

LACP (Link Aggregation Control Protocol) allows multiple individual Ethernet links to be aggregated together so they act similarly to a single link.

LACP is typically used for two purposes;

- Bundling two or more circuits together to give increased throughput and a level of "load balancing" for when the speed of individual Ethernet lines is limited.
- Links in a LACP aggregation provide an automatic fallback should a link fail, providing enhanced resilience. All traffic is routed from the failed link to the remaining links.

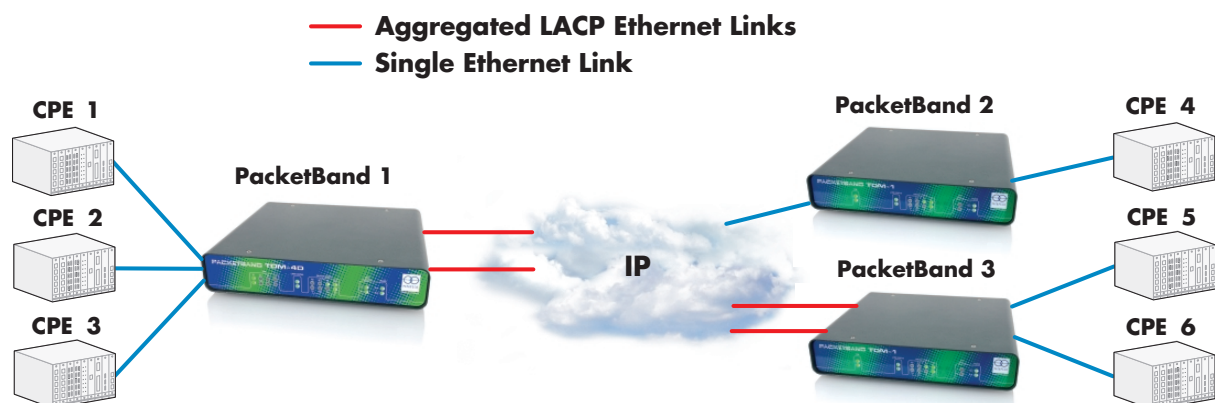
## Necessary Requirements

For LACP to operate correctly, the following is required:

- LACP will only operate point-to-point between two partner devices connected together, for example PacketBand and an Ethernet switch.
- Both partners in the link must support LACP.
- The link between partners must be Full-Duplex.
- The partners must be running at the same speed (10BT, 100BT, 1000BT).

## Application

An aggregated link will allow communication between the devices in the system without any alteration necessary to the source or destination devices. LACP will follow a set of rules for determining how communication is managed across the aggregated link.



By way of a simplified example, PacketBand 1 and PacketBand 3 and their local IP network switches have two 100M physical Ethernet links between them which are aggregated using LACP. All traffic between CPE 2 and CPE 5 go via one link on each PacketBand and the traffic between CPE 3 and CPE 6 goes down the other.

PacketBands 2 does not support LACP. Traffic from CPE 1 goes via one of PacketBand's links to CPE 4.

This is all done automatically.

If either link to PacketBand 1 should fail, traffic can automatically be switched from the failed link to the remaining link. The use of all remote links remains the same. When the failed link recovers, the communications are re-balanced between the two physical links to maximize the available bandwidth. Again this is automatically handled by PacketBand and the network, adding a high level of automatic resilience.

For more information, please contact your supplier or [Patapsco](http://Patapsco).