

BROADCOM SWITCH/PHY REFERENCE DESIGNS

- BCM 56640
- BCM 56440 / 56441 / 56442 / 56443
- BCM 56445 / 56448
- BCM 88650
- BCM 88030
- BCM 56842 / 56844 / 56846
- BCM 56850

IDT SYNCHRONOUS ETHERNET SOLUTIONS

The IDT **8V89307 + 8V89308** clocking solution uniquely complements Broadcom Switch/PHY SyncE designs. The IDT 8V89307 + 8V89308 clocking solution fully supports the requirements laid out in ITU-T G.8262 for synchronous Ethernet Equipment Clocks and it meets the stringent phase noise requirements of 10GE/40GE SyncE applications.

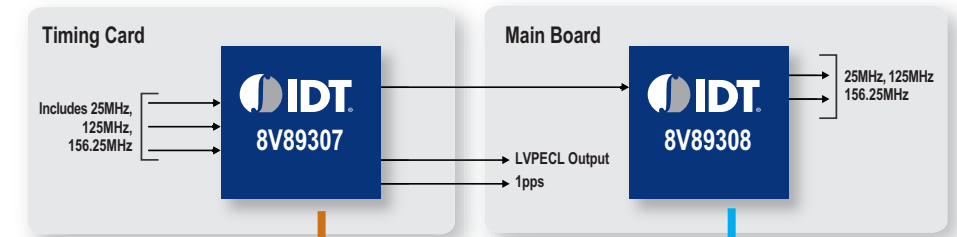
IDT provides the performance, design expertise, reliability and delivery necessary to achieve design success.

IDT SOLUTION FOR BCM 56640

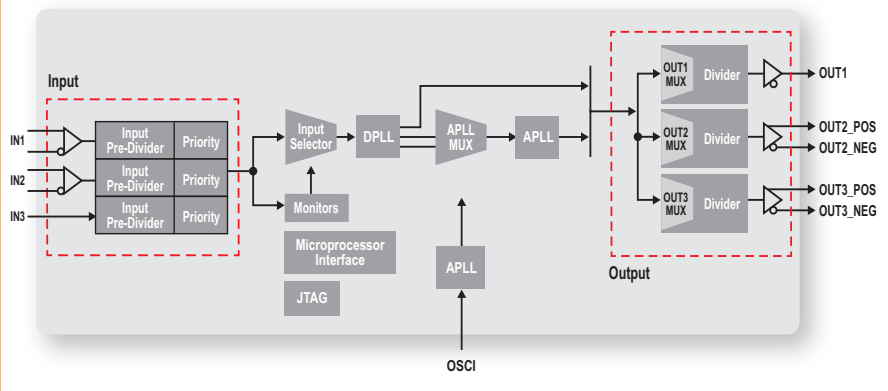
8V89307 + 8V89308

- Input frequencies: 10MHz – 156.25MHz
- Output frequencies: 1pps, 25MHz, 125MHz, 156.25MHz
- RMS jitter: <0.3ps
- Aligns outputs to reference input phase with offset control
- Automatic hitless switching with less than 0.61ns transient
- Automatic switching between free-run, locked, holdover
- I²C or SPI interface control
- IEEE 1149.1 JTAG Boundary Scan

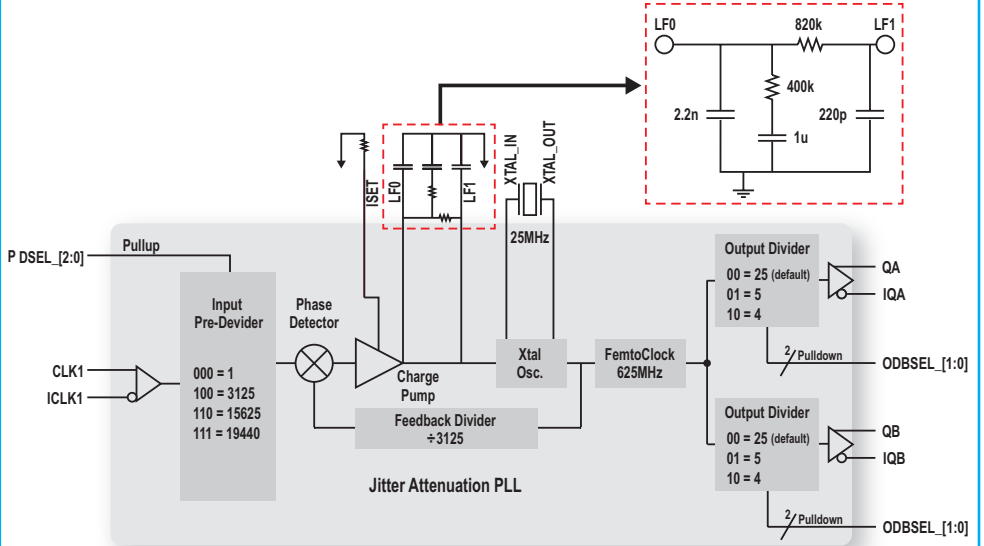
IDT SOLUTION FOR BCM 56640



8V89307 BLOCK DIAGRAM



8V89308 BLOCK DIAGRAM



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IDT SYNCHRONOUS ETHERNET SOLUTIONS

The IDT 8V89307 is a flexible clocking solution that fully supports the requirements laid out in ITU-T G.8262 for synchronous Ethernet Equipment Clocks and it meets the tight phase noise requirements of Broadcom Switch/PHY 1GE applications. No other external components are needed to achieve 1GE requirements.

IDT has a wide portfolio of fanout buffers to complement different design requirements to fanout multiple copies of the clock.

