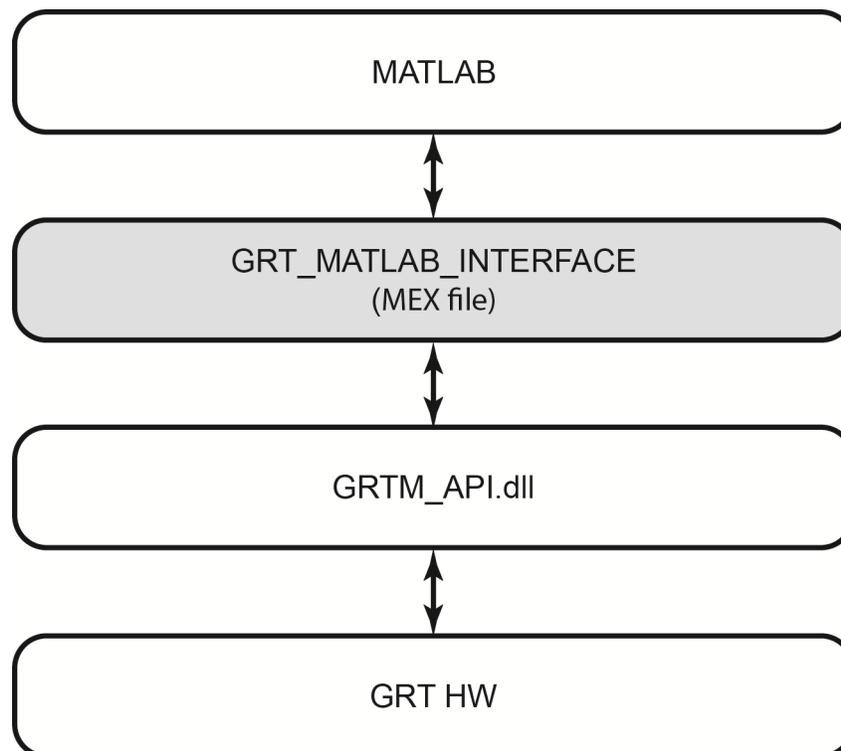


## Matrix on MATLAB®

### Interface Matrix or Matrix Plus Hardware with MATLAB software

The GRT\_ MATLAB \_Interface gives GRT users the capability to interface GRT Matrix hardware with MATLAB software. With the interface, users can utilize MATLAB's development platform for image analysis. Currently, the interface allows users to open and close a Matrix or Matrix Plus card, initialize the card, turn on or off user flow of the card, receive data from a source, and pass the raw data to MATLAB. The data is passed to MATLAB within a 2D M\*N matrix. (The M and N variables signify the resolution of the card.) The data can then be processed in the MATLAB software at the discretion of the user.

The interface was created using a MATLAB Executable (MEX) file. MEX files are used to call custom C code directly from MATLAB as if it were a built-in MATLAB function. The MEX file is essentially a wrapper enclosing the GRT\_API DLL. Below is a block diagram describing the data flow.



## FAQs about GRT\_MATLAB\_INTERFACE

### *How do I get the GMI?*

The GMI is available at no charge, but does not include any technical support. The GMI is provided for reference only.

Please contact Great River Technology at [sales@greatrivertech.com](mailto:sales@greatrivertech.com) for a copy of the GMI.

### *What OS platforms are supported?*

The GMI was created on Win32 and Windows x64 platforms.

### *Will GMI work with ARINC 818 or HL2V?*

It was developed with an ARINC 818 interface, but should work with HL2V.

### *Do I have access to the header/ancillary data?*

No, there is no access to this data.

Please contact Great River Technology for a quote.

### *What if I need more functionality?*

GRT currently is not set up to support MATLAB development. GRT could create a more extensive interface, but this would be quoted as a custom project.

The GMI provides a simple way to access the GRTM DLL through MATLAB. Users can add to the GMI and may use the GMI on a non-exclusive basis.

### *What support is provided with the GMI?*

GRT does not provide support for the GMI. It is provided free of charge for reference only.