Data Mode Scrambler Options
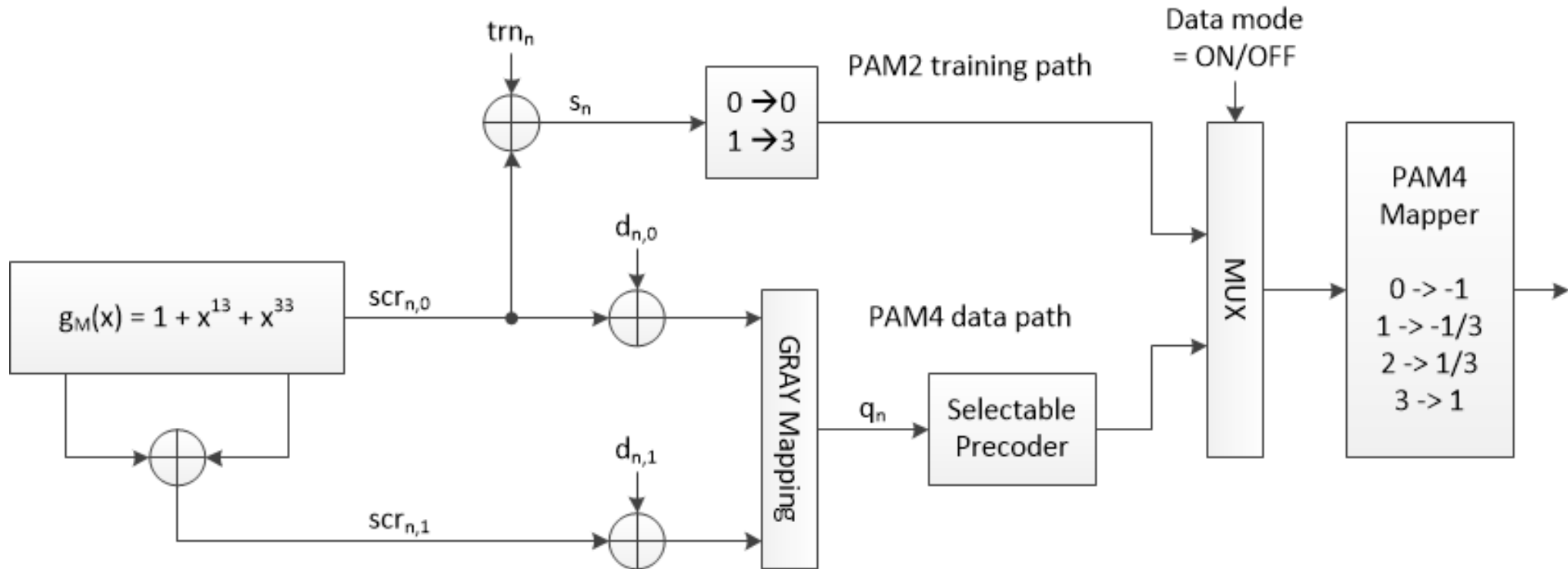
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Data Mode Scrambler Choices

- Side-stream scrambler

- Polynomial option 1
  - Degree 15 short polynomials as in 802.3bp
  - Not recommened due to insufficient periodic length

- Polynomial option 2
  - Same as Clause 55
  - Master $G_M(x) = 1 + x^{39} + x^{58}$
  - Slave $G_S(x) = 1 + x^{19} + x^{58}$
  - Exchange initial seed during PAM2 training (same as in 802.3bp)

- Polynomial option 3
  - Data mode use the same deg=33 scramblers during training, adding one extra bit
  - Similar to 1000BASE-T
  - More details next page

- Others ??

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Same Training Mode Polynomials for Data Mode

- PAM2 training scramblers continue to run into data mode
- Generate one extra bit for data mode PAM4, for example $scr_n[4] + scr_n[6]$
- No need to exchange scrambler seeds