

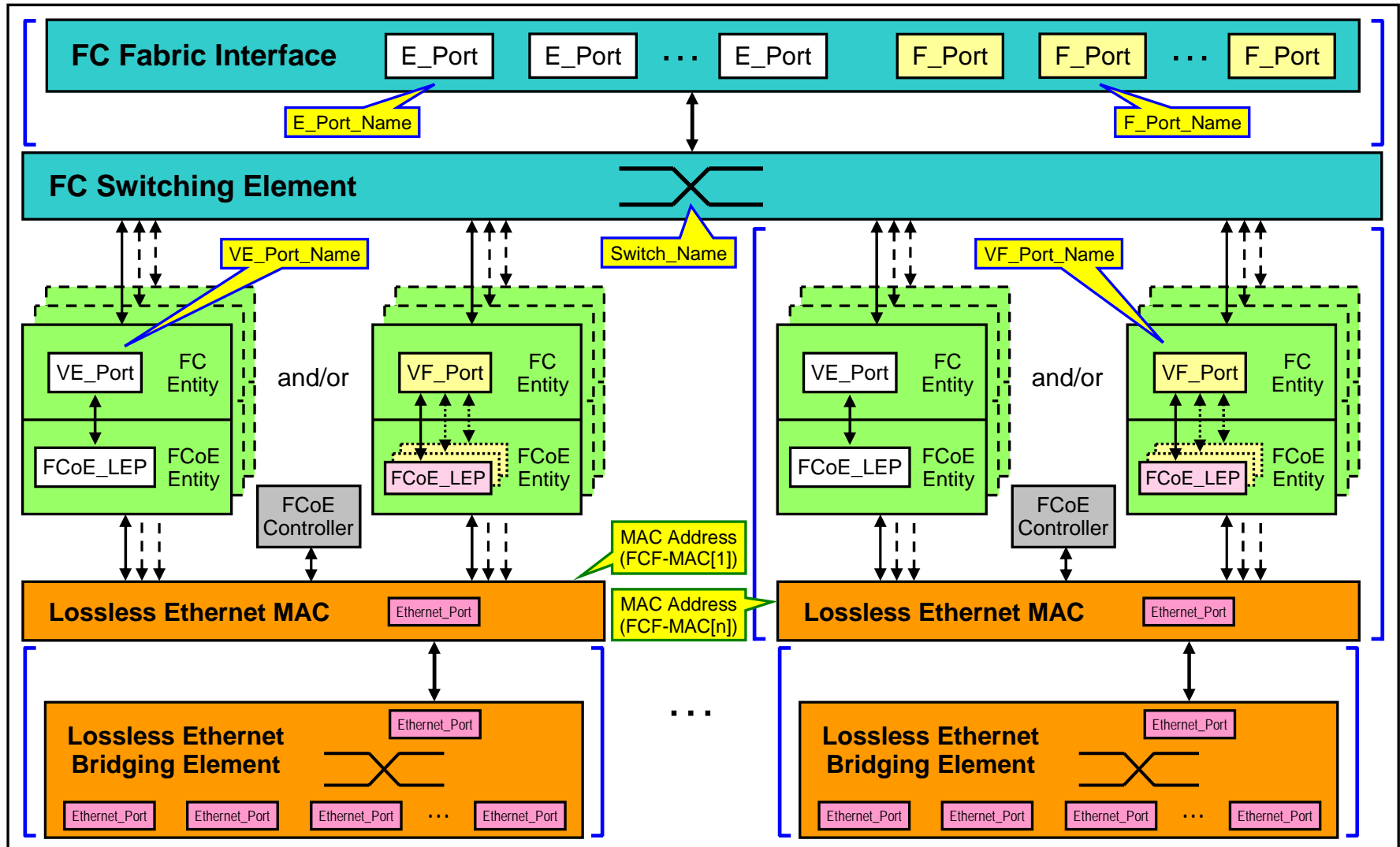
# FC-BB-5 FCoE Models

**T11/07-560v1, October 2007**

