### 4.8.13 MRAPI_ATOMIC_XCHG (ABB Extension)

**NAME**

mrapi_atomic_xchg

**SYNOPSIS**

```
void  mrapi_atomic_xchg(
  MRAPI_OUT void* sync, MRAPI_IN void* dest,
  MRAPI_IN void* exchange, MRAPI_OUT void*
  previous, MRAPI_IN size_t size, MRAPI_OUT
  mrapi_status_t* status
);
```

**DESCRIPTION**

`mrapi_atomic_xchg()`performs atomic integer exchange. Atomic pointer exchange is provided by `mrapi_atomic_xchg_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 replaced by `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**