4.1.1. ROE overview:

Figure 1 shows the steps in transportation of CPRI frames over ethernet through ROE protocol. CPRI mapping layer maps CPRI frames to/from ROE layer based on the mode - tunnel, structure aware or structure agnostic. ROE packets are assembled/disassembled with control, data and timing information which are then encapsulated/decapsulated by ethernet layer and transmitted/received electrically or optically as ethernet frames.
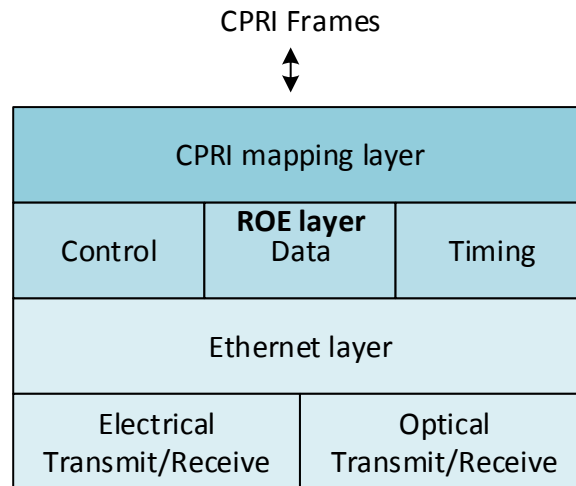
CPRI Frames

CPRI mapping layer		
Control	**ROE layer** Data	Timing
Ethernet layer		
Electrical Transmit/Receive	Optical Transmit/Receive	

Figure 1 : CPRI Frames transported by ROE

Figure 2 shows the steps in mapping IQ data natively over ethernet through ROE. IQ samples are assembled/disassembled by ROE layer as ROE packets with data, control and timing information which are then encapsulated/decapsulated by ethernet layer and eventually transmitted/received electrically or optically as ethernet frames.
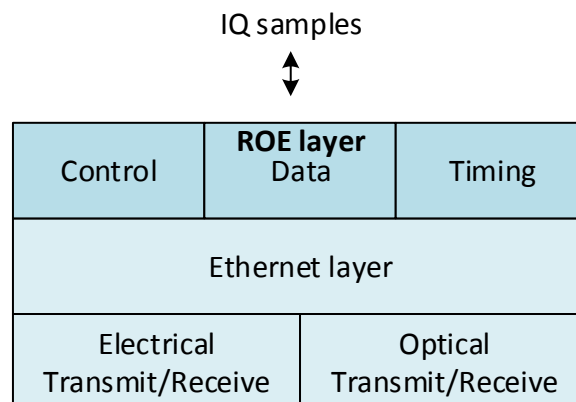
IQ samples

Control	**ROE layer** Data	Timing
Ethernet layer		
Electrical Transmit/Receive	Optical Transmit/Receive	

Figure 2 : Native ROE