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Find the *Mercury Computer Systems / Echotek ECSG-1RHSCT* at our website: *Click HERE*

ECHOTEK™ SERIES

DATASHEET

Computer Systems, Inc. MERCURY

# ECSG-1RHSCT Low Phase Noise A/D Clock Generators

## One-Reference High-Speed Clock Transmitters

- High-quality clock output
- For board-level, mixed-signal products
- Choice of standard VME or PMC form factor



ECSG-1RHSCT-VME



ECSG-1RHSCT-PMC

The Echotek™ Series ECSG-1RHSCT Low Phase Noise A/D Clock Generators from Mercury Computer Systems are one-reference high-speed clock transmitters for distribution to board-level, mixed-signal products such as analog-to-digital converters (ADC), digital-to-analog converters (DAC), digital receivers, and digital upconverters. The VME version has five high-speed clock output connectors; the PMC version has two. The clock source is generated using an ADF4113 RF PLL frequency synthesizer driving a voltage-controlled oscillator (VCO). VCOs are available in variable ranges.

## Features

- Generates high-quality clock output, frequency is VCO dependent
- Generates a divided slow clock output: high-speed clock divided by 12 to 1024 in steps of 4
- Outputs have 50% duty cycle
- External reference input to PLL or 10-MHz onboard reference
- Trigger output aligned to clock rising edge, based on an external trigger input
- Programmable trigger width: 6 to 512 clocks wide in steps of 2
- Choice of 6U VME or PMC form factor
- PMC size has PCI Version 2.1-compliant bus interface
- PCI interface supports 3.3V and 5V I/O

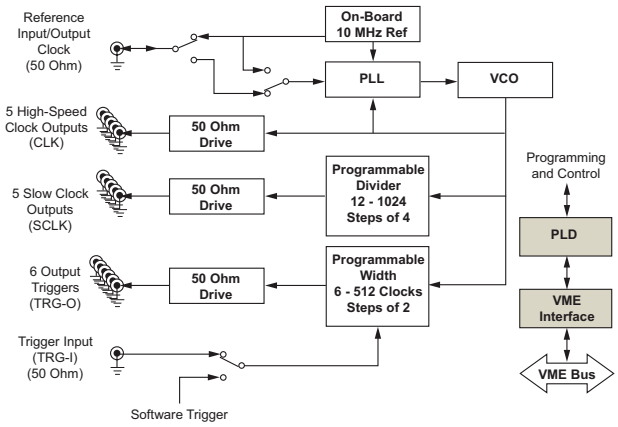



*Figure 1. ECSG-1RHSCT-VME functional block diagram*

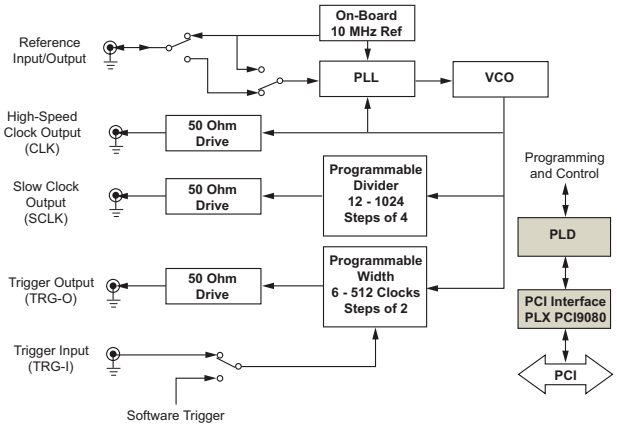



*Figure 2. ECSG-1RHSCT-PMC functional block diagram*

## Ordering Information

| Model | Part Number | Options |
|---|---|---|
| ECSG-1RHSCT-VME | 12-00153/CC585 | 1.48 GHz to 1.58 GHz |
| ECSG-1RHSCT-VME | 12-00153/CC586 | 980 MHz to 1.08 GHz |
| ECSG-1RHSCT-VME | 12-00153/CC621 | 450 MHz to 600 MHz |
| ECSG-1RHSCT-PMC | 12-0101/CC421 | 10 MHz oscillator, 1487 to 1587 MHz VCO |

## Specifications

| Ruggedization Level | Commercial | Extended Temperature |
|---|---|---|
| Temperature | | |
| Operating | 0°C to 55°C with 300 ft/min airflow | -20°C to +65°C with 300 ft/min airflow |
| Storage | -50°C to +85°C | -50°C to +85°C |
| Vibration | $0.002g^2$/Hz from 10 to 2000 Hz random and 2g sinusidal from 5 Hz to 500 Hz | $0.002g^2$/Hz from 10 to 2000 Hz random and 2g sinusidal from 5 Hz to 500 Hz |
| Shock | 20g peak sawtooth, 11 ms duration | 20g peak sawtooth, 11 ms duration |
| Humidity | Up to 95% RH | Up to 95% RH with varying temperature, 10 cycles, 240 hr |
| Cooling | Commercial grade, cooled by blown air, for use in benign environments and software development applications | Similar to standard but conformally coated and temperature characterized |

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