HOLT INC.
INTEGRATED CIRCUITS
23351 Madero,
Mission Viejo.
CA 92691. USA.
Tel: + 1 949 859 8800
Fax: + 1 949 859 9643
Email: sales@holtic.com
Web: www.holtic.com

HI-8596
3.3V ARINC Line Driver Demonstration Board

1. INTRODUCTION

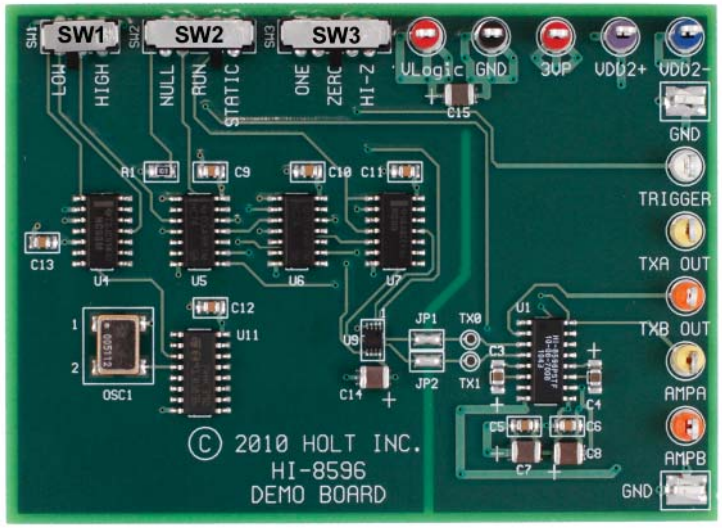
The **HI-8596 Demonstration Board** allows the user to evaluate the different modes of operation of the HI-8596 ARINC 429 line driver.

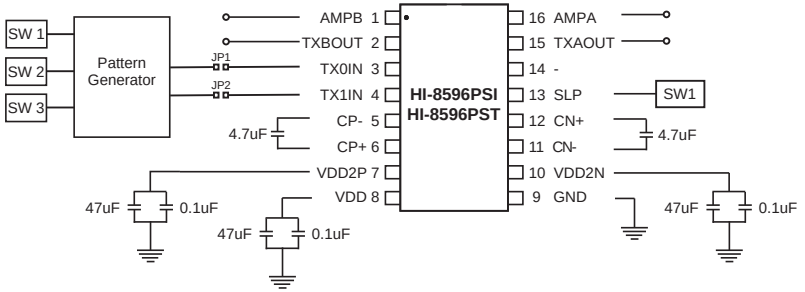
The HI-8596 includes a dual polarity voltage doubler, allowing it to operate from a single +3.3V supply using four external capacitors. The part also features high-impedance outputs (tri-state) when both data inputs are taken high, allowing multiple line drivers to be connected to a common bus.

2. DEMONSTRATION BOARD

The demonstration board can generate patterns that drive the HI-8596 in various different ways through a set of 3 switches. The table below describes how to generate signals in high or low speed, in static states of ARINC 429 One, Zero or Null or to hold the outputs in tri-state. With only a single +3.3V source the HI-8596 will generate the rail voltages which are used to produce ARINC 429 specified signals.

The HI-8596 Demonstration Board has test points to measure the +/-VDD2 generated supplies, the TXA/B outputs, along with the alternative AMPA/B outputs and a trigger signal for oscilloscope viewing. If an alternative input source to the TX0/TX1 pins is desired, jumpers 1 and 2 can be opened from the available pattern generator and a user designed generator may bypass that on the Demonstration Board.





Value	Part Number	Manufacturer
0.1µF	C0805C104M5UACTU	Kemet
47µF	EMK325B7476MM-T	Taiyo Yuden
4.7µF	LMK212B7475KG-T	Taiyo Yuden

ESR: Fly cap < 0.5Ω; Hold cap < 0.25Ω.
Material: Ceramic or Tantalum, preferably multilayer. No polarized capacitors.
Dielectric: XR7
Rated voltage: ≥ 10V

Switch 1	Switch 2	Switch 3	Tx Outputs	Slope
High	Run	X	Dynamic high speed (see below)	1.5µs
Low	Run	X	Dynamic low speed	10µs
X	Null	X	TXA = 0V, TXB = 0V	n/a
X	Static	One	TXA = +5V, TXB = -5V	n/a
X	Static	Zero	TXA = -5V, TXB = +5V	n/a
X	Static	Hi-Z	TXA = TXB = Hi-Z	n/a