



Linear Microsystems, Inc.
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LM101

MIL-STD-1553 Transceiver ASIC

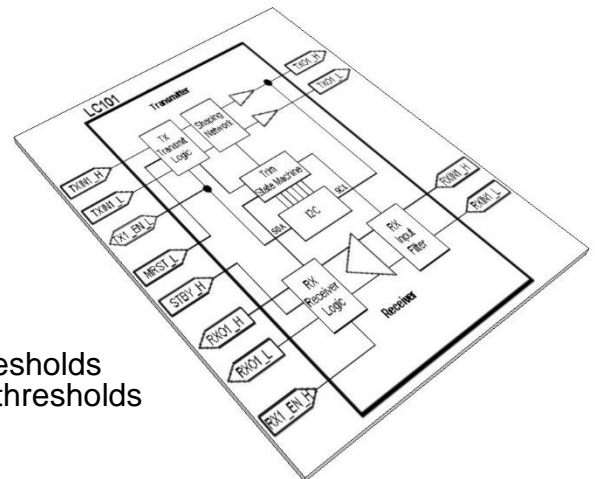
Introduction

The LMI101 single channel transceiver is compliant with 1553/1760 bus transceivers specifications. The receiver converts 1553 Manchester encoded bi-phase data to complementary Rx and RX_L TTL (3.3V or 5V) digital outputs. The 1553 databus transceiver also provides receiver enable input. The transmitter converts TTL (3.3V or 5V) data to analog bi-phase Manchester data. The 1553 databus transceiver also provides a transmitter enable input. An external coupling transformer is used to provide the proper analog signals levels to the 1553 bus or stub.

The transceiver also contains a master reset (transmitter logic) and a standby (receiver standby state) selection input pin. In addition, the transceiver has programmable receive and transmit characteristics. There are 2 modes of programming: one which allows the user to experiment with settings and the other that allows the settings to be permanently set. This facilitates a learn and burn methodology which is supported by "in system customization" (ISC). This feature is extremely beneficial for matching transmitter and receiver characteristics to variable field conditions and for best in class performance.

Features:

- Single Supply 5V or 3.3V
- Output Driver Withstands Short Circuit Fault
- Outstanding Thermal Impedance Characteristics
- Superior Noise Performance
- Programmable receiver filter
- Programmable receiver FTP (filter output test point) thresholds
- Programmable receiver input comparator low and high thresholds
- Programmable transmit dynamic offset
- Programmable transmit rise time and compensation
- Readback of programmed settings (pre-trim)
- 2.4 mm x 3.1 mm Die Size



Applications:

- Military and Commercial Avionics
- Military and Civilian spacecraft on board data handling
- (OBDH) Industrial Control Communications
- Automotive Communications



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Pin Table:

NAME	DIR	ACTIVE	DESCRIPTION
STBY_H	IN, Pullup	High	Receive Logic Standby
MRST_L	IN, Pullup	Low	Reset transmitter logic
RXEN_H	IN, Pullup	High	Receiver enable input high
RXO_H	OUT	High	Receiver output high, Manchester II
RXO_L	OUT	Low	Receiver output low, Manchester II
RXIN_H	IN	High	Receiver input high, Manchester II
RXIN_L	IN	Low	Receiver input low, Manchester II
TXO_H	OUT	High	Transmitter output high, Manchester II
TXO_L	OUT	Low	Transmitter output low, Manchester II
TXIN_H	IN, Pullup	High	Transmitter input high, Manchester II
TXIN_L	IN, Pullup	Low	Transmitter input low, Manchester II
TXENA_L	BIDI	Low	Transmitter Enable
VDD	-	-	3.3V or 5V power supply input
VSS	-	-	Ground

Ordering Information:

Ordering Part Number	Package	Minimum Quantity
LM-101-WP	Dies in Waffle Pack	100