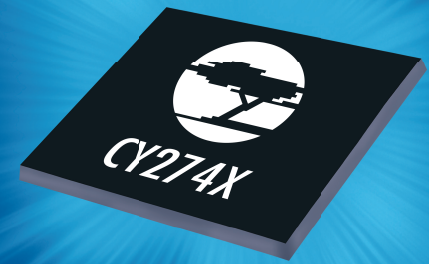CYPRESS

4-PLL High-Performance Clock Generator (CY274X)
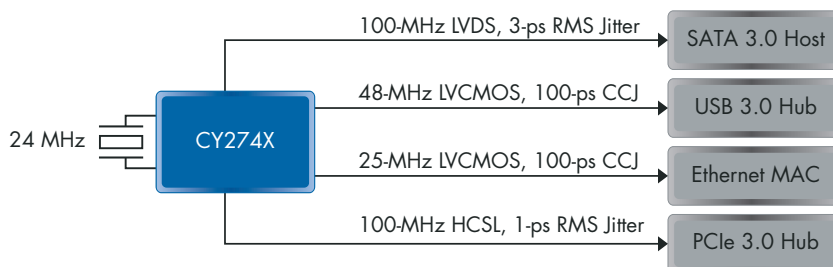
Flexible, Single-chip Solution that Simplifies System Design

4-PLL HIGH-PERFORMANCE CLOCK GENERATOR

The CY274X family is a 4-PLL (phase-locked loop) clock generator can create up to 12 programmable output frequencies on a single chip with best-in-class jitter performance. It saves board space and reduces bill-of-material costs by consolidating system components to provide a flexible, high-performance and low-cost solution. With support for frequencies up to 700 MHz and RMS Phase jitter of <0.7 ps, the devices can support reference clocks for PCIe 1.0/2.0/3.0, SATA 1.0/2.0/3.0, 10 GbE and USB 1.0/2.0/3.0 peripherals. CY274X is AEC-Q100 Qualified.

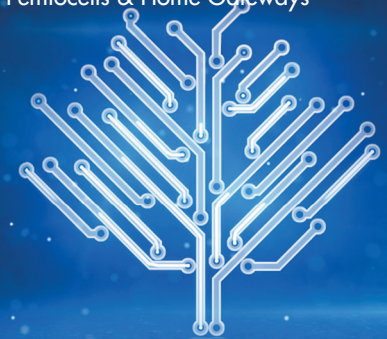CY27410 Reference Clocks for Data Transfer Standards

CY27410 FEATURES

- High frequency: 700-MHz differential, 250-MHz single-ended
- Pin select and I²C programming
- 12 outputs:
    - Eight configurable as differential or single-ended
    - Four single-ended
- Reference clock support for PCIe 3.0, SATA 2.0 and 10 GbE
- RMS Phase Jitter <0.7 ps (typical)
- Additional features:
    - Configurable as zero or non-zero delay buffer
    - Glitch-free frequency switching
    - Frequency Select
    - Early/late clocks
    - PLL cascading
    - Voltage controlled frequency synthesis

