

#### 4.4.2.12 MRAPI\_RMEM\_WRITE\_I

##### NAME

mrapi\_rmem\_write\_i

##### SYNOPSIS

```
void mrapi_rmem_write_i(
    MRAPI_IN mrapi_rmem_hdl_t rmem,
    MRAPI_IN mrapi_uint32_t rmem_offset,
    MRAPI_IN void* local_buf,
    MRAPI_IN mrapi_uint32_t local_offset,
    MRAPI_IN mrapi_uint32_t bytes_per_access,
    MRAPI_IN mrapi_uint32_t num_strides,
    MRAPI_IN mrapi_uint32_t rmem_stride,
    MRAPI_IN mrapi_uint32_t local_stride,
    MRAPI_OUT mrapi_request_t* mrapi_request,
    MRAPI_OUT mrapi_status_t* status
);
```

##### DESCRIPTION

This (non-blocking) function performs `num_strides` memory writes, where each write is of size `bytes_per_access` bytes. The *i*-th write copies `bytes_per_access` bytes of data from `local_buf` with offset `local_offset + i*local_stride` to `rmem` with offset `rmem_offset + i*rmem_stride`, where  $0 \leq i < \text{num\_strides}$ .

This supports scatter/gather type accesses. To perform a single write, without the need for scatter/gather, set the `num_strides` parameter to 1.

##### RETURN VALUE

On success, `*status` is set to `MRAPI_SUCCESS`. On error, `*status` is set to the appropriate error defined below. Use `mrapi_test()`, `mrapi_wait()` or `mrapi_wait_any()` to test for completion of the operation.

##### ERRORS

MRAPI_ERR_RMEM_INVALID	Argument is not a valid remote memory segment handle.
MRAPI_ERR_RMEM_BUFF_OVERRUN	<code>rmem_offset + (rmem_stride * num_strides)</code> would fall out of bounds of the remote memory buffer.
MRAPI_ERR_RMEM_STRIDE	<code>num_strides &gt; 1</code> and <code>rmem_stride</code> and/or <code>local_stride</code> are less than <code>bytes_per_access</code> .
MRAPI_ERR_REQUEST_LIMIT	No more request handles available.
MRAPI_ERR_RMEM_NOTATTACHED	The caller is not attached to the remote memory.
MRAPI_ERR_RMEM_BLOCKED	We have hit a hardware limit of the number of asynchronous DMA/cache operations that can be pending ("in flight") simultaneously. Thus we now have to block because the resource is busy.
MRAPI_ERR_PARAMETER	Either the <code>local_buf</code> is invalid or <code>bytes_per_access</code> is zero.
MRAPI_ERR_NODE_NOTINIT	The calling node is not initialized.