SKYWORKS®

Timing Solutions

Product Selector Guide

1117 Rev2

Timing Solutions

Skyworks offers a broad portfolio of timing products that enable
hardware designers to simplify clock generation, clock distribution,
jitter attenuation and network synchronization. These products

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enabling customers to easily architect optimized clock tree
solutions. Custom samples are available in 1-2 weeks, easing
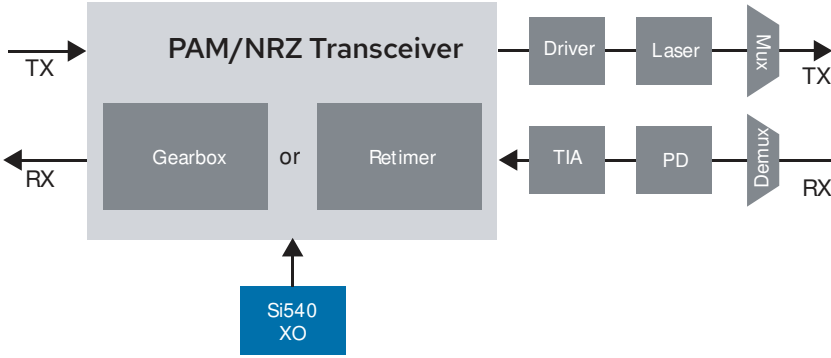design and reducing time-to-market.

- Any frequency up to 3.0 GHz

- Ultra-low jitter: 80 fs RMS

- Short lead times: 1-2 weeks (samples)

- Any-frequency, any-output with
  JESD204B/C support

- Ultra-low jitter: <55 fs RMS

- Clock tree on a chip replaces clocks
  and XOs

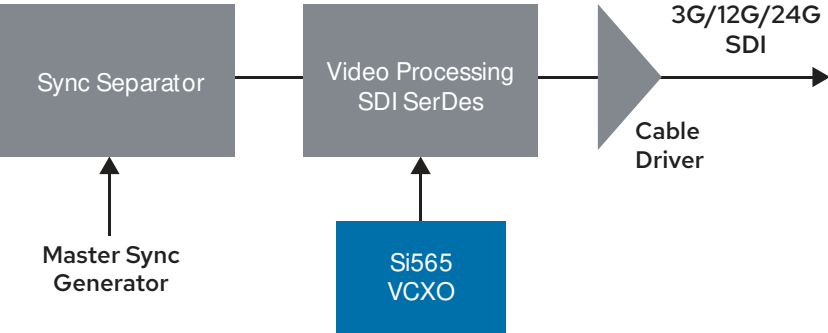014f5nT EMC /P .7 (o7 /P 0 0 5MCID 27 >> /n-US)/angD 27 >7 >>BDC BT 0 10005T 0MCIDT EMC /P Tw

Crystal Oscillators (XO)

n o   b   E
are highly customizable, with samples of any XO available with 1-2 week lead times.

| TX → | **PAM/NRZ Transceiver** | | Driver | Laser | Mux | → TX |

Gearbox or Retimer

← RX | Gearbox | or | Retimer | ← | TIA | PD | Demux | RX

Si540 XO

Voltage-Controlled Crystal Oscillators (VCXO)

are highly customizable, with samples of any VCXO available with 1-2 week lead times.

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┌──────────────┐       ┌──────────────┐
│              │       │              │       ╲
│    Sync      │───────│    Video     │────────╲      3G/12G/24G
│  Separator   │       │  Processing  │         ╲         SDI
│              │       │  SDI SerDes  │         ╱───────────────►
│              │       │              │        ╱
└──────────────┘       └──────────────┘       ╱
       ▲                      ▲            Cable
       │                      │            Driver
       │                      │
   Master Sync          ┌──────────┐
   Generator            │  Si565   │
                        │  VCXO    │
                        └──────────┘
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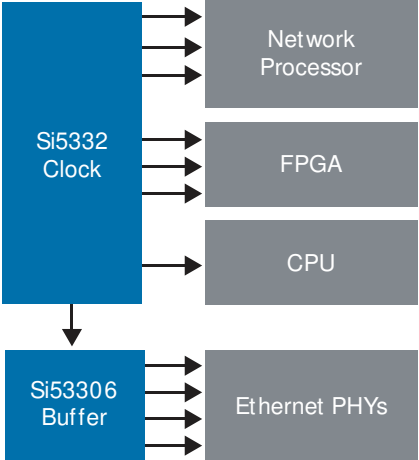
Clock Gener

