# LAN9303 Ethernet switch driver

The LAN9303 is a three port 10/100 Mbps ethernet switch with integrated phys for the two external ethernet ports. The third port is an RMII/MII interface to a host master network interface (e.g. fixed link).

## Driver details

The driver is implemented as a DSA driver, see `Documentation/networking/dsa/dsa.rst`.

See `Documentation/devicetree/bindings/net/dsa/lan9303.txt` for device tree binding.

The LAN9303 can be managed both via MDIO and I2C, both supported by this driver.

At startup the driver configures the device to provide two separate network interfaces (which is the default state of a DSA device). Due to HW limitations, no HW MAC learning takes place in this mode.

When both user ports are joined to the same bridge, the normal HW MAC learning is enabled. This means that unicast traffic is forwarded in HW. Broadcast and multicast is flooded in HW. STP is also supported in this mode. The driver support fdb/mdb operations as well, meaning IGMP snooping is supported.

If one of the user ports leave the bridge, the ports goes back to the initial separated operation.

## Driver limitations

- Support for VLAN filtering is not implemented
- The HW does not support VLAN-specific fdb entries