AC Shared Memory Documentation

SPageFileStatic

The following members are initialized when the instance starts and never changes until the instance is closed.

wchar_t smVersion[15]	Version of the Shared Memory structure
wchar_t acVersion[15]	Version of Assetto Corsa
int numberOfSessions = 0	Number of sessions in this instance
int numCars = 0	Max number of possible cars on track
wchar_t carModel[33]	Name of the player's car
wchar_t track[33]	Name of the track
wchar_t playerName[33]	Name of the player
wchar_t playerSurname[33]	Surname of the player
wchar_t playerNick[33]	Nickname of the player
int sectorCount = 0	Number of track sectors
float maxTorque = 0	Max torque value of the player's car
float maxPower = 0	Max power value of the player's car
int maxRpm = 0	Max rpm value of the player's car
float maxFuel = 0	Max fuel value of the player's car
float suspensionMaxTravel[4]	Max travel distance of each tyre [Front Left, Front Right, Rear Left, Rear Right]
float tyreRadius[4];	Radius of each tyre [Front Left, Front Right, Rear Left, Rear Right]
float maxTurboBoost = 0;	Max turbo boost value of the player's car
float deprecated_1	Do not use it
float deprecated_2	Do not use it
int penaltiesEnabled = 0	Cut penalties enabled: 1 (true) or 0 (false)
float aidFuelRate = 0	Fuel consumption rate: 0 (no cons), 1 (normal), 2 (double cons) etc.

float aidTireRate = 0	Tire wear rate: 0 (no wear), 1 (normal), 2 (double wear) etc.
float aidMechanicalDamage = 0	Damage rate: 0 (no damage) to 1 (normal)
int aidAllowTyreBlankets = 0	Player starts with hot (optimal temp) tyres: 1 (true) or 0 (false)
float aidStability = 0	Stability aid: 0 (no aid) to 1 (full aid)
int aidAutoClutch = 0	If player's car has the "auto clutch" feature enabled : 0 or 1
int aidAutoBlip = 0	If player's car has the "auto blip" feature enabled : 0 or 1
int hasDRS = 0	If player's car has the "DRS" system: 0 or 1
int hasERS = 0	If player's car has the "ERS" system: 0 or 1
int hasKERS = 0	If player's car has the "KERS" system: 0 or 1
float kersMaxJ = 0	Max KERS Joule value of the player's car
int engineBrakeSettingsCount = 0	Count of possible engine brake settings of the player's car
int ersPowerControllerCount = 0	Count of the possible power controllers of the player's car
float trackSPlineLength = 0	Length of the spline of the selected track
wchar_t trackConfiguration[33]	Name of the track's layout (only multi-layout tracks)
float ersMaxJ = 0	Max ERS Joule value of the player's car
int isTimedRace = 0	1 if the race is a timed one
int hasExtraLap = 0	1 if the timed race is set with an extra lap
wchar_t carSkin[33]	Name of the used skin
int reversedGridPositions	How many positions are going to be swapped in the second race
int PitWindowStart	Pit window is open on Lap/Minute
int PitWindowEnd	Pit window is closed on Lap/Minute

SPageFilePhysics

The following members change at each graphic step. They all refer to the player's car.

int packetId = 0	Index of the shared memory's current step
float gas = 0	Value of gas pedal: 0 to 1 (fully pressed)
float brake = 0	Value of brake pedal: 0 to 1 (fully pressed)

float fuel = 0	Liters of fuel in the car
int gear = 0	Selected gear (0 is reverse, 1 is neutral, 2 is first gear)
int rpms = 0	Value of rpm
float steerAngle = 0	Angle of steer
float speedKmh = 0	Speed in Km/h
float velocity[3]	Velocity for each axis (world related) [x, y, z]
float accG[3]	G-force for each axis (local related) [x, y, z]
float wheelSlip[4]	Spin speed of each tyre [Front Left, Front Right, Rear Left, Rear Right]
float wheelLoad[4]	Load on each tyre (in N) [Front Left, Front Right, Rear Left, Rear Right]
float wheelsPressure[4]	Pressure of each tyre [Front Left, Front Right, Rear Left, Rear Right]
float wheelAngularSpeed[4]	Angular speed of each tyre [Front Left, Front Right, Rear Left, Rear Right]
float tyreWear[4]	Current wear of each tyre [Front Left, Front Right, Rear Left, Rear Right]
float tyreDirtyLevel[4]	Dirt level on each tyre [Front Left, Front Right, Rear Left, Rear Right]
float tyreCoreTemperature[4]	Core temperature of each tyre [Front Left, Front Right, Rear Left, Rear Right]
float camberRAD[4]	Camber of each tyre in Radian [Front Left, Front Right, Rear Left, Rear Right]
float suspensionTravel[4]	Suspension travel for each tyre [Front Left, Front Right, Rear Left, Rear Right]
float drs = 0	If DRS is present and enabled: 0 (false) or 1 (true)
float tc = 0	Slip ratio limit for the traction control (if enabled)
float heading = 0	Heading of the car on world coordinates
float pitch = 0	Pitch of the car on world coordinates
float roll = 0	Roll of the car on world coordinates
float cgHeight	Height of Center of Gravity
float carDamage[5]	Level of damage for each car section (only first 4 are valid)
int numberOfTyresOut = 0	How many tyres are allowed to stay out of the track to not