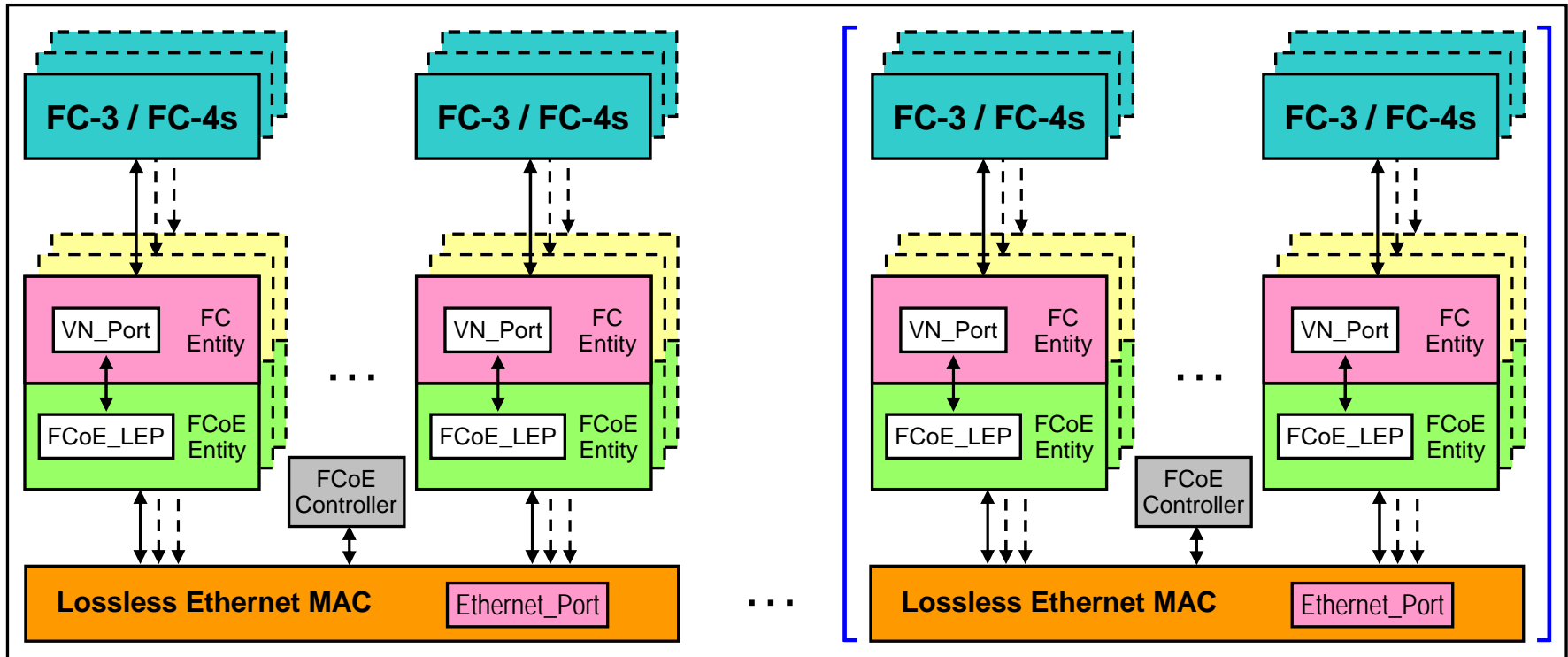
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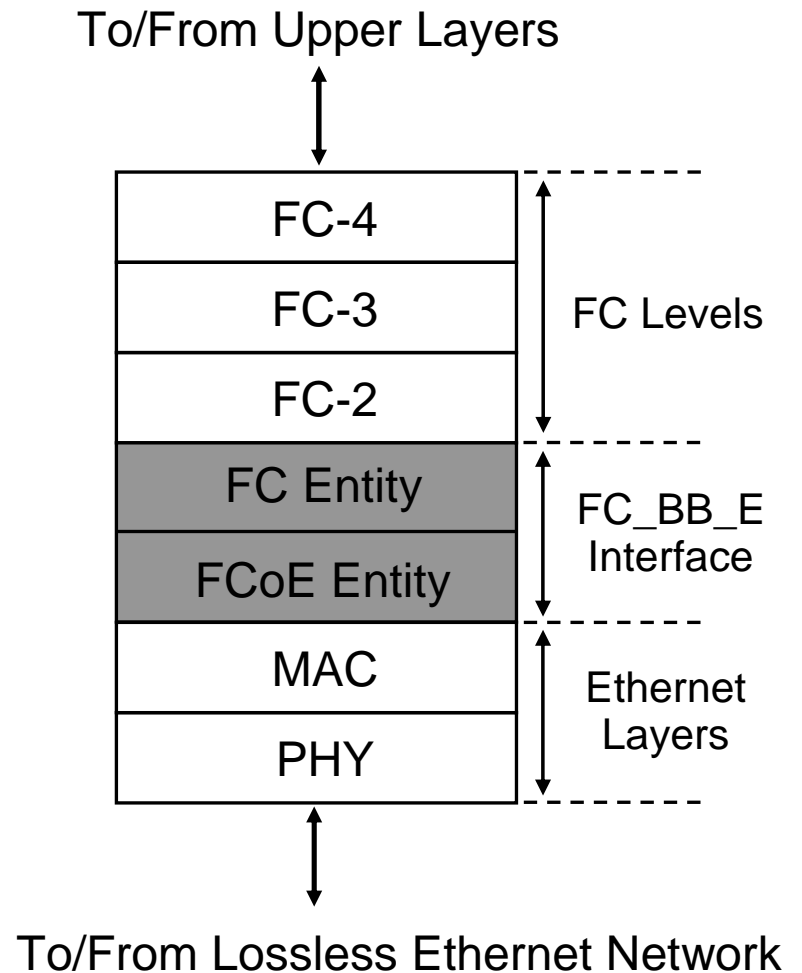
