



Intel[®] Ethernet Controller X710/ XXV710/XL710

Dynamic Device Personalization eCPRI

Ethernet Networking Division (ND)

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Revision 1.2



Revision History

Document Revision	Date	Comments
1.0	May 2020	Initial release (Intel Public).
1.1	July 2020	Updated Table 2.
1.2	January 2021	Updated Table 2.



1.0 Introduction

This document describes the Dynamic Device Personalization (DDP) functionality supported by the Intel® Ethernet Controller X710/XXV710/XL710 starting with firmware version 6.01.

The eCPRI DDP profile (0x80000013) contains the X710/XXV710/XL710 parser graph for eCPRI over Ethernet and IPv4/UDP protocols. This classification offload is required for fronthaul to enable filtering of data packets based on their unique subtype like Timing packets, PUSCH and PRACH packets.

Table 1. Terms and Definitions

Term	Definition
DDP	Dynamic device personalization.
eCPRI	Enhanced Common Public Radio Interface
IPv4	Internet Protocol, version 4.
UDP	User Datagram Protocol

Table 2. Version History

Version	Description
1.0.0.0	Initial version
1.1.0.1	Current eCPRI parser graph for the X710/XXV710/XL710



Table 4. eCPRI Packet Field Vector

There are no changes to field vector contents, as no eCPRI fields are extracted.

Note: DPDK (up to release 17.11) forces flexible payload to the first 16 bytes of the payload and overrides the outer destination IP address. Starting from DPDK 18.02, the flexible payload is extracted only if enabled by the flow director configuration.

Table 5. Packet Classifier Types

PCTYPE	PCTYPE Description
8	eCPRI MsgType2 SectType0
9	eCPRI MsgType2 SectType1
10	eCPRI MsgType2 SectType3
11	eCPRI MsgType2 SectType5
12	eCPRI MsgType2 SectType6
13	eCPRI MsgType2 SectType7
16	eCPRI MsgType0
17	eCPRI MsgType2
18	eCPRI MsgType5;
25	eCPRI

Table 6. Packet Types

PTYPE	Description	PTYPE	Description
eCPRI over Ethernet		eCPRI over IP/UDP	
168	eCPRI PAY2	178	IPV4 UDP eCPRI PAY2
169	eCPRI MsgType0 PAY3	179	IPV4 UDP eCPRI MsgType0 PAY3
170	eCPRI MsgType2 PAY3	180	IPV4 UDP eCPRI MsgType2 PAY3
171	eCPRI MsgType2 SectType0 PAY4	181	IPV4 UDP eCPRI MsgType2 SectType0 PAY4
172	eCPRI MsgType2 SectType1 PAY4	182	IPV4 UDP eCPRI MsgType2 SectType1 PAY4
173	eCPRI MsgType2 SectType3 PAY4	183	IPV4 UDP eCPRI MsgType2 SectType3 PAY4
174	eCPRI MsgType2 SectType5 PAY4	184	IPV4 UDP eCPRI MsgType2 SectType5 PAY4
175	eCPRI MsgType2 SectType6 PAY4	185	IPV4 UDP eCPRI MsgType2 SectType6 PAY4
176	eCPRI MsgType2 SectType7 PAY4	186	IPV4 UDP eCPRI MsgType2 SectType7 PAY4
177	eCPRI MsgType5 PAY3	187	IPV4 UDP eCPRI MsgType5 PAY3

Note: When using this package, neither GRE nor tunneled NSH is supported.



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