

	Stream Cipher	Block Cipher
Approach	Encrypt one symbol of plaintext directly into a symbol of ciphertext	Encrypt a group of plaintext symbols as one block
Pro	Fast	High diffusion
Cons	Low diffusion Key reused attack	Slow

Stream cipher and block cipher are often used together

- Stream cipher for encrypting large volume of data
- Block cipher for encrypting fresh pseudo-random seeds

# Latest trends

AES is now hardware accelerated (AES-NI native instruction)

- ➡ AES is fast enough ( $\sim 1.3$  cycles per byte)  
to be used as the go-to cipher for any application

<https://security.stackexchange.com/questions/22905/how-long-would-it-take-a-single-processor-with-the-aes-ni-instruction-set-to-bru>