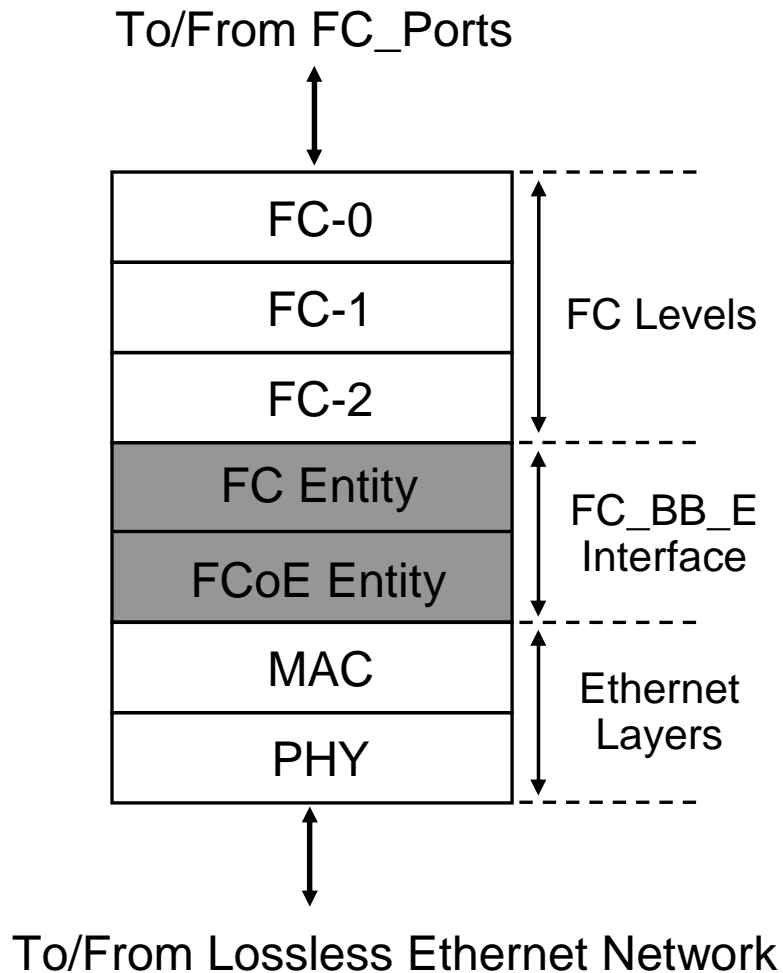
# FCoE VE\_Port/VF\_Port Functional Model



