**MRAPI API Specification V0.9.3**

**4.8.12 MRAPI\_ATOMIC\_CAS (ABB Extension)**

**NAME**

mrapi\_atomic\_cas

**SYNOPSIS**

void mrapi\_atomic\_cas(

MRAPI\_OUT void\* sync, MRAPI\_IN void\* dest, MRAPI\_IN void\* exchange, MRAPI\_IN void\* compare, MRAPI\_OUT void\* previous, MRAPI\_IN size\_t size, MRAPI\_OUT mrapi\_status\_t\* status

);

**DESCRIPTION**

mrapi\_atomic\_cas()performs atomic integer compare and swap. Atomic pointer compare and swap is provided by mrapi\_atomic\_cas\_ptr(). The operation is only valid for memory locations within shared memory, where the synchronization can be across real-time processes. The integer value at destination address is compared with compare, and if they match then

replaced with exchange. The previous value is returned if that argument is non-NULL. Different integer widths are supported based on the platform. The desired size is passed as input and returned status indicates if the operation succeeded.

**RETURN VALUE**

None.

**ERRORS**

|  |  |
| --- | --- |
| MRAPI\_ERR\_NODE\_NOTINIT | The calling node is not initialized |
| MRAPI\_ERR\_ATOM\_OP\_FAILED | The local atomic operation failed |
|  |  |

**NOTE**

Supported integer types:

Windows – uint8\_t, uint16\_t, uint32\_t, uint64\_t

Unix - uint8\_t, uint16\_t, uint32\_t, uint64\_t

**SEE ALSO**