

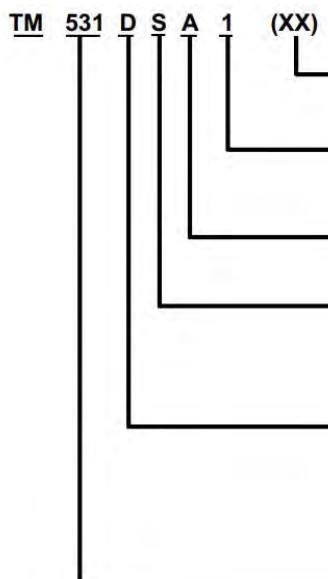
# COPPERHEAD SERIES FIBRE CHANNEL TRANSCEIVER

Line Interface Module



- High Performance, low-cost alternative to completeley-fiber systems.
- Compact, small package saves PCB footprint.
- Equalizer and transformers isolation provides long distance applications, better transient protection, and common mode rejection.
- Low transmit / receive jitter.
- Low Power dissipation; 500mW Maximum

Transmitter		Vcc : + 3.13 V to 3.47 V				
Parameter		SYM	MIN	Typical	MAX	UNIT
Power Supply Current (Transmitter + Receiver)	Icc	—	—	90	110	mA
Input Data Voltage Low	VIL	1.35	—	—	1.88	V
Input Data Voltage High	VIH	2.07	—	—	2.58	V
Differential Input Data Voltage	VIN	150	800	1200	—	mV P-P
Input High Voltage Common Range (Differential)	VIHCMR	2	—	—	3.3	V
Transmitter Output Impedance (Diff)	Ztx-Diff	100	150	—	—	Ohms
Output Differential signal level (p-p)	VO	1000	1250	1600	—	mV
Data Rate (NRZ)	DR	—	266	—	—	Mb/s
Total P-P transmit jitter	TJ	—	500	900	—	ps
Output rise-fall time (20%-80%)	TRO	—	—	—	500	ps
Receiver		Vcc : + 3.13 V to 3.47 V				
Input logic swing(Differential)	VIN	150	—	1200	—	mV
Differential Output Data Voltage	VO	423	—	1175	—	mV P-P
OutputCommon-Mode Voltage	VOCMR	1.75	1.93	2.05	—	V
Data Rate (NRZ)	DR	—	266	—	—	Mb/s
Total P-P transmit jitter	TJ	—	1000	2000	—	ps



Custom product designator

blank - No transmit driver

1 - 1100 mV output transmit driver and military temperature range  
2 - 1100 mV output transmit driver and industrial temperature range

5 - Active cable equalizer circuit

A - 5.00 Volt

B - 3.30 Volt

S - Impedance matched for STP and twinax (150 ohm)

U - Impedance matched for unshielded twisted pair (100 ohm)

V - Impedance matched for video and mini-coax (75 ohm)

C - Impedance matched for coax (50 ohm)

D - Gull wing DIP 28-pin package: 0.800" L x 0.400" W x 0.200" H

F - Gull wing flat pack 28-pin package: 0.760" L x 0.610" W x 0.125" H

H - Gull wing half DIP 16-pin package: 0.300" L x 0.500" W x 0.250" H

(16-pin package is only available on passive units.)

133 - 132.8125 Mbaud version 1/8 speed Fibre Channel/ATM

266 - 265.625 Mbaud version 1/4 Speed Fibre Channel

531 - 531.25 Mbaud version 1/2 Speed Fibre Channel

1062 - 1.0625 Gbaud version Full Speed Fibre Channel

1250 - 1.250 Gbaud version, Gigabit Ethernet (both short haul and long haul)

1485 - 1.485 Gbaud version, SMPTE

## Ordering Information - Part No.



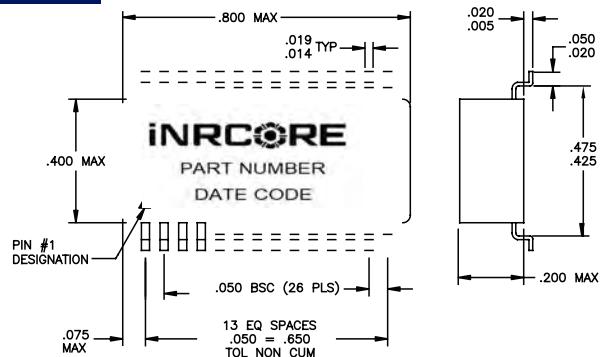
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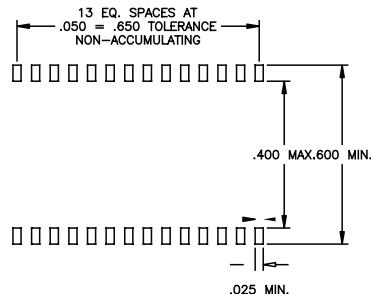
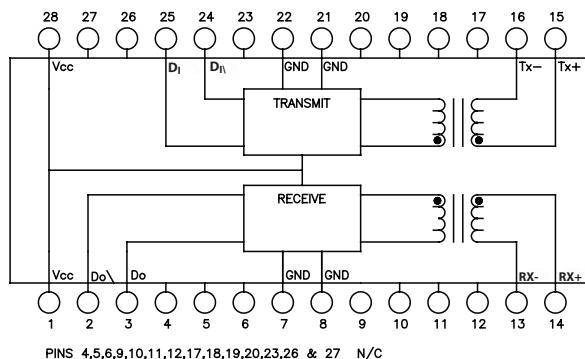
**INRCORE**

## Mechanical

### SAMPLE SPECS



## Electrical Schematic



Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are:  $\pm \frac{.010}{.025}$

### Pin number(s)

- 1, 28 ..... The positive supply for the line interface module. Connect to +3.3V for LVPECL applications.
- 2, 3 ..... D O\, D O : Differential LVPECL data outputs. These outputs can drive 50 ohm loads connected to V CC – 2.0V. Recommend 150 ohms to Gnd.
- 7, 8 ..... Gnd (V EE ) : The negative supply for the line interface module. Connect to Gnd for LVPECL applications.
- 13, 14 ..... R X -, R X + : Transformer coupled differential inputs to receiver section. For coax applications, R X - should be connected to shield of cable/earth Gnd; R X + should be connected to the center conductor. Earth Gnd should be AC coupled to DC signal Gnd using a 0.027  $\mu$ F capacitor, ~500V.
- 15, 16 ..... T X + , T X - : Transformer coupled differential outputs to cable. For coax applications, T X - should be connected to shield of cable/earth Gnd; T X + should be connected to the center conductor. Earth Gnd should be AC coupled to DC signal Gnd using a 0.027  $\mu$ F capacitor, 500V.
- 21, 22 ..... Gnd (V EE ) : The negative supply for the line interface module. Connect to Gnd for LVPECL applications.
- 24, 25 ..... D \, D I : Differential LVPECL compatible data inputs to the transmitter side of the module.
- 4, 5, 6, 9, 10, 11, 12, 17, . These pins are "no connect;" do not apply Gnd, VCC, or signal lines to these pins.
- 18, 19, 20, 23, 26, 27

