

**Security Function:** Encryption.

**Error Propagation:** Finite,  $n/8$  (=NSB) sub-blocks are correlated together.

**Synchronization:** Any cryptosystem that uses 2DEM must ensure that the block structure remains intact, either by framing or by storing data in multiple-block-sized chunks.

**Parallelizability:** fully parallelizable.

**Keying Material Requirements:** one key (that of the underlying block cipher)

**Counter/IV/Nonce Requirements:** BPR should be generated randomly. It is encrypted and sent with ciphertext. (Counters, IVs, and nonces could be used with 2DEM, but none is required in our specification)

**Memory Requirements:** Just memory required for underlying block cipher, input plaintext, and output ciphertext, and the value of BPR (an integer).

**Pre-processing Capability:** None. (Subkeys, if any, could be computed only once).

**Message Length Requirements:** arbitrary length messages could be encrypted, and padding is necessary if ciphertext stealing (or some other alternative) is not used.

**Ciphertext Expansion:** none (besides that required for padding).

**Other Characteristics:** See specification document.