ADD-ON MODULE

Locomarine

SAT LOAD BALANCER

SERIES 6

The easiest way to stay online.

SAT Load Balancer is an Add-on Module for Yacht Router Pro. Using advanced Load Balancing algorithm device will dynamically allocate users Internet traffic too all connected satellite Internet systems. Device can work with up to 7 satellite systems of any type (e.g. Starlink, OneWeb, VSAT, FleetBroadband etc.) Load Balancer can be connected to Yacht Router Pro s6 via 10 GbE SFP+ or 1 GbE Ethernet connection. It will also work with network system from other brands.

LAN, WAN, Backbone ports
Total number of Ethernet ports: 8
Ethernet WAN (SAT) ports: 7
Ethernet Load Balanced ports: 1
SFP+ Load Balanced ports: 1
Max. data rate on each Ethernet port: 1 Gbps
Max. data rate on each SFP+ port: 10 Gbps

Power, environment and dimensions
AC power supply input range: 110-240 V
Max. power consumption: 20 W
Operating temperature range: -10 to +50 °C
Operating humidity range: 5-95 % non-condensing
IP Protection: IP30
Dimension (WxDxH, without antennas): 483 x 328 x 45 mm

Ordering information
Network Expander Pro: SLB-S06

Load Balancing
Advanced algorithm for fast Internet.

Load balancing is the process of distributing network traffic across multiple SAT (WAN) Internet sources. This ensures no single satellite system bears too much trafic demand. By spreading the work evenly, load balancing improves application responsiveness. This results in speeding up performance and better user experience in general.
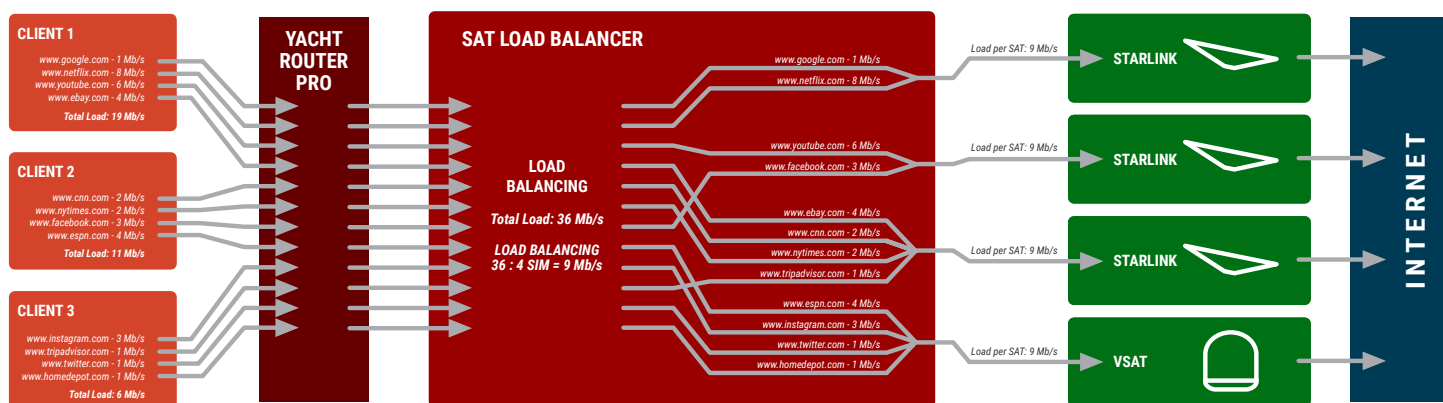
Load Balancing vs Network Bonding

Several router manufacturers have invested in Network Bonding solution. Network Bonding solutions take individual SAT (WAN) connections and combine them to form a single aggregated connection. Based on our experiences with network bonding, we at Locomarine decided for Load Balancing as a better solution. The reason is simple: Network Bonding is only as good as the worst performing satellite Internet source. For example, if you have four Starlink and one VSAT systems the Network Bonding will run at the speed of slowest Internet satellite source multiplied by number of satellite Internet systems. For example, if you have four Starlink system with 100 Mbps download bandwidth and one VSAT system with 25 Mbps, the maximum download bandwidth will be 4x 25 Mbps = 100 Mpbs. Moreover, as Network Bonding solution demands server system on the other side, it makes it more expensive than Load Balancing.

Benefit of Network bonding is that in very specific cases it is possible to achieve combined bandwidth for single download stream. However, if any of the satellite links is having any issues, whole system will slow down to match that speed. Additionally, the network architecture enforced by the need for a fixed network equipment that connects all separate connection from the boat massively increases network latencies.