IDT has long been a leader in wireline market space. IDT has a complete portfolio of T1/E1/J1 products such as Line Interface Units (LIU), transceivers and framers. To support TDM in this reference design, designers can choose from T1/E1 LIU in different number of port counts that can support long- and short-haul, and also short-haul only applications.

IDT SOLUTION FOR BCM 56440 / 56441 / 56442 / 56443

8V89307

- Input frequencies: 10MHz – 156.25MHz
- Output frequencies: 1pps, 25MHz, 125MHz, 156.25MHz
- 8V89307 will meet Broadcom requirements without jitter attenuator for 1GE applications

BUFFERS

8S89831I

- 1:4 Differential-to-LVPECL Fanout Buffer

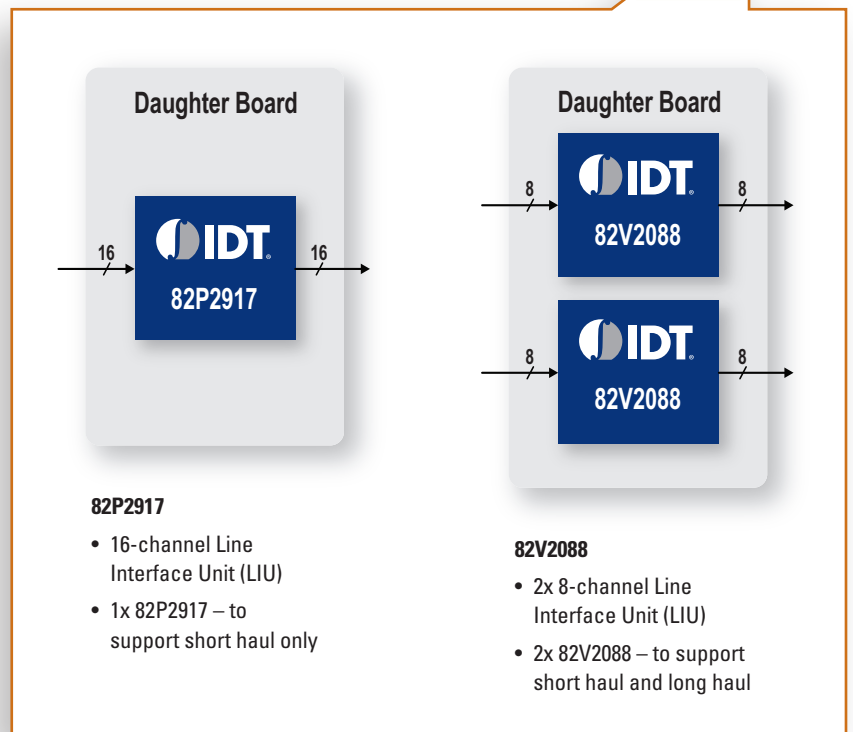
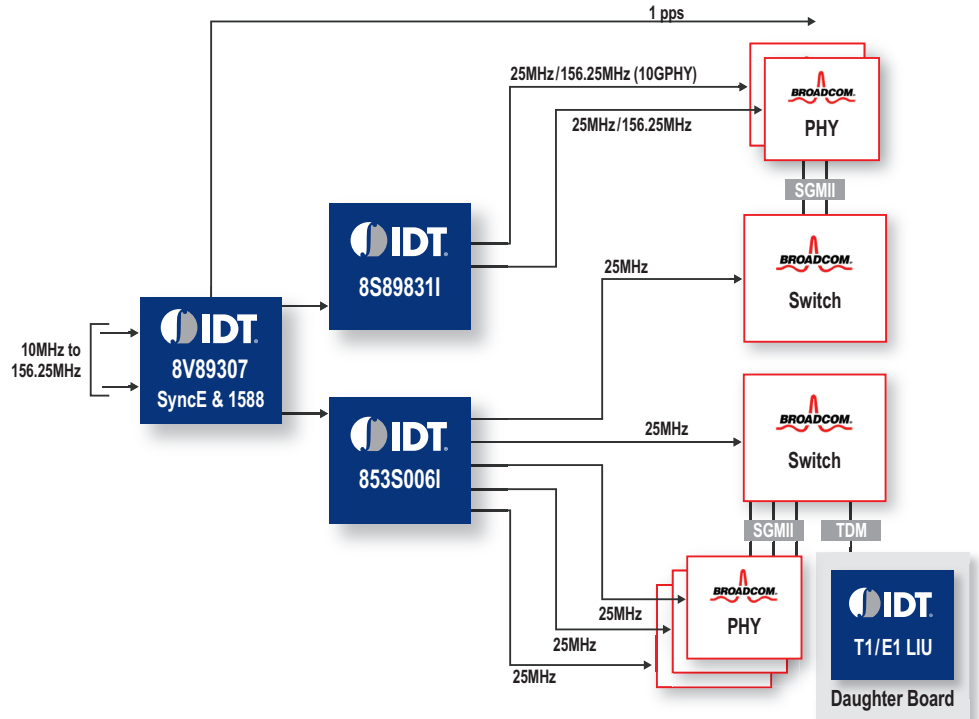
853S006I

- 1:6 Differential to LVPECL Fanout buffer

Based on individual design requirements

For a complete selection of IDT Buffers, visit idt.com/go/clocks

IDT SOLUTION FOR BCM 56440 / 56441 / 56442 / 56443



82P2917

- 16-channel Line Interface Unit (LIU)
- 1x 82P2917 – to support short haul only

82V2088

- 2x 8-channel Line Interface Unit (LIU)
- 2x 82V2088 – to support short haul and long haul