# 82P33714/31 SETS and 8T49N28x UFTs
## Proven Timing Solutions for SyncE Systems

## FEATURES

- **8T49N285/286/287**

  – Universal Frequency Translator (UFT™) with jitter attenuation

  – Eight independently-programmable outputs

  – 300 fs typical RMS jitter

  – Operates from a 10 MHz to 40 MHz fundamental mode crystal

  – Accept input frequencies from 8 kHz to 875 MHz

  – Auto and manual input clock selection with hitless switching or phase-slope limiting

  – Output frequencies from 8kHz to 1.0 GHz

  – Programmable PLL bandwidth settings

- **82P33714/31**

  – G.8262 compliant SETS for SyncE

  – Lock to a wide range of reference clock frequencies including 10/100/1000 Ethernet, 10G Ethernet, OTN, SONET/SDH, PDH, TDM, GSM, CPRI, and GNSS frequencies including 1 PPS

  – Highly flexible reference monitoring and hitless switching capabilities

  – 82P33731 supports sub 300 fs RMS jitter

  – Sync pulse inputs and outputs (1 PPS, 2 kHz, 4 kHz or 8 kHz)

  – Choice of eight common TCXO/OCXO frequencies

  – Input-to-output programmable phase delay

  – Independent programmable input delays

  – Programmable output phase capabilities

## COMPLIANCE REPORT
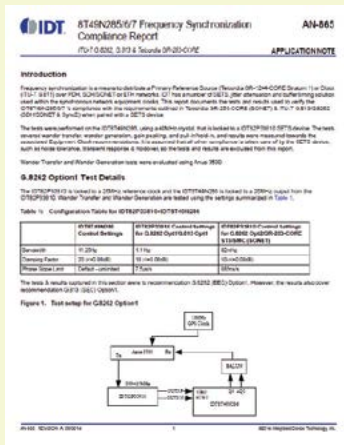


For more Information, Visit
**IDT.com/go/UFT**
**IDT.com/go/Sync**
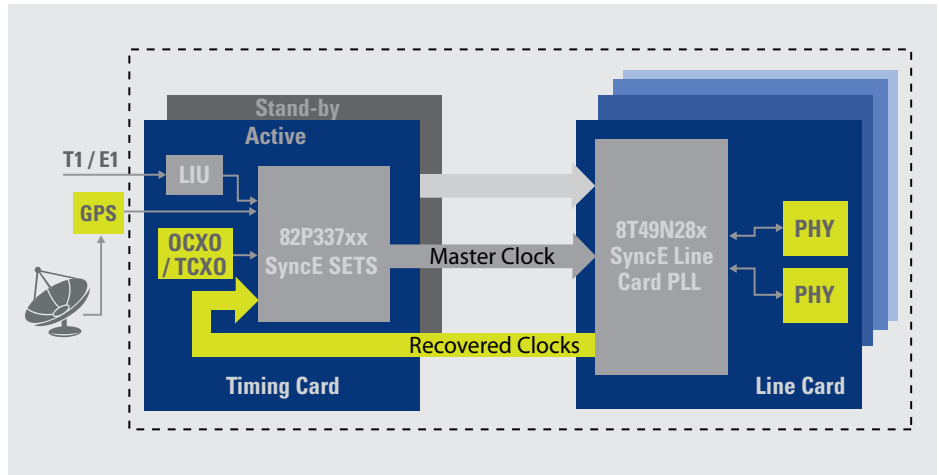


## IDT SETS and UFT Line Card Synchronizers for High-Speed SyncE Systems

The 82P33714/31 and 8T49N285/286/287 provide solutions to support ITU-T G.8262 SyncE compliance in single board or multi-board architectures with network interfaces operating at up to 100 Gigabit/s.

The Synchronous Equipment Timing Source (SETS) devices generate SyncE compliant timing references for an entire system. The Universal Frequency Translator (UFT™) devices are ideal for line cards in multi-board systems to adapt SETS timing signals for local interfaces while preserving SyncE compliance. The two families have been tested together and are proven to provide SyncE-compliant clocks.

## Combine Compliance and Versatility

The SETS devices provide flexibility to accept network synchronization references from virtually any source, including 1 PPS (pulse per second) signals from GPS (Global Positioning System) receivers. The 82P33714 can directly time 1G PHYs; while the 82P33731 can directly time 10G PHYs. In line card applications, the UFT devices deliver reliably solid jitter performance to directly time 10G PHYs and interfaces up to 100G. They provide redundancy management, jitter attenuation, low jitter generation and flexible output formats. The IDT technology allows highly flexible frequency plans, including any rate conversion to unrelated output frequencies, helping engineers simplify complex clock trees. IDT's Timing Commander GUI (Graphical User Interface) enables a fast and easy reconfiguration of the devices for use and reuse of these devices in many different clock trees while reducing engineering effort.

| SyncE Application | Recommended Device |
|---|---|
| SyncE Line Card | 8T49N285/286/287 |
| SyncE Timing Card | 82P33714 |
| SyncE Blade (single board system) | 82P33731 |

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