ADVANTAGES

- High frequency: 700-MHz differential, 250-MHz LVCMOS
- Supports multiple differential output standards: LVPECL, LVDS, HCSL and CML
- 12 outputs:
  Eight configurable as differential or single-ended
  Four single-ended
- Best-in-class jitter performance with RMS Phase Jitter <0.7 ps
- Reference clock support for PCIe 3.0, SATA 3.0 and 10 GbE
- Pin select and I²C programming
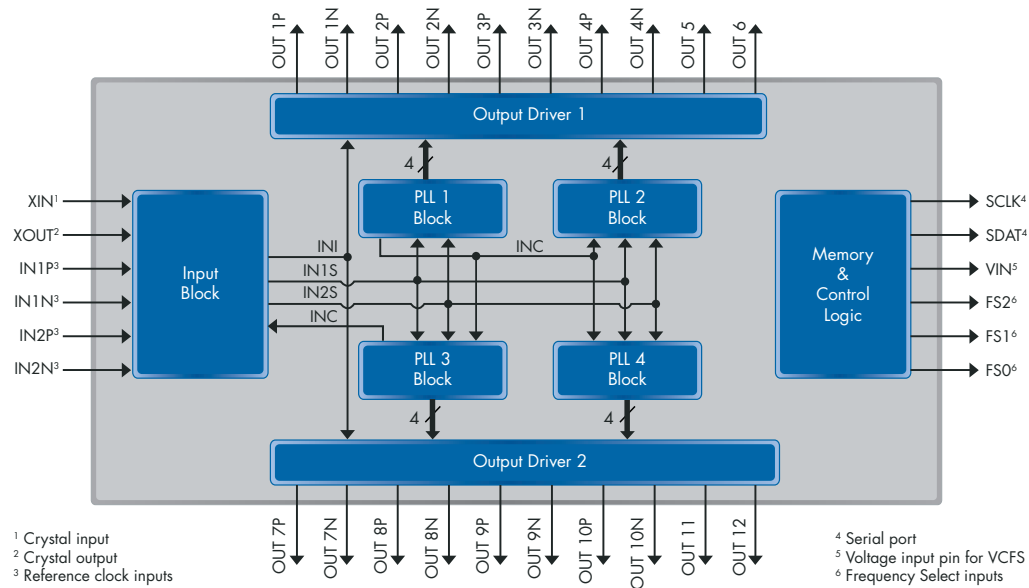- Patented Spread Spectrum Technology
- Glitch-free frequency switching

APPLICATIONS

- Multifunction Printers
- Car Infotainment Systems
- Routers & Switches
- Media Broadcast Systems
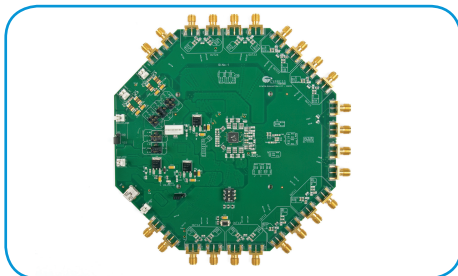- Storage Systems
- Femtocells & Home Gateways

CYPRESS
EMBEDDED IN TOMORROW™

CY27410 ORDERING INFORMATION

Part Number	No. of Outputs	Programmability	Grade	Package
CY27410FLTXI	12	Field	Industrial	48-QFN
CY27410LTXI - XXX	12	Factory	Industrial	48-QFN
CY27430LTXA	8	Field	Automotive	48-QFN
CY27430LTXA-XXX	8	Factory	Automotive	48-QFN

1 Crystal input
2 Crystal output
3 Reference clock inputs

4 Serial port
5 Voltage input pin for VCFS
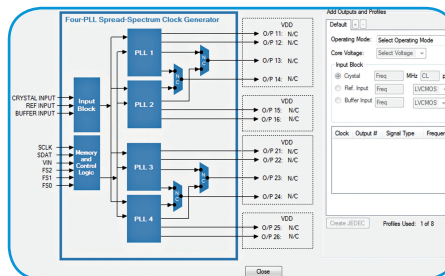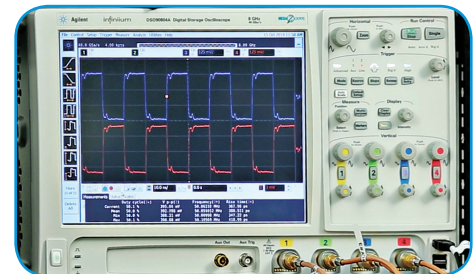6 Frequency Select inputs

CY27410 Block Diagram

GET STARTED NOW

Buy the CY3679 kit to evaluate CY27410's performance and features including configurability, frequency select, early/late clocks and VCXO

Download the ClockWizard and PSoC Programmer software for free and design different configurations with ease

Generate your desired reference frequencies and replace your entire clock tree with a single-chip solution

FOR FURTHER DETAILS

To learn more about CY274X and all Cypress Timing products, visit www.cypress.com/timing

To purchase CY274X parts and evaluation/programming kits, visit www.cypress.com/buyonline

To access our timing solutions documentation, visit www.cypress.com/go/TimingAppNotes