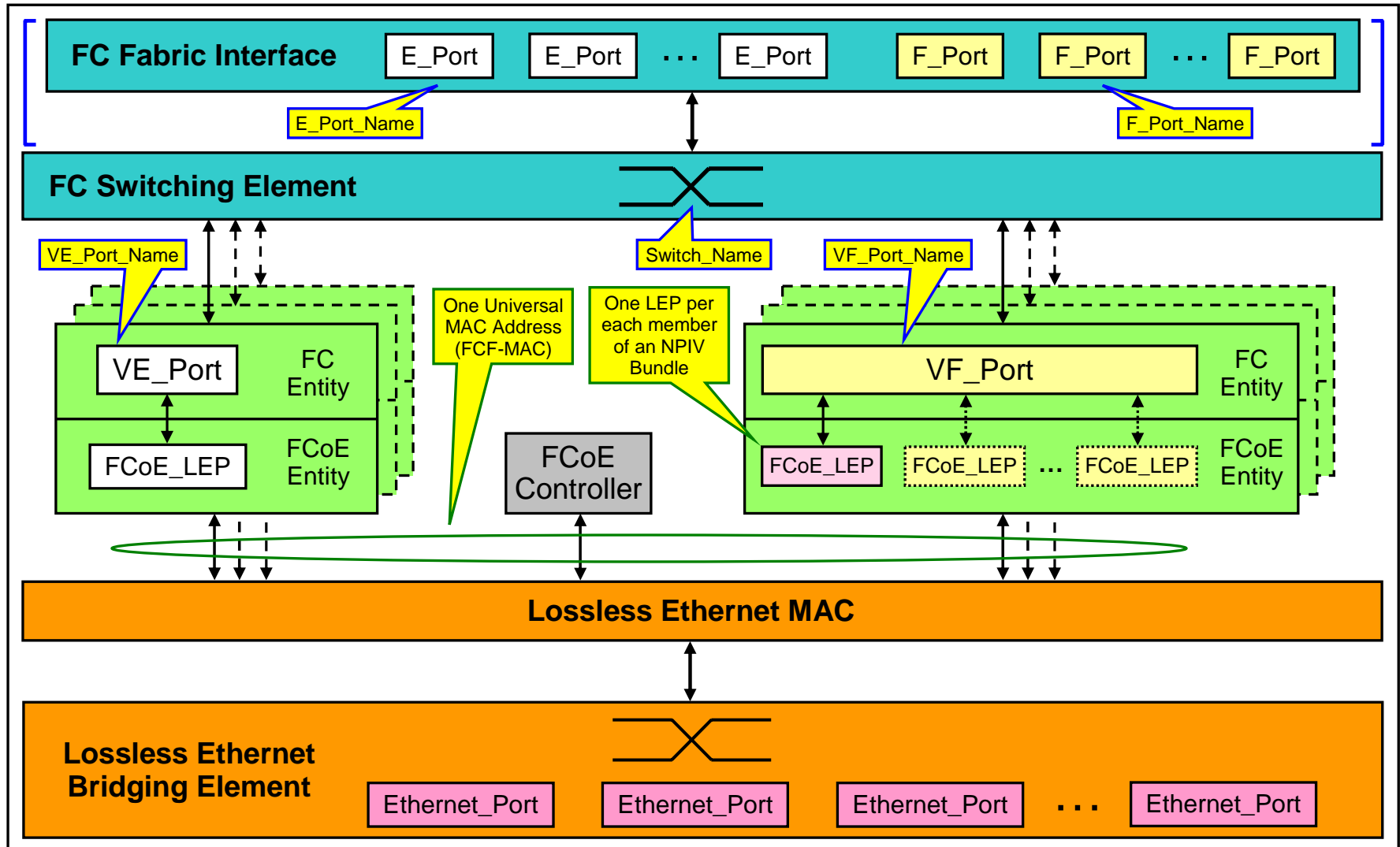
# FCoE VN\_Port/ENode Functional Model



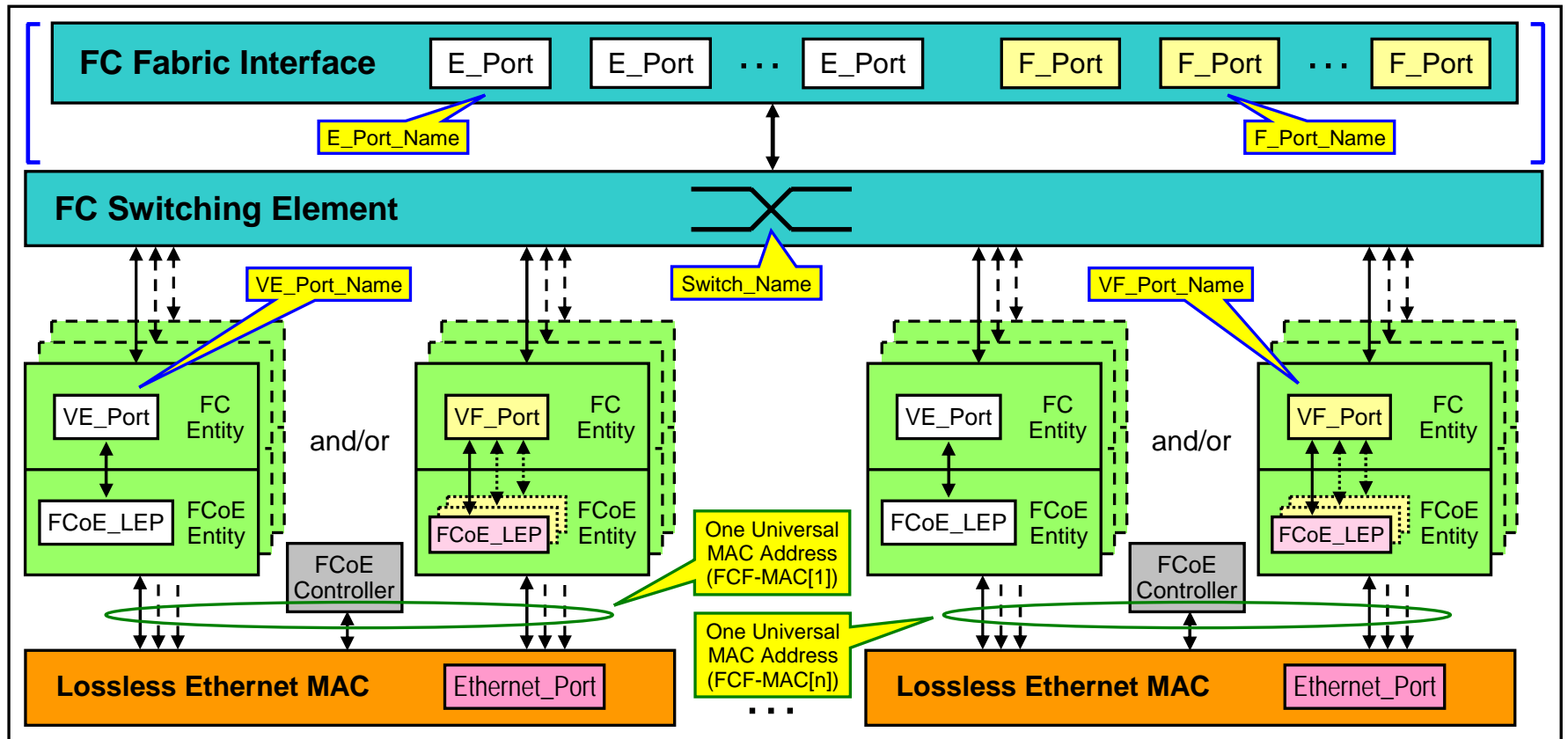
# FC\_BB\_E Protocol Layers



# FCoE VE\_Port/VF\_Port Functional Model (Implementation Example #1)



# FCoE VE\_Port/VF\_Port Functional Model (Implementation Example #2)



# FCoE Definitions (1)

- **Virtual E\_Port (VE\_Port):** The data forwarding component of an FC Entity that emulates an E\_Port and is dynamically instantiated on successful completion of an ELP Exchange. The term virtual indicates the use of a non Fibre Channel link connecting the VE\_Ports.
- **Virtual F\_Port (VF\_Port):** The data forwarding component of an FC Entity that emulates an F\_Port and is dynamically instantiated on successful completion of an FLOGI Exchange. The term virtual indicates the use of a non Fibre Channel link connecting a VF\_Port with a VN\_Port.
- **Virtual N\_Port (VN\_Port):** The data forwarding component of an FC Entity that emulates an N\_Port and is dynamically instantiated on successful completion of an FLOGI or FDISC Exchange. The term virtual indicates the use of a non Fibre Channel link connecting a VN\_Port to a VF\_Port.
