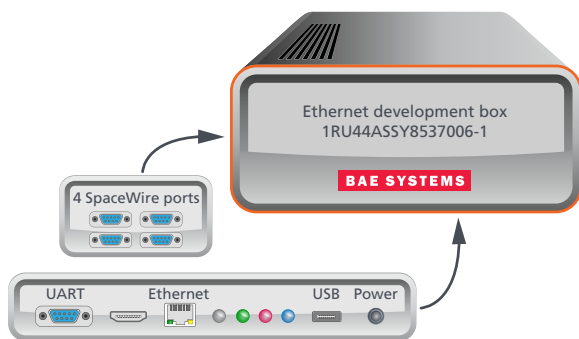


OrangeBox

First-generation Ethernet development box



The OrangeBox (OBx) is an Ethernet-to-SpaceWire (EtherWire) bi-directional interface unit used to connect IP-based networks and space systems.

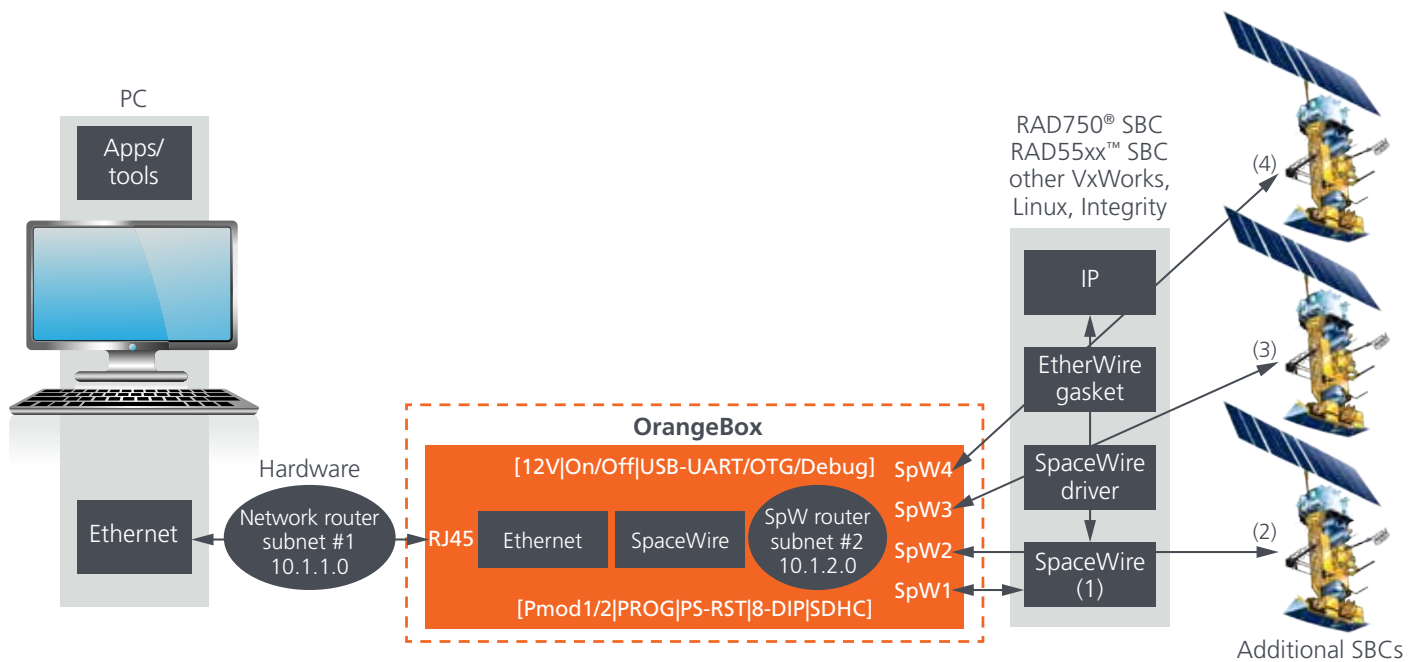
The OBx is a small, self-contained, and portable development companion for products that have SpaceWire connections. It eliminates the need for Ethernet ports on space hardware modules and boxes by utilizing common SpaceWire ports and networks for testing. The technology still appears to external test equipment as IP devices to leverage existing test software and applications.

Application

Using an OrangeBox (OBx) allows IP messages to move across a SpaceWire network (both internal and external to a unit under test). Messages are encapsulated for transport over SpaceWire, routed to the appropriate endpoint, and then converted to IP using an EtherWire gasket. A standard PC can now run any IP application on devices connected to the SpaceWire network. This includes programming and debugging RAD750[®] and RAD5545[™] single-board computers at Ethernet speeds without requiring an Ethernet port or interface on the unit under test.

Specifications

User connectors	12 volts power
	RJ45 Ethernet
	Four SpaceWire ports
Diagnostic connectors	USB OTG/UART/debug
	Two Digilent Pmod [™] headers
	Secure digital high capacity storage – bottom side
Switches and buttons	Eight digital image processing
	On/off
General specifications	Program/reset
	SpaceWire data rates to 100 Mbps
	120 volts to 12 volts power adapter included
	Ethernet/SpaceWire cables not included



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