```c
typedef struct {
  QInt dim_block;
  RealMat **blocks;
} QcMat;
```

```c
typedef struct {
  QInt f90_imat[SIZEOF_F_TYPE_P];
  QBool external_mat;
} RealMat;
```

```fortran
type matrix_ptr_t
  private
  type(LANG_F_MATRIX), pointer :: f90_mat
end type matrix_ptr_t
```

QcMATRIX APIs

```c
QErrorCode QcMatWrite(QcMat* A,
                      const QChar *mat_label,
                      const QViewOption view_option)
```

QcMATRIX Fortran Adapter (C part)

```c
QErrorCode RealMatWrite(RealMat *A,
                        const QChar *mat_label,
                        const QViewOption view_option)
{
  ... ...;
  f90_adapter_Mat_Ptr_Write(&A->f90_imat[0], ...);
  ... ...;
}
```

transfer()

QcMATRIX Fortran Adapter (Fortran part)

```fortran
module f90_adapter
  subroutine Mat_Ptr_Write(iA, ...)
    integer, intent(in) :: iA(SIZEOF_F_TYPE_P)
    ... ...
    type(matrix_ptr_t) A
    ... ...
    A = transfer(iA, A)
    call Matrix_Write(A%ptr, ...)
    ... ...
  end subroutine Mat_Ptr_Write
end module f90_adapter
```