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Data Sheet
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STANFORD RESEARCH

Stanford Research CG645 – PECL (+2.5Vcc) up to 2050MHz

Stanford Research CG645 – PECL (+2.5Vcc) up to 2050MHz The Stanford Research Systems CG645 is an optional PECL output adapter for the CG635 Synthesized Clock Generator–it is notastandalone clock generator. The CG645 converts the CG635 rear-panel LVDS clock output into PECL logic levels at +2.5 Vcc on 50 Ω outputs, operating to 2.05 GHz with approximately 100 ps transition times. Delivering clean PECL (+2.5 V) clock signals to low-voltage high-speed digital and communications systems; remote clock distribution fromaCG635 master; PECL drive for FPGAs, serializers, and communications ICs requiring 2.5 V PECL levels. The Stanford Research Systems CG645 is an optional PECL output adapter for the CG635 Synthesized Clock Generator–it is notastandalone clock generator. The CG645 converts the CG635 rear-panel LVDS clock output into PECL logic levels at +2.5 Vcc on 50 Ω outputs, operating to 2.05 GHz with approximately 100 ps transition times. Delivering clean PECL (+2.5 V) clock signals to low-voltage high-speed digital and communications systems; remote clock distribution fromaCG635 master; PECL drive for FPGAs, serializers, and communications ICs requiring 2.5 V PECL levels.

MODEL	CALIBRATION
Stanford Research CG645	Available on request
CONDITION	STATUS
Used	In stock
RFQ / SKU	LISTING
CG645	https://aumictechlabs.com/products/cg645-2/

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This unit

The Stanford Research CG645 is a PECL clock generator delivering stable, precise timing signals up to 2050 MHz. Engineered for applications demanding stringent clock integrity - including high-speed digital systems, telecommunications infrastructure, and semiconductor testing - the CG645 provides the low-jitter outputs and clean spectral performance required in demanding laboratory and production environments.Technical Specifications Clock Generation Frequency range: Up to 2050 MHz Output signal type: PECL (+2.5Vcc) Output impedance: 50 Ω Jitter (RMS): Typically < 1 ps rms Transition time: 80 ps (20% to 80%) Output Connectors SMA connectors (standard on similar Stanford Research Systems instruments)Key Features Sub-picosecond RMS jitter ensures timing fidelity in high-speed applications Fast edge transitions (80 ps) support clean clock distribution 50 Ω output impedance matches standard digital system interfaces PECL signaling provides low-noise differential outputsTypical Applications High-speed digital system clocking Telecommunications and infrastructure timing Semiconductor device testing and characterization Advanced research laboratory instrumentation Systems requiring phase-coherent, low-jitter clock referencesCompatibility & Integration The CG645 operates as a standalone benchtop instrument. Rack-mount configuration options are available, enabling integration into automated test systems and facility-level timing distribution networks. PECL output levels and 50 Ω impedance ensure direct compatibility with digital logic families and high-speed data acquisition equipment.

Features & description

From manufacturer datasheet

Features

• PECL (+2.5 Vcc) output adapter for CG635 • Operates up to 2.05 GHz (2050 MHz) • 50 Ω source and load impedance • Approximately 100 ps transition times • Connects via Category-6 cable to CG635 RJ-45 output • Remote placement away from the CG635 mainframe • Part of CG640–CG649 optional receiver family

CG645 Characteristics / Specifications

PARAMETER	VALUE
Stanford Research CG6	PECL (+2.5Vcc) up to 2050MHz Overview The Stanford Research Systems CG645 is an optional PECL output adapter for the CG635 Synthesized Clock Generator–it is notastandalone clock generator. The CG645 converts the CG635 rear-panel LVDS clock output into PECL logic levels at +2.5 Vcc on 50 Ω outputs, operating to 2.05 GHz with approximately 100 ps transition times.
Model	CG645
Manufacturer	Stanford Research Systems
Instrument Type	Optional PECL Output Adapter
Parent Instrument	CG635 Synthesized Clock Generator
Output Logic Family	PECL (+2.5 Vcc)
Maximum Frequency	2.05 GHz (2050 MHz)
Transition Time	approximately 100 ps
Source Impedance	50 Ω
Load Impedance	50 Ω
Input	RJ-45; LVDS clock pair from CG635 via Category-6 cable
Output	PECL on SMA connector(s)
Power	supplied from CG635 rear-panel RJ-45 (±5 VDC for optional receivers) Standard Operating Conditions Use withaCG635 equipped for optional line receivers. Terminate PECL outputs with 50 Ω when required. Observe Category-6 cable length limits versus frequency (OEM guidance: shorter cables at higher frequencies).
CG645 requiresaCG6	it cannot generate clocks independently. Related PECL variants include CG643 (+5 Vcc) and CG644 (+3.3 Vcc). For RF or other logic families, select CG646 (RF +7 dBm), CG648 (ECL), or other CG640–CG649 modules per application.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications

Specifications

PARAMETER	VALUE
Model	CG645
Manufacturer	Stanford Research Systems
Instrument Type	Optional PECL Output Adapter
Parent Instrument	CG635 Synthesized Clock Generator
Output Logic Family	PECL (+2.5 Vcc)
Maximum Frequency	2.05 GHz (2050 MHz)
Transition Time	approximately 100 ps
Source Impedance	50 Ω
Load Impedance	50 Ω
Input	RJ-45; LVDS clock pair from CG635 via Category-6 cable
Output	PECL on SMA connector(s)
Power	supplied from CG635 rear-panel RJ-45 (±5 VDC for optional receivers)

Standard Operating Conditions
Use withaCG635 equipped for optional line receivers. Terminate PECL outputs with 50 Ω when required. Observe Category-6 cable length limits versus frequency (OEM guidance: shorter cables at higher frequencies).

Operational Notes
CG645 requiresaCG635–it cannot generate clocks independently. Related PECL variants include CG643 (+5 Vcc) and CG644 (+3.3 Vcc). For RF or other logic families, select CG646 (RF +7 dBm), CG648 (ECL), or other CG640–CG649 modules per application.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: **sales@aumictech.com** · +1 (484) 841-9341

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