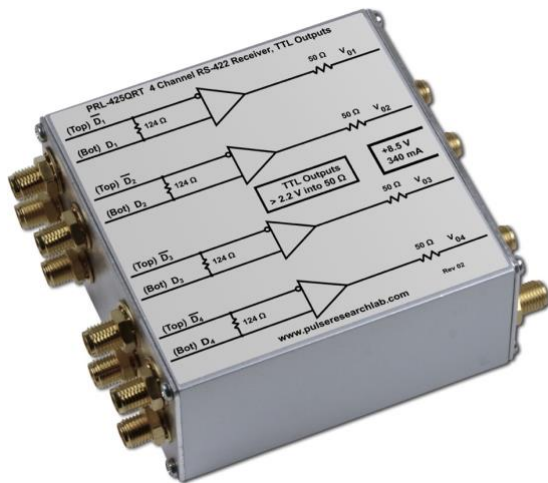


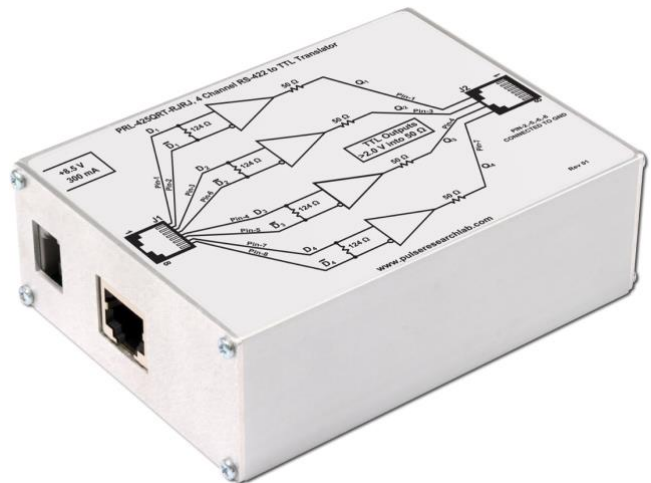
PRL-425QRT, 4-CHANNEL RS-422 DIFFERENTIAL RECEIVER, 50 Ω TTL LINE DRIVER OUTPUTS



**PRL-425QRT-SMA, 4-Channel RS-422 Receiver,
50 Ω TTL Outputs, SMA I/Os**

APPLICATIONS

- Differential RS-422 to TTL Logic Level Translation
- Conversion of Differential Signals Transmitted through Long Lines to Single-Ended TTL Signals
- Mini Modular Instruments for interfacing with High Speed Data Communications Equipment



**PRL-425QRT-RJRJ, 4-Channel RS-422 Receiver,
50 Ω TTL Outputs, RJ45 I/Os**

FEATURES

- 75 MHz Typical Maximum Clock Rate
- Floating 124 Ω Differential Inputs Accept RS-422 or source-biased LVPECL Signals
- 4 Single-Ended 50 Ω Back-Terminated TTL Outputs Deliver 2.5V into 50 Ω or 5 V into Hi-Z typical
- SMA or RJ45 I/O Connectors
- Single Supply, +7.5 VDC to +12.0 VDC Operation
- Ready-to-Use 1.3 x 2.9 x 2.9-in. or 3.9-in Module Includes a ± 8.5 V/1.8 A AC/DC Adaptor

DESCRIPTION

The PRL-425QRT is a four channel, RS422 receiver with single-ended 50 Ω TTL output line drivers. It is intended for converting differential signals transmitted through long lines into single-ended TTL outputs. The floating 124 Ω inputs are designed to be compatible with RS-422 or TTL differential input signals. They can also accept source-biased LVPECL inputs. The 50 Ω back-terminated TTL output line drivers can drive long lines with or without terminations, and they are designed specifically for use with high speed data communications applications. A functional block diagram of this device is shown in Fig. 1.

A feature of the RS422 receiver chip in the PRL-425QRT is a “fail safe” state that sets the output logic Hi (TTL True) if the inputs are at the same voltage, which occurs if the inputs are left to float open or if they are shorted to GND. If this is undesired in your application, please consider the [PRL-425T, 2 Ch. Universal Differential Receiver with TTL Outputs](#).

Each PRL-425QRT is supplied with a ± 8.5 V/1.8 A AC/DC Adaptor, but it can also operate from a single positive power supply in the range of 7.5 V to 12.0 V. The PRL-425QRT-SMA has SMA I/Os and is housed in a 1.3 x 2.9 x 2.9-in. extruded aluminum enclosure, while the PRL-425QRT-RJRJ has RJ45 I/Os and a length of 3.9-in. Available accessories include TTL fanout modules, voltage distribution modules and brackets for mounting multiple units.

*SPECIFICATIONS (0° C ≤ T_A ≤ 35°C)

Unless otherwise specified, dynamic measurements are made with all outputs terminated into 50 Ω

SYMBOL	PARAMETER	Min	Typ	Max	UNIT	Comment
R _{inD}	Differential Input Resistance		124		Ω	
R _{inC}	Common Mode Input Resistance		5K		Ω	
I _{DC1}	DC Input Current @ 50MHz		265	280	mA	
I _{DC2}	DC Input Current @ 80MHz		340	360		
V _{DC}	DC Input Voltage	7.5	8.5	12.0	V	
V _{AC}	AC/DC Adapter Input Voltage	103	115	127	V	
V _{OHNL}	Output Hi Level, No Load	4.4	5.0		V	
V _{OHFL}	Output Hi Level, Full load	2.2	2.5		V	
V _{OLNL}	Output Lo Level, No Load	-0.1	0.0	0.4	V	
V _{OLFL}	Output Lo Level, Full Load	-0.05	0.0	0.2	V	
t _{PLH}	Propagation Delay to output ↑		2.2		ns	
t _{PHL}	Propagation Delay to output ↓		2.2		ns	
t _r /t _f	Rise/Fall Times		1.8	2.5	ns	
f _{max}	Max Clock Frequency	70	75		MHz	-SMA version
t _{SKEW1}	Skew between outputs		250	600	ps	
DTY	Positive Duty Cycle @ 50MHz		55		%	
VCM	Input Common Mode Voltage	-2.5		5	V	
	Size		1.3 x 2.9 x 2.9		in.	-SMA version
	Size		1.3 x 2.9 x 3.9		in.	-RJRJ version
	Weight		7		Oz	