Leveraging Skyworks' pr

Skyworks' comprehensiv
industrial and consumer a

Clock Buffers

Skyworks offers a comprehensive portfolio of clock buffers. In addition to universal buffers that support any in/out signal format translation, we offer a wide range of differential and single-ended buffers that provide ultra-low additive jitter and low skew clock distribution. Skyworks also offers a broad range of low-power PCIe buffers that
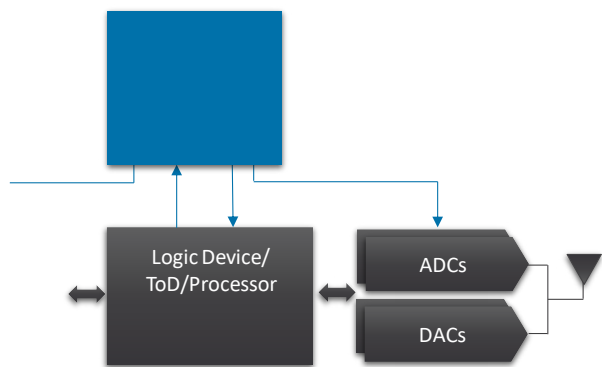j ; k ; l ; m ; n ; o

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┌──────────┐         ┌──────────────┐
│          │────────▶│  Network     │
│          │────────▶│  Processor   │
│          │────────▶│              │
│ Si5332   │         └──────────────┘
│ Clock    │────────▶┌──────────────┐
│          │────────▶│    FPGA      │
│          │────────▶│              │
│          │         └──────────────┘
│          │────────▶┌──────────────┐
│          │         │    CPU       │
└────┬─────┘         └──────────────┘
     │
     ▼
┌──────────┐────────▶┌──────────────┐
│ Si53306  │────────▶│ Ethernet PHYs│
│ Buffer   │────────▶│              │
└──────────┘────────▶└──────────────┘
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Jitter Attenuating Clocks
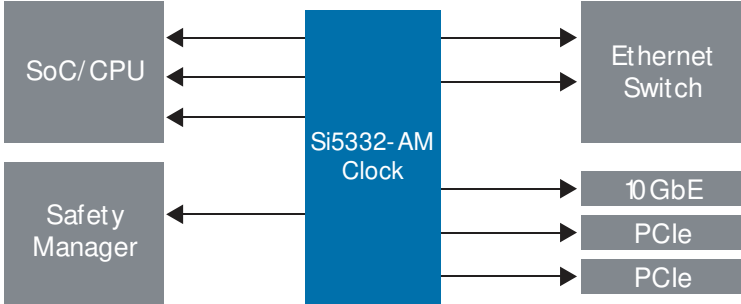
2   '
generators for Wireless, Wireline , and Data Center equipment. Leveraging Skyworks' proven DSPLL®and

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jitter, and provide any combination of output frequencies, including JESDB2024B/C support. Skyworks offers an

m ; n
packet optical transport and Ethernet designs.

Logic Device/
ToD/Processor

ADCs

DACs

AEC-Q100 Automotive Grade Timing Products

Skyworks offers a comprehensive portfolio of automotive grade 2 timing solutions, providing system designers with solutions that simplify clock tree design, add redundancy, reduce system points of failure, increase system reliability and optimize the performance of high-speed serial data transfer in automotive infotainment, advanced driver assistance systems (ADAS), Lidar/radar sensors and automated driving ECU platforms.

SoC/CPU	→ Si5332-AM Clock ←	Ethernet Switch
Safety Manager		10 GbE / PCIe / PCIe