

45. Management Data Input/Output (MDIO) Interface

We have an action item to provide a mechanism to copy the active profile to the offline profile. I would like to propose the following.

Create four variables in addition to US_CID and DS_CID; two for US and two for DS

US_PrflCpySetting this variable TRUE would cause the PHY to copy the currently active upstream profile variables (see Table xxx) to the offline copy. Once initiated this action continues to completion (i.e., it cannot be interrupted or aborted once initiated). R/W

US_CpyInPWhen this status variable is TRUE it indicates that a commanded profile copy initiated via the US_PrflCpy variable is currently in process. Note that while this variable is TRUE writes to all upstream profile variables shall be ignored and switching to the offline variable is prohibited.RO

DS_PrflCpySetting this variable TRUE would cause the PHY to copy the currently active downstream profile variables (see Table xxx) to the offline copy. Once initiated this action continues to completion (i.e., it cannot be interrupted or aborted once initiated). R/W

DS_CpyInPWhen this status variable is TRUE it indicates that a commanded profile copy initiated via the DS_PrflCpy variable is currently in process. Note that while this variable is TRUE writes to all downstream profile variables shall be ignored and switching to the offline variable is prohibited. RO

These variables, along with US_CID and DS_CID would be mapped to a single mdio register named Profile Control (we have a register open at 1910 that would be a good location).

Comments on this proposal are welcome.

45.2 MDIO Interface Registers

45.2.1 PMA/PMD registers

45.2.1.112 Placeholder

45.2.1.113 Profile Control (Register 1.1910)

The assignment of bits in the Profile Control register is shown in Table 45–71a. See {ref} for additional information on the profile copy functionality.

Table 45–71a—Profile Control register bit definitions

Bit(s)	Name	Description	R/W ^a
1.1910.15:2	Reserved	Value always 0, writes ignored	RO
1.1910.7:4	Reserved	Value always 0, writes ignored	RO
1.1910.3	DS Copy In Process	Indicates the currently active profile is being copied to the offline profile	RO

Table 45–71a—Profile Control register bit definitions (*continued*)

Bit(s)	Name	Description	R/W ^a
1.1910.2	DS Profile Copy	Causes the current active profile to be copied to the offline profile	R/W
1.1910.1:0	DS Configuration ID	Control switching the active profile	RO

^aR/W = Read/Write, RO = Read only

45.2.1.113.1 DS Copy In Process (1.1910.3)

When read as a one bit 1.1910.3 indicates that a copy of the currently active downstream profile to the inactive profile is in process. Note that while this variable has a value of one writes to all upstream profile variables shall be ignored and switching between profiles is prohibited.

45.2.1.113.2 DS Profile Copy (1.1910.2)

When bit 1.1910.2 is set to a one copy of the currently active downstream profile to the inactive profile is initiated. Once initiated this action continues to completion (i.e., it cannot be interrupted or aborted once initiated).

45.2.1.113.3 DS Configuration ID (1.1910.1:0)

Bits 1.1910.1:0 indicate the value of the most recently received downstream Configuration ID bits (see 102.2.3.1).

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101. Reconciliation Sublayer, Physical Coding Sublayer, and Physical Media Attachment for EPoC

101.1 PHY Link overview and architecture

101.2 Reconciliation Sublayer (RS) for EPoC

101.3 Physical Coding Sublayer (PCS) for EPoC

101.4 10GPASS-XR PMA

101.4.1 Overview

Inser new section as shown below.

101.4.1.1 OFDM Profile descriptors

In an OFDM link a large number of parameters must be set in order to ensure both ends of a link operate as intended. In EPoC this set of parameters is referred to as a profile. Table 101–1 lists the variables that are included in the upstream and downstream OFDM profiles.

Table 101–1—Profile variables

Downstream Profile	Upstream Profile

Two copies of every profile variable exist; an active copy and an inactive copy. During a profile switch (see 102.2.3.1) the network switches operation from the currently active profile to the inactive profile.

The currently active profile can be copied to the inactive profile via a profile copy. This is controlled via the *DS_PrflCpy* and *US_PrflCpy* variables. While the copy is in process, as indicated by the *DS_CpyInP* and *US_CpyInP* variables profile switches and profile writes shall be prohibited.

Subtend current section 101.4.2 PMA Service Interface to section 101.4.1 making it 101.4.1.2.

101.4.1.2 PMA Service Interface

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