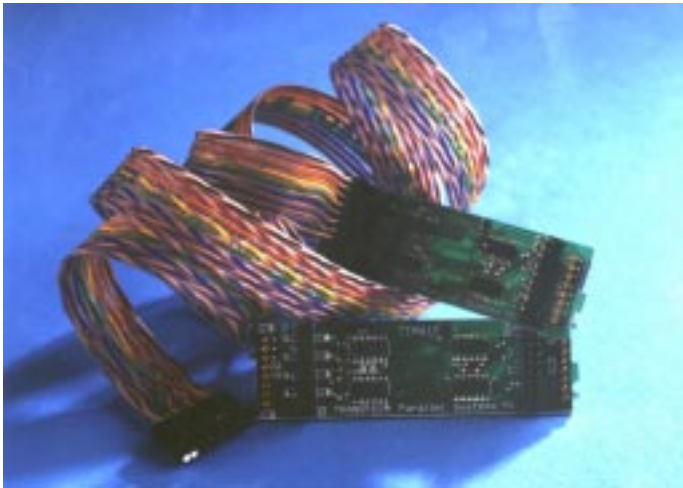


TTM415



The TTM415 Differential Interface Buffer TRAM allows connections between transputer systems which are not in the same electrical environment. No common ground between the two systems is required, reducing earthing problems. Cable lengths up to 10m can be operated at the full 20Mbps/s link speed. Longer cables up to 100m can be used at lower link speeds.

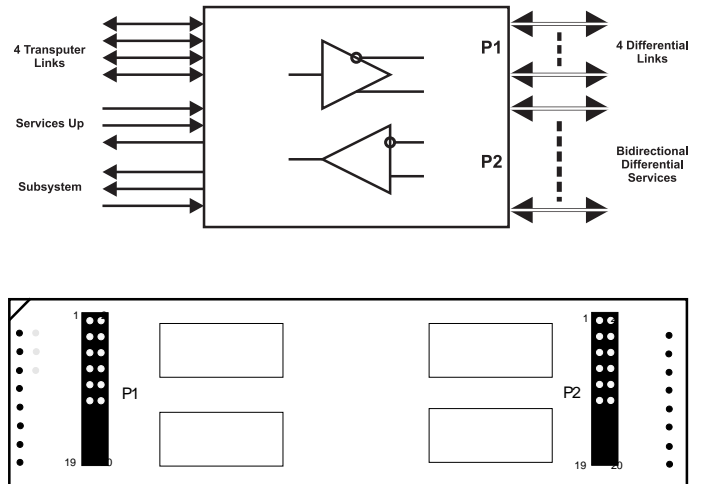
The TTM415 contains only differential drivers & receivers and associated signal conditioning components. This allows correct link behavior to be maintained with no software changes needed. Alternative buffering techniques that decode the link packets and forward them using a different coding technique require software modifications because more than one byte may be in transit at any one time.

Two 20-pin connectors, labelled P1 and P2, carry the RS422 differential signals from the top face of the TRAM. These are standard 0.025inch square post gold pin headers with two rows of ten pins on 0.1inch centers. P1 carries the link signals, P2 carries the system control signals.

The TTM415 is designed for use with twisted-pair cables with a characteristic impedance of 100Ω. Cables longer than 10m may not operate reliably at 20Mbps/second. Transtech recommends that unshielded twisted pair cable be used. To comply with FCC and EU EMC regulations, these cables should only be used within a shielded enclosure.

For normal operation between two TTM415s the following cable wiring details should be followed. The recommended cable type is Amphenol Spectrastrip, part #1352802-316.

Differential Link TRAM



- ❖ **Direct replacement for IMSB415-0 and IMSB415-1**
- ❖ **20Mbit/sec link operation**
- ❖ **Size 1 TRAM**

P1		P2	
Pin	Signal Name	Pin	Signal Name
1	Link0Out-	1	DownReset-
2	Link0Out+	2	DownReset+
3	Link0In-	3	DownError-
4	Link0In+	4	DownError+
5	Link1Out-	5	DownAnalyse-
6	Link1Out+	6	DownAnalyse+
7	Link1In-	7	UpReset-
8	Link1In+	8	UpReset+
9	Link2Out-	9	UpError-
10	Link2Out+	10	UpError+
11	Link2In-	11	UpAnalyse-
12	Link2In+	12	UpAnalyse+
13	Link3Out-	13	NC
14	Link3Out+	14	NC
15	Link3In-	15	NC
16	Link3In+	16	NC
17	Cut Short	17	NC
18	NC	18	NC
19	Cut Short	19	Cut Short
20	NC	20	Cut Short

ORDERING INFORMATION

TTM415-0	Single TTM415 TRAM
TTM415-1	Pair of TTM415 TRAMs plus 1 meter cables