



OVERVIEW

The notes at right describe the relationship between the various components that make up the μ MATRIX relay system.

The table on page 2 is indented to provide users of μ MATRIX platform relays with a means of determining which software functions are compatible with specific hardware versions.

μ MATRIX-S UPDATE

An update to the μ MATRIX platform was released in April 2009 to provide:

- 4M56-S case – 18mm length reduction
- USB PC programming port
- Optional network comms. port
- Increased functional capability

These changes do not effect the terminal wiring or software functionality which allows compatibility with previous software applications back to version 0500.

In the compatibility chart on page 2 the μ MATRIX-S hardware codes have been used. However for version 0500+ software versions the -S code is not significant from a compatibility perspective.

LATEST VERSION

The most up to date version of the Hardware / Software Compatibility register may be found at the μ MATRIX software downloads page:

www.rmspl.com.au/umatrix.htm

SOFTWARE DOWN LOADS

Information regarding software version numbers may be found at the software downloads page for each relay type:

www.rmspl.com.au/umatrix.htm

BIOS LEVEL (Basic Input Output System)

Every μ MATRIX platform relay requires a BIOS to be factory loaded which manages the low level operation of the device & provides a *tool box* for the coding of each specific relay application.

The BIOS version is displayed in the format xx.yy

The xx portion of the version is used to indicate the major revision.

The yy portion of the version is used to indicate the minor revision.

APPLICATION (UMX) LEVEL

In addition to the BIOS the μ MATRIX platform relays require an application layer or UMX to provide the relay *personality* for the function required.

Each software application has specific functional attributes, which are described in the relevant relay Technical Bulletin, Software Function & Verification Manual & Product Manual.

Each application is allocated a unique code letter & version number in the following format:

UMX2V164C_xxyy.umx

In this example the application alpha code is C and the version is xxyy

APPLICATION SOFTWARE VERSION CONTROL

Each software application also has a version number in the format xxyy. This is used to differentiate between software versions with the same application code but a different release date. For example when an update is made to provide enhancements to functionality or performance. While such changes are designed & tested for backward compatibility with earlier versions some customers may prefer to use a tried & proven release version.

The xx portion of the version is used to indicate the major revision level.

The yy portion of the version is used to indicate the minor revision level.

The xx portion of the UMX code must always match the xx portion of the BIOS code.

HARDWARE VERSIONS

Every μ MATRIX platform relay comprises a standard *Primary* PCB & *Display* module which incorporates the micro controller, HMI, basic I/O, communications & power supply.

To enable each relay function a specific *Secondary* PCB is fitted to facilitate the correct analogue inputs & digital I/O count.

An *Auxiliary* PCB is also available for extra I/O capability required by some applications.

The hardware version is described by the RMS type number system. For example:

2V164K1 where 2V164 is the general product code & the K1 is the version number.

The BIOS is loaded by the factory on all μ MATRIX platform relays.

UMX applications can only be loaded onto relay type numbers that have the required hardware to support the application requirements.

μ MATRIXwin PC CONFIGURATION SOFTWARE

The μ MATRIXwin configuration software is designed for communication with the relay from a PC to load setting files (UMP), verify relay operation, run reports etc. This program also provides a utility to load UMX application files into a relay provided the hardware & BIOS versions are compatible.

The software upgrade utility in μ MATRIXwin incorporates a number of automatic checks to ensure that the relay hardware & BIOS level is compatible with the UMX version to be loaded.

For example if an operator attempted to load a version 05.yy version UMX into a relay with a version 04.yy BIOS a warning message would be displayed advising of the non compatibility & the download process terminated.

For example if an operator attempted to load a 2V164 UMX file into a 2V67 hardware platform a warning message would be displayed advising of the non compatibility & the download process terminated.

PARAMETER SETTING FILES (ump)

Default parameters setting files are embedded in the UMX & are automatically loaded when the UMX file is installed.

It should be noted that when a new UMX version is loaded into a relay any previously saved parameters files (.ump) may no longer be compatible. New compatible parameters files are created by printing the old parameters file, opening the default .ump file in μ MATRIXwin & updating the fields from the printed version.

The default .ump file is available from the RMS web site or can be created by connecting to the updated relay & saving the initial relay settings.



2H34 Compatibility

Each line represents a specific μ MATRIX hardware build.
 Each column represents a specific μ MATRIX software UMX.
 The compatibility of each 'hardware' row to each 'software' column is indicated at the intersection by the ● symbol.
 Where the ● symbol is not shown the software is not compatible with the hardware & cannot be loaded.

