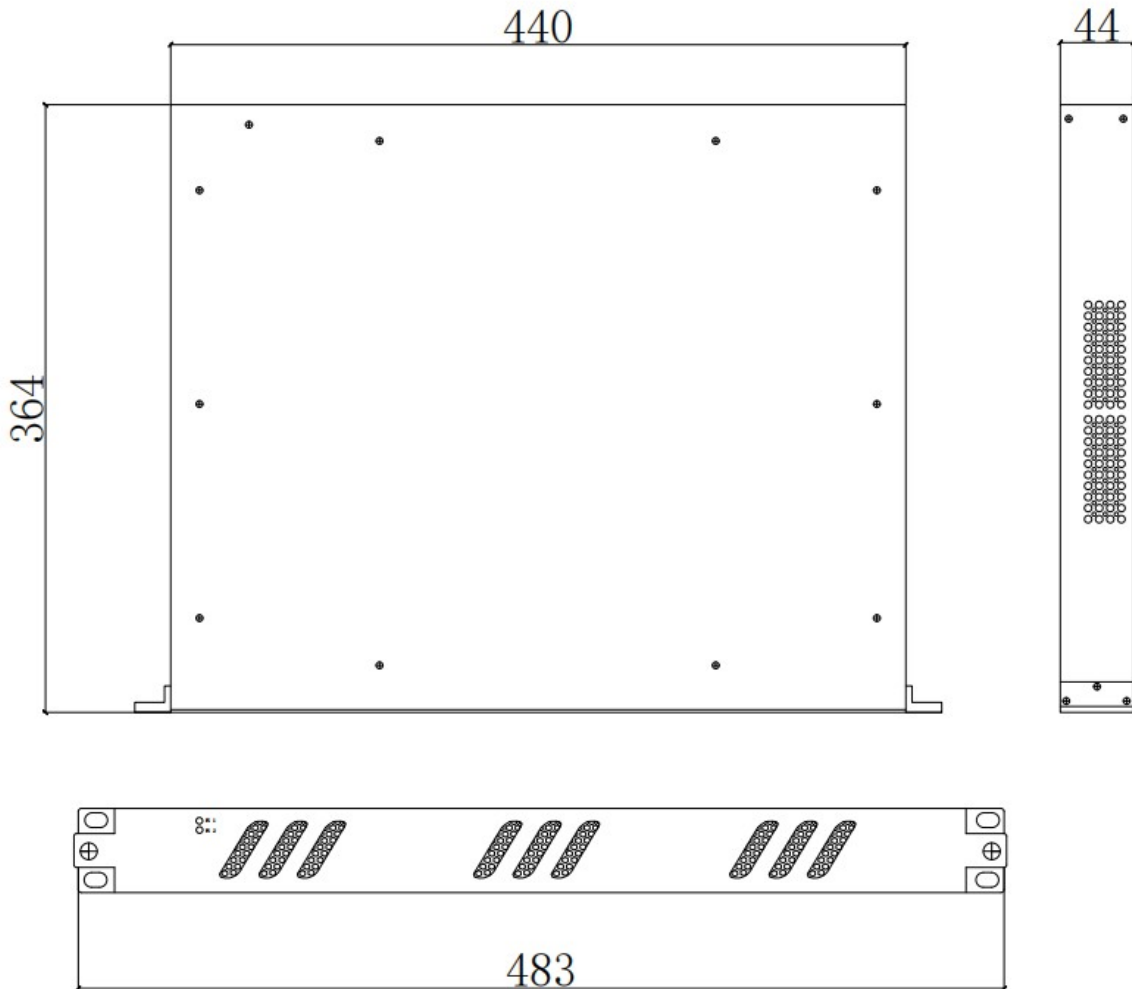
- Product family: SPC100 Series Sync Signal Generator.
- Chassis format: 1U, with six card slots.
- Maximum sync generator card count: one for every listed model.
- Maximum analog distribution card count: one to five for SPC100-12 through SPC100-32, as shown above.

OUTPUT COUNT Use the published total for the selected model. The source does not provide an internal card-to-card wiring map, so no additional internal connection scheme is assumed.

SECTION 06

MECHANICAL DIMENSIONS

Dimensions for rack planning and installation. All drawing values are in millimetres.



Dimensional tolerance: ± 0.3 mm. Units: mm.

MECHANICAL ITEM	DIMENSION
Overall dimensions	483 × 364 × 44 mm (W × D × H)
Chassis body width shown in drawing	440 mm

SECTION 07

SPECIFICATIONS & SAFETY

Power, environmental limits and the original operating precautions.

PARAMETER	SPECIFICATION
Input voltage	DC 12 V
Operating temperature	0 °C to 45 °C
Operating humidity	0% RH to 80% RH, non-condensing
Chassis dimensions	483 × 364 × 44 mm (W × D × H)

POWER NOTE Current and power consumption may vary with use, environment, settings and other operating factors. Numerical current and power-consumption values are not provided in the source.

INSTALLATION & HANDLING

- Installation must be performed by qualified professionals.
- To prevent safety hazards, do not allow liquids, metal fragments or other conductive objects to enter the equipment.
- Operate the equipment in a dry, clean environment.

REFERENCE IMAGES

Product images are for reference only. The delivered product prevails.

SECTION 08

REVISION & DOCUMENT CONTROL

Original release information and transparent handling of source-data ambiguities.

DOCUMENT VERSION	RELEASE DATE	REVISION
V4.0	July 17, 2025	Initial release

ENGLISH EDITION CONTROLS

- English product name: SPC100 Series Sync Signal Generator.
- The source chapter content is retained in this edition and reorganized by technical topic. Configuration values, performance figures, dimensions and operating precautions are preserved.
- Differential phase is stated as <1% in the original. Confirm the intended unit with the manufacturer before release; this edition does not silently substitute degrees.
- The standard designation "ITU624-2" is retained as "ITU 624-2". Its exact formal reference should be confirmed before release.
- The SPC100-7 analog distribution card-count cell is blank in the original. A dash marks that source blank in Section 05.
- The source application diagram labels the cable "SDI cable". The English topology preserves that label as a source note and distinguishes it from the specified BB / tri-level reference formats.

CONTACT INFORMATION

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Professional LED Display Control Systems

Specifications and product appearance are subject to change without notice.

