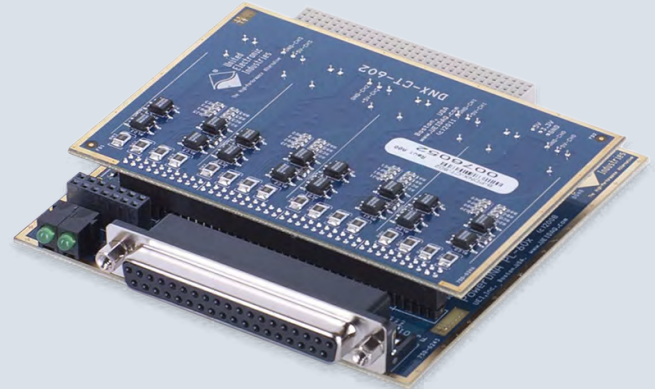


DNx-SL-514

SSI (Synchronous Serial Interface) board

- DNA-SL-514 for use with “Cube” chassis
- DNR-SL-514 for use with RACKtangle™ I/O chassis
- DNF-SL-514 for use with FLATrack I/O chassis
- Industry standard SSI master or slave functionality
- Clock rates up to 1.25 MHz (Master) or 625 kHz (slave)
- 4 independent channels
- 350 Vrms channel-to-channel & channel-to-chassis isolation
- Fully differential inputs/outputs at RS-422 logic levels



The DNx-SL-514 provides 4 channels of industry standard SSI interface (DNA-SL-514 shown)

GENERAL DESCRIPTION

The DNA/DNR/DNF-SL-514 are high performance SSI (Synchronous Serial Interface) boards for UEI’s Cube, RACKtangle™ and FLATRACK™ I/O chassis respectively. The DNA/DNR/DNF versions are electrically identical and provide four independent RS-422/485 compatible channels, each having over voltage protection and opto-isolation. The 4 channels can be

independently configured. Rx/Tx termination resistors may be enabled or disabled via the API. The board supports standard SSI master or slave functionality as shown in the timing diagram to the right. “tv”, “tp”, and “tm” as shown in the diagram are user programmable via the SL-514’s API. Each input word may be timestamped.

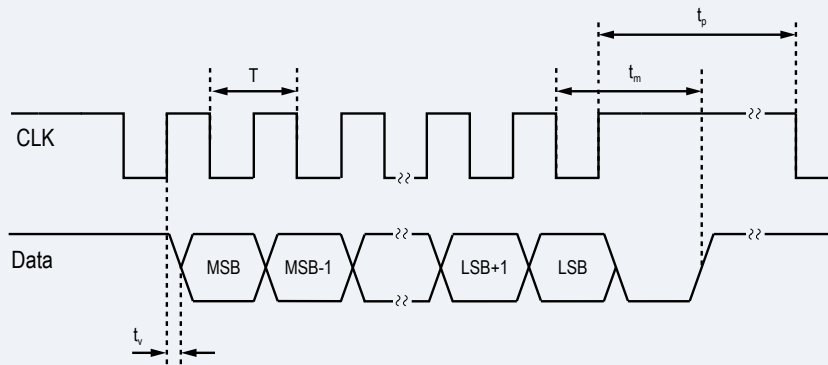
Software included with the DNx-SL-514 provides a comprehensive yet easy to use API supporting all popular Windows programming languages as well as programmers using Linux and most real-time operating systems including QNX, RTX, VXworks and more.

TECHNICAL SPECIFICATIONS

DNx-SL-514

SSI Ports	
Baud Rate	Up to 1.25 Mbaud as SSI master; up to 625 kbaud in slave mode
Baud Rates available	User selectable 0.1% accuracy or better
Data word length	3–128 bits
FIFO (on each channel)	Input: 2048 word, output: 1024 word
General Specifications	
Protection	7 kV ESD, 350 V isolation
Input high/low voltage	RS-422/485 compatible
Output high/low voltage	RS-422/485 compatible
RS-422/485 termination resistors	Software selectable
Electrical Isolation	350 Vrms, channel-channel and channel-chassis
Input/output buffer chip	LTC1687 or equivalent
Power consumption	< 3W
Operating range	Tested -40 to +85 °C
Humidity range	0–5%, noncondensing
Vibration	
(IEC 60068-2-6)	5 g, 10–500 Hz, 5 g, sinusoidal
(IEC 60068-2-64)	5 g (rms), 10-500 Hz, broad-band random
Shock	
(IEC 60068-2-27)	100 g, 3 ms half sine, 18 shocks @ 6 orientations
	30 g, 11 ms half sine, 18 shocks @ 6 orientations
MTBF	350,000 hours

SSI TIMING DIAGRAM

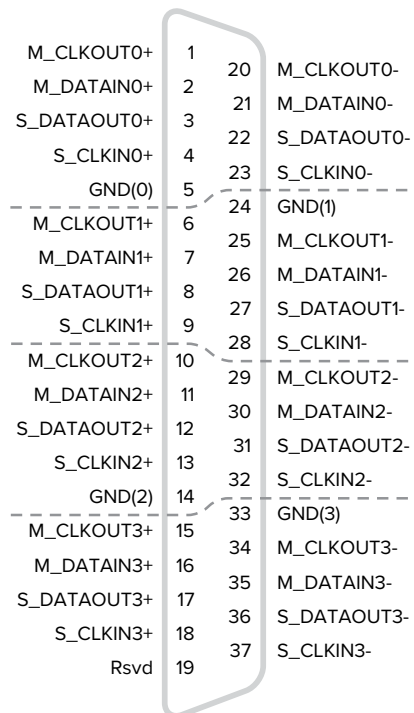


Note: data is latched on the falling edge of the CLK signal

PINOUT DIAGRAM

DB-37 (female)

37-pin connector:



CONNECTION OPTIONS

Part Number	Terminal Panel	Description
DNA-CBL-37	DNA-STP-37	DNA-CBL-37 3 foot ribbon cable connects directly to the DNA-STP-37 Screw Terminal Panel.
DNA-CBL-37S	DNA-STP-37	DNA-CBL-37S 3 foot shielded cable connects directly to the DNA-STP-37 Screw Terminal Panel.

Part Number	Description
DNx-SL-514	SSI (Synchronous Serial Interface) board
Extended Warranty	Option to purchase UEI's extended 10 year warranty is available