



# 40GBASE-T Uncoded Bit Protection Merged Solution

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# Proposal

- ▶ **Merge ideas for Lo\_3bq\_01\_0514.pdf and Bliss\_3bq\_01\_0514.pdf improvement**
- ▶ **No CRC8**
- ▶ **No LDPC bits involved**
- ▶ **12 x 256/257-bit + 2 x 64/65-bit transcoding and aggregation**
- ▶ **Use 11 bits symbols - RS(140, 136, 2<sup>11</sup>)**
  - **Even more protection than 9-bit symbols**
  - **Maximize use of 45 available parity bits (4 x 11 bits = 44 bits) corrects 2 11-bit symbols**
  - **Odd number of parity symbols don't help with correction**

## Comparison of 11-bit vs other possible RS Codes

RS Code	information bits	pad bits transmitted	pad bits not transmitted	parity bits	total bits transmitted
RS(192, 187, 2 <sup>8</sup> )	1491	5	0	40	1536
RS(192, 188, 2 <sup>8</sup> )	1499	5	0	32	1536
RS(171, 166, 2 <sup>9</sup> )	1491	0	3	45	1536
RS(171, 167, 2 <sup>9</sup> )	1499	1	3	36	1536
RS(140, 136, 2 <sup>11</sup> )	1491	1	4	44	1536