

**NAME**

PKCS12\_item\_decrypt\_d2i, PKCS12\_item\_decrypt\_d2i\_ex, PKCS12\_item\_i2d\_encrypt,  
PKCS12\_item\_i2d\_encrypt\_ex - PKCS12 item encrypt/decrypt functions

**SYNOPSIS**

```
#include <openssl/pkcs12.h>
```

```
void *PKCS12_item_decrypt_d2i(const X509_ALGOR *algor, const ASN1_ITEM *it,  
    const char *pass, int passlen,  
    const ASN1_OCTET_STRING *oct, int zbuf);  
void *PKCS12_item_decrypt_d2i_ex(const X509_ALGOR *algor, const ASN1_ITEM *it,  
    const char *pass, int passlen,  
    const ASN1_OCTET_STRING *oct, int zbuf,  
    OSSL_LIB_CTX *libctx,  
    const char *propq);  
ASN1_OCTET_STRING *PKCS12_item_i2d_encrypt(X509_ALGOR *algor,  
    const ASN1_ITEM *it,  
    const char *pass, int passlen,  
    void *obj, int zbuf);  
ASN1_OCTET_STRING *PKCS12_item_i2d_encrypt_ex(X509_ALGOR *algor,  
    const ASN1_ITEM *it,  
    const char *pass, int passlen,  
    void *obj, int zbuf,  
    OSSL_LIB_CTX *ctx,  
    const char *propq);
```

**DESCRIPTION**

**PKCS12\_item\_decrypt\_d2i()** and **PKCS12\_item\_decrypt\_d2i\_ex()** decrypt an octet string containing an ASN.1 encoded object using the algorithm *algor* and password *pass* of length *passlen*. If *zbuf* is nonzero then the output buffer will be zeroed after the decrypt.

**PKCS12\_item\_i2d\_encrypt()** and **PKCS12\_item\_i2d\_encrypt\_ex()** encrypt an ASN.1 object *it* using the algorithm *algor* and password *pass* of length *passlen*, returning an encoded object in *obj*. If *zbuf* is nonzero then the buffer containing the input encoding will be zeroed after the encrypt.

Functions ending in **\_ex()** allow for a library context *ctx* and property query *propq* to be used to select algorithm implementations.

**RETURN VALUES**

**PKCS12\_item\_decrypt\_d2i()** and **PKCS12\_item\_decrypt\_d2i\_ex()** return the decrypted object or

NULL if an error occurred.

**PKCS12\_item\_i2d\_encrypt()** and **PKCS12\_item\_i2d\_encrypt\_ex()** return the encrypted data as an ASN.1 Octet String or NULL if an error occurred.

#### SEE ALSO

**PKCS12\_pbe\_crypt\_ex(3)**, **PKCS8\_encrypt\_ex(3)**

#### HISTORY

**PKCS12\_item\_decrypt\_d2i\_ex()** and **PKCS12\_item\_i2d\_encrypt\_ex()** were added in OpenSSL 3.0.

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