	receive a penalty
int pitLimiterOn = 0	If pit limiter is enabled: 0 (false) or 1 (true)
float abs = 0	Slip ratio limit for the ABS (if enabled)
float kersCharge = 0	KERS/ERS battery charge: 0 to 1
float kersInput = 0	KERS/ERS input to engine: 0 to 1
int autoShifterOn = 0	If auto shifter is enabled: 0 (false) or 1 (true)
float rideHeight[2]	Right heights: front and rear
float turboBoost = 0	Turbo boost
float ballast = 0	Kilograms of ballast added to the car (only in multiplayer)
float airDensity = 0	Air density
float airTemp = 0	Ambient temperature
float roadTemp = 0	Road temperature
float localAngularVel[3]	Angular velocity of the car [x, y, z]
float finalFF = 0	Current Force Feedback value;
float performanceMeter = 0	Performance meter compared to the best lap
int engineBrake = 0	Engine brake setting
int ersRecoveryLevel = 0	ERS recovery level
int ersPowerLevel = 0	ERS selected power controller
int ersHeatCharging = 0	ERS changing: 0 (Motor) or 1 (Battery)
int ersIsCharging = 0	If ERS battery is recharging: 0 (false) or 1 (true)
float kersCurrentKJ = 0	KERS/ERS KiloJoule spent during the lap
int drsAvailable = 0	If DRS is available (DRS zone): 0 (false) or 1 (true)
int drsEnabled = 0	If DRS is enabled: 0 (false) or 1 (true)
float brakeTemp[4]	Brake temp for each tire [Front Left, Front Right, Rear Left, Rear Right]
float clutch = 0	Value of clutch pedal: 0 to 1 (fully pressed)
float tyreTempI[4]	Inner temperature of each tyre [Front Left, Front Right, Rear Left, Rear Right]
float tyreTempM[4]	Middle temperature of each tyre

	[Front Left, Front Right, Rear Left, Rear Right]
float tyreTempO[4]	Outer temperature of each tyre [Front Left, Front Right, Rear Left, Rear Right]
int isAIControlled	AI controlled car: 0 (human) or 1 (AI)
float tyreContactPoint[4][3]	Vector for contact point of each tyre [Front Left, Front Right, Rear Left, Rear Right][x, y, z]
float tyreContactNormal[4][3]	Vector for contact normal of each tyre [Front Left, Front Right, Rear Left, Rear Right][x, y, z]
float tyreContactHeading[4][3]	Vector for contact heading of each tyre [Front Left, Front Right, Rear Left, Rear Right][x, y, z]
Float brakeBias	Brake bias from 0 (rear) to 1 (front)
Float localVelocity[3]	Vector for local velocity

SPageFileGraphic

The following members change at each graphical step. They all refer to the player's car.

int packetId = 0	Index of the shared memory's current step
AC_STATUS status = AC_OFF	Status of the instance: AC_OFF 0 AC_REPLAY 1 AC_LIVE 2 AC_PAUSE 3
AC_SESSION_TYPE session = AC_PRACTICE	Session type: AC_UNKNOWN -1 AC_PRACTICE 0 AC_QUALIFY 1 AC_RACE 2 AC_HOTLAP 3 AC_TIME_ATTACK 4 AC_DRIFT 5 AC_DRAG 6
wchar_t currentTime[15]	Current lap time
wchar_t lastTime[15]	Last lap time
wchar_t bestTime[15]	Best lap time
wchar_t split[15]	Time in sector
int completedLaps = 0	Number of completed laps by the player

int position = 0	Current player position (standings)
int iCurrentTime = 0	Current lap time
int iLastTime = 0	Last lap time
int iBestTime = 0	Best lap time
float sessionTimeLeft = 0	Time left until session is closed
float distanceTraveled = 0	Distance traveled during the instance
int isInPit = 0	If player's car is stopped in the pit: 0 (false) or 1 (true)
int currentSectorIndex = 0	Current sector index
int lastSectorTime = 0	Last sector time
int numberOfLaps = 0	Number of laps needed to close the session
wchar_t tyreCompound[33]	Current tyre compound
float replayTimeMultiplier = 0	Replay multiplier
float normalizedCarPosition = 0	Car position on the track's spline
float carCoordinates[3]	Car position on world coordinates [x, y, z]
float penaltyTime = 0	Time of penalty
AC_FLAG_TYPE flag = AC_NO_FLAG	Type of flag being shown: AC_NO_FLAG 0 AC_BLUE_FLAG 1 AC_YELLOW_FLAG 2 AC_BLACK_FLAG 3 AC_WHITE_FLAG 4 AC_CHECKERED_FLAG 5 AC_PENALTY_FLAG 6
int idealLineOn = 0	If ideal line is enabled: 0 (false) or 1 (true)
int isInPitLane = 0	If player's car is in the pitlane: 0 (false) or 1 (true)
loat surfaceGrip = 0	Current grip of the track's surface
int mandatoryPitDone = 0;	Set to 1 if the player has done the mandatory pit
float windSpeed = 0	Speed of the wind on the current session
float windDirection = 0	Direction of the wind (0-359) on the current session

SHARED MEMORY EXAMPLE

Visual Studio C++ Solution downloadable from the following link.

DOWNLOAD EXAMPLE