

Known switching classes of APN functions in \mathbb{F}_{2^8}

No.	$F(x)$
1.1	x^3
1.2	x^9
1.3	$x^3 + \text{tr}(x^9)$
1.4	$x^9 + \text{tr}(x^3)$
1.5	$x^3 + w^{245}x^{33} + w^{183}x^{66} + w^{21}x^{144}$
1.6	$x^3 + w^{65}x^{18} + w^{120}x^{66} + w^{135}x^{144}$
1.7	$w^{188}x^{192} + w^{129}x^{144} + w^{172}x^{132} + w^{138}x^{129} + w^{74}x^{96} + w^{244}x^{72} + w^{22}x^{66} + w^{178}x^{48} + w^{150}x^{36} + w^{146}x^{33} + w^6x^{24} + w^{60}x^{18} + w^{80}x^{12} + w^{140}x^9 + w^{221}x^6 + w^{19}x^3$
1.8	$w^{37}x^{192} + w^{110}x^{144} + w^{40}x^{132} + w^{53}x^{129} + w^{239}x^{96} + w^{235}x^{72} + w^{126}x^{66} + w^{215}x^{48} + w^{96}x^{36} + w^{29}x^{33} + w^{19}x^{24} + w^{14}x^{18} + w^{139}x^{12} + w^{230}x^9 + w^{234}x^6 + w^{228}x^3$
1.9	$w^{242}x^{192} + w^{100}x^{144} + w^{66}x^{132} + w^{230}x^{129} + w^{202}x^{96} + w^{156}x^{72} + w^{254}x^{66} + w^{18}x^{48} + w^{44}x^{36} + w^{95}x^{33} + w^{100}x^{24} + w^{245}x^{18} + w^{174}x^{12} + w^{175}x^9 + w^{247}x^6 + w^{166}x^3$
1.10	$w^{100}x^{192} + w^{83}x^{144} + w^{153}x^{132} + w^{65}x^{129} + w^{174}x^{96} + w^{136}x^{72} + w^{46}x^{66} + w^{55}x^{48} + w^{224}x^{36} + w^{180}x^{33} + w^{179}x^{24} + w^{226}x^{18} + w^{54}x^{12} + w^{168}x^9 + w^{89}x^6 + w^{56}x^3$
1.11	$w^{77}x^{192} + w^{133}x^{144} + w^{47}x^{132} + w^{229}x^{129} + w^{23}x^{96} + w^{242}x^{72} + w^{242}x^{66} + w^{245}x^{48} + w^{212}x^{36} + w^{231}x^{33} + w^{174}x^{24} + w^{216}x^{18} + w^{96}x^{12} + w^{253}x^9 + w^{154}x^6 + w^{71}x^3$
1.12	$w^{220}x^{192} + w^{94}x^{144} + w^{70}x^{132} + w^{159}x^{129} + w^{145}x^{96} + w^{160}x^{72} + w^{74}x^{66} + w^{184}x^{48} + w^{119}x^{36} + w^{106}x^{33} + w^{253}x^{24} + w^{18}x^{18} + w^{90}x^{12} + w^{169}x^9 + w^{118}x^6 + w^{187}x^3$
1.13	$w^{98}x^{192} + w^{225}x^{144} + w^{111}x^{132} + w^{238}x^{129} + w^{182}x^{96} + w^{125}x^{72} + w^{196}x^{66} + w^{219}x^{48} + w^{189}x^{36} + w^{199}x^{33} + w^{181}x^{24} + w^{110}x^{18} + w^{19}x^{12} + w^{175}x^9 + w^{133}x^6 + w^{47}x^3$
1.14	$w^{236}x^{192} + w^{212}x^{160} + w^{153}x^{144} + w^{185}x^{136} + w^3x^{132} + w^{89}x^{130} + w^{189}x^{129} + w^{182}x^{96} + w^{105}x^{80} + w^{232}x^{72} + w^{219}x^{68} + w^{145}x^{66} + w^{171}x^{65} + w^{107}x^{48} + w^{179}x^{40} + w^{227}x^{36} + w^{236}x^{34} + w^{189}x^{33} + w^{162}x^{24} + w^{216}x^{20} + w^{162}x^{18} + w^{117}x^{17} + w^{56}x^{12} + w^{107}x^{10} + w^{236}x^9 + w^{253}x^6 + w^{180}x^5 + w^{18}x^3$
1.15	$w^{27}x^{192} + w^{167}x^{144} + w^{26}x^{132} + w^{231}x^{129} + w^{139}x^{96} + w^{30}x^{72} + w^{139}x^{66} + w^{203}x^{48} + w^{36}x^{36} + w^{210}x^{33} + w^{195}x^{24} + w^{12}x^{18} + w^{43}x^{12} + w^{97}x^9 + w^{61}x^6 + w^{39}x^3$
1.16	$w^6x^{192} + w^{85}x^{144} + w^{251}x^{132} + w^{215}x^{129} + w^{229}x^{96} + w^{195}x^{72} + w^{152}x^{66} + w^{173}x^{48} + w^{209}x^{36} + w^{165}x^{33} + w^{213}x^{24} + w^{214}x^{18} + w^{158}x^{12} + w^{146}x^9 + x^6 + w^{50}x^3$
1.17	$w^{164}x^{192} + w^{224}x^{144} + w^{59}x^{132} + w^{124}x^{129} + w^{207}x^{96} + w^{211}x^{72} + w^5x^{66} + w^{26}x^{48} + w^{20}x^{36} + w^{101}x^{33} + w^{175}x^{24} + w^{241}x^{18} + x^{12} + w^{15}x^9 + w^{217}x^6 + w^{212}x^3$
2.1	$x^3 + x^{17} + w^{16}(x^{18} + x^{33}) + w^{15}x^{48}$
3.1	$x^3 + w^{24}x^6 + w^{182}x^{132} + w^{67}x^{192}$
4.1	$x^3 + x^6 + x^{68} + x^{80} + x^{132} + x^{160}$
5.1	$x^3 + x^5 + x^{18} + x^{40} + x^{66}$
6.1	$x^3 + x^{12} + x^{40} + x^{66} + x^{130}$
7.1	x^{57}