SHARED MEMORY STRUCTURE:

The main program "XRF_Scanner" generates 5 shared memory segments used to communicate
with the other 8 programs. The dimensions of the segments are univocally defined in
the file ../Shm.h for all programs to avioid conflicts.

SHARED MEMORY SEGMENTS:

SHARED_MEMORY_CMD: -> used to send commands and storage application and data status
KEY_CMD = 6900 present in all programs
DIMENSION: 2048

SHARED_MEMORY: ->
KEY = 7000
DIMENSION: 204800

SHARED_MEMORY2: -> used for storing maps by XRF_SCANNER (file: ScanYX_XY.cpp,
KEY_2 = 7200 mainwindow_loadSHM.cpp) by ADCXRF
DIMENSION: 122880000

SHARED_MEMORY3: -> used to show maps present in mainwindow_loadSHM.cpp
KEY_3 = 7300 mainwindow_mouse.cpp
DIMENSION: 122880000

SHARED_MEMORY4: -> used by digitiser interface to send commands to the CAEN 5780
KEY_4 = 7400 digitiser. Parameters are used by ADCXRF_Optical_Link and
DIMENSION: 2048 ADXRF_USB programs.

SHARED_MEMORY_RATE: -> used by digitiser send commands DAQ rate to ratemeter
KEY_4 = 7500 used by ADCXRF_Optical_Link, ADXRF_USB and rate programs.
DIMENSION: 128

SHARED_MEMORY_CMD STRUCTURE (from XRF_Scanner/SHM_Creator.cpp):

shared_memory_cmd	-> XY motor	-> STATUS
shared_memory_cmd+1	-> Z motor	-> STATUS
(shared_memory_cmd+2)	-> serials (not used)	-> STATUS
shared_memory_cmd+10	-> X Port	-> ASSIGNMENT
shared_memory_cmd+11	-> Y Port	-> ASSIGNMENT
shared_memory_cmd+12	-> Z Port	-> ASSIGNMENT
shared_memory_cmd+20	-> X motor (not used)	-> STATUS
shared_memory_cmd+21	-> Y motor (not used)	-> STATUS
shared_memory_cmd+22	-> Z motor (not used)	-> STATUS
shared_memory_cmd+30	-> X motor inited	-> STATUS
shared_memory_cmd+31	-> Y motor inited	-> STATUS
shared_memory_cmd+32	-> Z motor inited	-> STATUS
shared_memory_cmd+40	-> X[point] scan	-> POSITION
shared_memory_cmd+41	-> Y[point] scan	-> POSITION
shared_memory_cmd+42	-> Z	-> POSITION
shared_memory_cmd+43	-> Integral[point] DAQ	-> INTEGRAL
shared_memory_cmd+50	-> Xmin	-> POSITION
shared_memory_cmd+51	-> Xmax	-> POSITION
shared_memory_cmd+52	-> Ymin	-> POSITION
shared_memory_cmd+53	-> Ymax	-> POSITION

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shared_memory_cmd+54            -> Zmin                 -> POSITION
shared_memory_cmd+55            -> Zmax                 -> POSITION

shared_memory_cmd+60            -> X step               -> PARAMETER
shared_memory_cmd+61            -> Y step               -> PARAMETER
shared_memory_cmd+62            -> Z step               -> PARAMETER
shared_memory_cmd+64            -> X movement           -> POSITION
shared_memory_cmd+65            -> Y movement           -> POSITION
shared_memory_cmd+66            -> Z movement           -> POSITION

shared_memory_cmd+70            -> VME/ADCXRF           -> PROGRAM STATUS
shared_memory_cmd+71            -> XRF SPECTRUM         -> PROGRAM STATUS
shared_memory_cmd+72            -> Digitiser_interface  -> PROGRAM STATUS
shared_memory_cmd+73            -> Rate meter           -> PROGRAM STATUS
shared_memory_cmd+74            -> Xray Table           -> PROGRAM STATUS
shared_memory_cmd+75            -> OnLineMap            -> PROGRAM STATUS
shared_memory_cmd+76            -> Motor test tool      -> PROGRAM STATUS
shared_memory_cmd+77            -> PI parameter table   -> PROGRAM STATUS

shared_memory_cmd+80            -> ADCXRF               -> PROGRAM PID
shared_memory_cmd+81            -> XRF SPECTRUM         -> PROGRAM PID
shared_memory_cmd+82            -> Digitiser_interface  -> PROGRAM PID
shared_memory_cmd+83            -> Rate Meter           -> PROGRAM PID
shared_memory_cmd+84            -> Xray Table           -> PROGRAM PID
shared_memory_cmd+85            -> OnLineMap            -> PROGRAM PID
shared_memory_cmd+86            -> Motor test tool      -> PROGRAM PID
shared_memory_cmd+87            -> PI parameter table   -> PROGRAM PID
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