

Symmetric ciphers and cipher-text length changes

Symmetric Cipher	Mode	Increases Length	Padding Used (Yes/No)	Notes
AES (128, 192, 256)	ECB (Electronic Codebook)	No	Yes	Output length equals input length; padding needed if input is not a multiple of block size.
	CBC (Cipher Block Chaining)	No	Yes	Output length equals input length; padding needed if input is not a multiple of block size.
	CFB (Cipher Feedback)	No	No	Output length equals input length; works as a stream cipher.
	OFB (Output Feedback)	No	No	Output length equals input length; works as a stream cipher.
	CTR (Counter Mode)	No	No	Output length equals input length; works as a stream cipher.
	GCM (Galois/Counter Mode)	Yes	No	Increases length due to authentication tag (typically 16 bytes).
	CCM (Counter with CBC-MAC)	Yes	No	Increases length due to authentication tag (8-16 bytes).
	XTS (XEX Tweakable Block Cipher)	No	No	Output length equals input length; typically used for disk encryption.
Blowfish	ECB	No	Yes	Same as AES in ECB mode.
	CBC	No	Yes	Same as AES in CBC mode.
	CFB	No	No	Same as AES in CFB mode.
	OFB	No	No	Same as AES in OFB mode.
	CTR	No	No	Same as AES in CTR mode.
CAST5	ECB	No	Yes	Same as AES in ECB mode.
	CBC	No	Yes	Same as AES in CBC mode.
DES	ECB	No	Yes	Same as AES in ECB mode.
	CBC	No	Yes	Same as AES in CBC mode.
Triple DES (3DES)	ECB	No	Yes	Same as AES in ECB mode.
	CBC	No	Yes	Same as AES in CBC mode.
Twofish	ECB	No	Yes	Same as AES in ECB mode.
	CBC	No	Yes	Same as AES in CBC mode.

Symmetric Cipher	Mode	Increases Length	Padding Used (Yes/No)	Notes
Camellia (128, 192, 256)	ECB	No	Yes	Same as AES in ECB mode.
	CBC	No	Yes	Same as AES in CBC mode.
	CFB	No	No	Same as AES in CFB mode.
	OFB	No	No	Same as AES in OFB mode.
	CTR	No	No	Same as AES in CTR mode.
Serpent	ECB	No	Yes	Same as AES in ECB mode.
	CBC	No	Yes	Same as AES in CBC mode.
ChaCha20	-	No	No	Stream cipher; output length equals input length.
Salsa20	-	No	No	Stream cipher; output length equals input length.
ARCFOUR (RC4)	-	No	No	Stream cipher; output length equals input length.
GOST	ECB	No	Yes	Same as AES in ECB mode.
	CBC	No	Yes	Same as AES in CBC mode.
IDEA	ECB	No	Yes	Same as AES in ECB mode.
	CBC	No	Yes	Same as AES in CBC mode.
SEED	ECB	No	Yes	Same as AES in ECB mode.
	CBC	No	Yes	Same as AES in CBC mode.