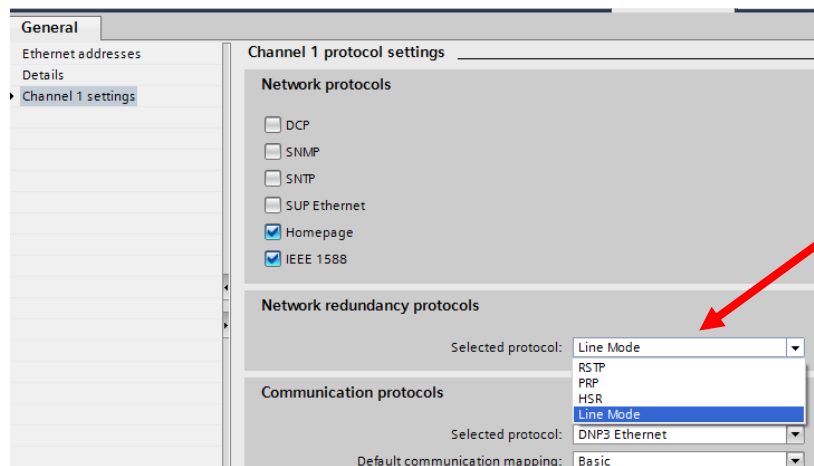


For SIPROTEC 5 relays, two Ethernet interfaces are available (in addition to the single built-in copper Port J)

- Copper (2 x RJ-45) [shown above left]
- Fibre (2 x Optical LC duplex 1300 nm interfaces) [shown above right]

**Do not assume these are fully independent ports!**

On each interface the CH1 & CH2 physical ports connect via a switch to the internal connection. The physical ports share IP address and MAC address etc. The behavior of the ports is defined by the interface setting mode selected.



**Figure 1. DIGSI 5 interface setting mode.**

Refer to the ‘SIPROTEC 5 Communication Protocol Manual’ for detailed information on settings and functions. With DIGSI 5, the terminology “Line Mode” is used to refer to what is known as “Dual Homing”.



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The port arrangement allows for star or ring connection of relays, and as can be seen in **Figure 1** multiple protocols can be used on the port.

In “**Line Mode**” one port (e.g. CH1) of the module is normally connected to an Ethernet switch. The network traffic addressed for the relay runs over this point-to-point connection. If the second port (e.g. CH2) is connected to another switch, the module will switch over to the second connection if a connection failure is detected on CH1. This is called Dual standby mode. Both ports are NOT working at the same time. The network traffic is running over one port, while the other port is supervised for its connection.

Siemens “SIPROTEC 5 Application Note SIP5-APN-006 Multiple communication options” provides an introduction to some of the possible options. The “Protocol Manual” provides detailed information on the other operating modes (**Rapid Spanning Tree Protocol, Parallel Redundancy Protocol & High Availability Seamless Redundancy Protocol**).