

## COASTAL MARINE OBSERVATORIES - DIFFERENT SOLUTIONS FOR A LINK BETWEEN OCEAN AND SHORE

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Argos link (satellite) <http://www.argos-system.org>

Global coverage, tracking and monitoring system, polar orbiting satellites, relatively low bandwidth (approx. from few kilobits/day to few kilobits/second), cost for an intensive use.

Iridium link (satellite) <http://www.iridium.com>

Global coverage, 66 satellites in low-Earth orbit (LEO), relatively low bandwidth (approx. few kilobits/second), and cost for an intensive use.

3G/4G networks

For onshore or coastal applications, uplink speed is usually lower than downlink, bandwidth is not guaranteed, ISPs usually provide data plans with a monthly data usage limit.

Private wireless radio link

Private link, high bandwidth, guaranteed bandwidth, unlimited data usage, limited distance and restricted coverage.

Private telecom marine cable

Certainly the best solution for a permanent observatory (virtually unlimited data + power) but very expensive.

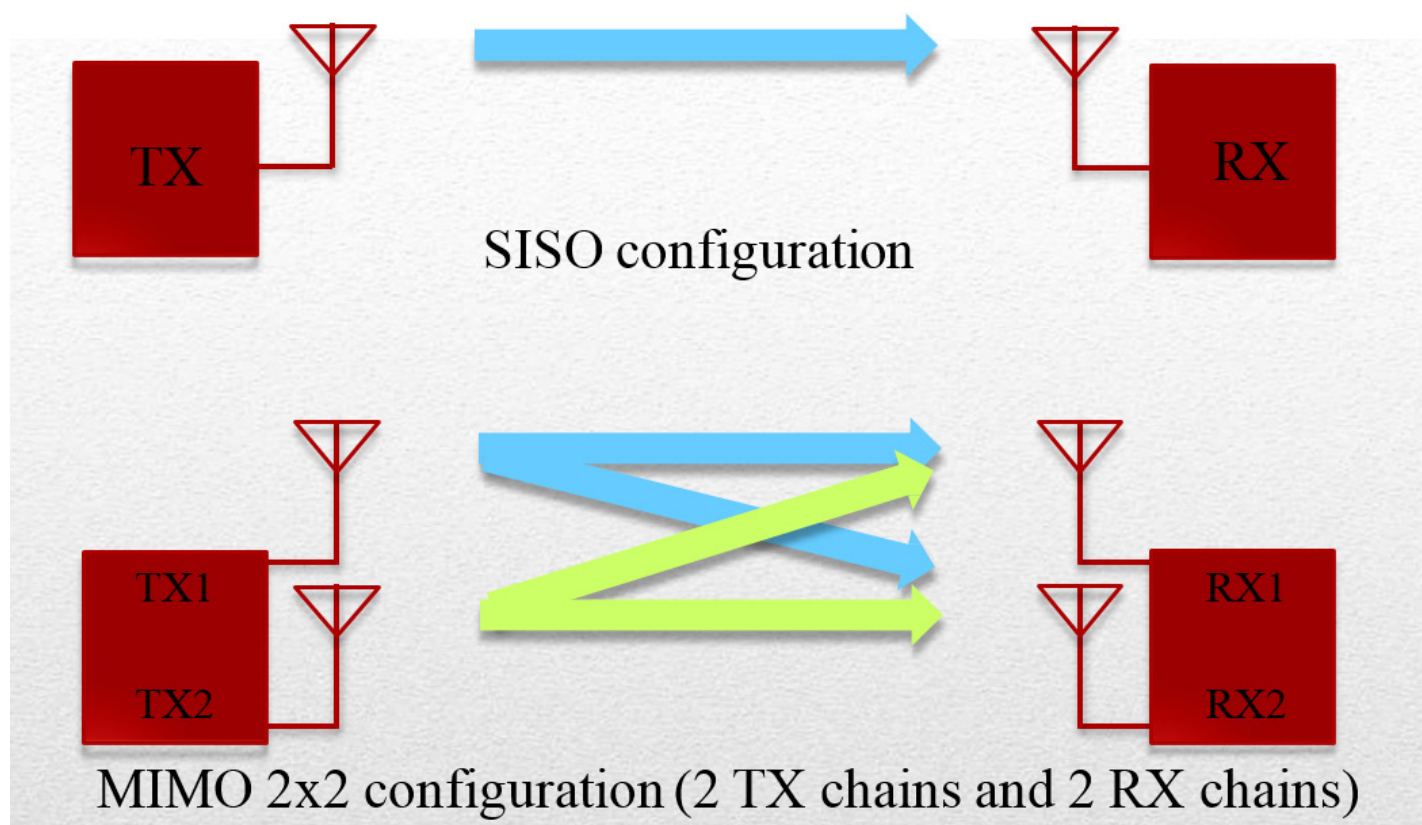


Figure 1 SISO vs. MIMO