- **Virtual Link:** The logical link connecting two FCoE\_LEPs over a Lossless Ethernet network and is identified by the pair of MAC addresses of the two link end-points.
- **FC Entity:** The interface between an FC Switching Element or an FC stack and the FCoE Entity. Each FC Entity contains a single instance of either a VE\_Port, a VF\_Port, or a VN\_Port.
- **FCoE Entity:** The interface between the FC Entity and a Lossless Ethernet MAC. Each FCoE Entity contains one or more FCoE\_LEPs.
- **FCoE Link Endpoint (FCoE\_LEP):** The data forwarding component of an FCoE Entity that handles FC frame encapsulation/decapsulation, and transmission/reception of encapsulated frames through a single Virtual Link.

# FCoE Definitions (2)

- **VE\_Port\_Name:** The Name\_Identifier of a VE\_Port.
- **VF\_Port\_Name:** The Name\_Identifier of a VF\_Port.
- **VN\_Port\_Name:** The Name\_Identifier of a VN\_Port.
- **Lossless Ethernet MAC:** A full duplex Ethernet MAC supporting at least 2.5KB jumbo frames and implementing extensions to avoid Ethernet frame loss due to congestion (e.g., the Pause mechanism, see IEEE 802.3-2005).
- **Lossless Ethernet Bridging Element:** An Ethernet bridging function supporting the minimum required capabilities of Lossless Ethernet MACs.
- **Lossless Ethernet network:** An Ethernet network composed only of full duplex links, Lossless Ethernet MACs, and Lossless Ethernet Bridging Elements.
- **FCoE Controller:** A functional entity, coupled with a Lossless Ethernet MAC, instantiating new VE\_Ports, VF\_Ports, and VN\_Ports, and/or creating new FCoE\_LEPs.
- **FCoE Forwarder (FCF):** A Fibre Channel Switching Element (see FC-SW-4) with one or more Lossless Ethernet MACs, each coupled with an FCoE Controller, and optionally one or more Lossless Ethernet bridging elements and optionally an FC Fabric interface. An FCF forwards FCoE frames addressed to one of its FCF-MACs based on the D\_ID of the encapsulated FC frames.
- **FCoE Node (ENode):** A Fibre Channel Node (see FC-FS-2) with one or more Lossless Ethernet MACs, each coupled with an FCoE Controller.

# Motion

- **To accept the model diagrams and definitions specified in this document as the FCoE model diagrams and definitions in FC-BB-5**