TYPE NO.	ORDER CODE	BIOS	APPLICATION SOFTWARE - UMX																	
			UMX2H034A	UMX2H034B	UMX2H034C	UMX2SY212A	UMX2V067A	UMX2V067B	UMX2V067C	UMX2V067D	UMX2V067E	UMX2V067H	UMX2V164A	UMX2V164B	UMX2V164C	UMX2V164G	UMX2V164I	UMX2V164J	UMX2V164K	UMX2V165C
2H34-K1	BBB	●	●	●	●															
2H34-K2	BCC	●	●	●	●															
2H34-K3	AAA	●	●	●	●															
2H34-K4	BAA	●	●	●	●															
2H34-K80	AAA	●	●	●	●															
2H34-K81	BBB	●	●	●	●															
2H34-K82	BCC	●	●	●	●															
2H34-SK1	BBBB	●	●	●	●															
2H34-SK3	AAAB	●	●	●	●															
2H34-SK4	BAAB	●	●	●	●															
2H34-SK6	AAAA	●	●	●	●															
2H34-SK7	Bddb	●	●	●	●															
2H34-SK8	ADDB	●	●	●	●															

TYPE NO.	ORDER CODE	BIOS	APPLICATION SOFTWARE - UMX																	
			UMX2H034A	UMX2H034B	UMX2H034C	UMX2SY212A	UMX2V067A	UMX2V067B	UMX2V067C	UMX2V067D	UMX2V067E	UMX2V067H	UMX2V164A	UMX2V164B	UMX2V164C	UMX2V164G	UMX2V164I	UMX2V164J	UMX2V164K	UMX2V165C
2SY212-SK1	AAAA	●				●														

TYPE NO.	ORDER CODE	BIOS	APPLICATION SOFTWARE - UMX																	
			UMX2H034A	UMX2H034B	UMX2H034C	UMX2SY212A	UMX2V067A	UMX2V067B	UMX2V067C	UMX2V067D	UMX2V067E	UMX2V067H	UMX2V164A	UMX2V164B	UMX2V164C	UMX2V164G	UMX2V164I	UMX2V164J	UMX2V164K	UMX2V165C
2V67-K1	BBBA	●					●													
2V67-K2	BBAA	●					●													
2V67-K3	BAAA	●					●													
2V67-K4	BBBB-K04	●						●												
2V67-K5	BBAA-K05	●							●											
2V67-K6	BCCA	●					●													
2V67-K7	BBS1A-K07	●								●										
2V67-K8	AAAA	●					●													
2V67-K9	BCCA-K09	●																		
2V67-K10	AAAA-K10	●																		
2V67-K11	AAAA-K11	●								●										
2V67-K12	BCAA-K12	●								●										
2V67-K13	BBAA-K13	●					●													
2V67-K14	BBBB	●																		
2V67-K15	BAAA-K15	●																		
2V67-SK1	BBBAB	●					●													
2V67-SK2	BBAAB	●					●													
2V67-SK3	BAAAB	●					●													
2V67-SK4	BBBB-K04	●						●												
2V67-SK5	BBAA-K05	●							●											
2V67-SK6	BCCAB	●					●													
2V67-SK7	BBS1AB-K07	●								●										
2V67-SK8	AAAAB	●					●													
2V67-SK9	BCCAB-K09	●																		
2V67-SK10	AAAAB-K10	●																		
2V67-SK11	AAAAB-K11	●								●										
2V67-SK12	BCAAB-K12	●								●										
2V67-SK13	BBAAB-K13	●					●													
2V67-SK14	BBBBB	●																		
2V67-SK15	BAAAB-K15	●																		
2V67-SK16	BDDAA	●					●													
2V67-SK17	BCCAA	●					●													
2V67-SK18	BBBAA	●					●													
2V67-SK19	AAABA	●																		
2V67-SK20	AAAAA	●					●	●	●	●	●									

TYPE NO.	ORDER CODE	BIOS	APPLICATION SOFTWARE - UMX																
			UMX2H034A	UMX2H034B	UMX2H034C	UMX2SY212A	UMX2V067A	UMX2V067B	UMX2V067C	UMX2V067D	UMX2V067E	UMX2V067H	UMX2V164A	UMX2V164B	UMX2V164C	UMX2V164G	UMX2V164I	UMX2V164J	UMX2V164K
2V164-K1	BBBB	●										●	●	●				●	
2V164-K2	BBBA	●										●	●	●				●	
2V164-K3	BBBA-K03	●														●			
2V164-K4	BAAA	●										●	●	●				●	
2V164-K5	BCAA	●										●	●	●				●	
2V164-K6	BBBB-K06	●												●					
2V164-K7	BCCB	●										●	●	●				●	
2V164-K8	BCCA	●										●	●	●				●	
2V164-K9	BCCA-K09	●														●			
2V164-K10	BAAB-K10	●															●		
2V164-K11	AAAB	●										●	●	●				●	
2V164-K12	BBAA	●										●	●	●					
2V164-K13	BAAB	●										●	●	●					
2V164-K14	AAAA	●										●	●	●					
2V164-K15	BBAB	●										●	●	●					
2V164-K16	BCBA	●										●	●	●					
2V164-K17	BBBB-K17	●														●			
2V164-K18	ABBB	●										●	●	●					
2V164-K21	AAAB-K21	●														●			
2V164-K80	BCCB	●										●	●	●					

TYPE NO.	ORDER CODE	BIOS	APPLICATION SOFTWARE - UMX																	
			UMX2H034A	UMX2H034B	UMX2H034C	UMX2SY212A	UMX2V067A	UMX2V067B	UMX2V067C	UMX2V067D	UMX2V067E	UMX2V067H	UMX2V164A	UMX2V164B	UMX2V164C	UMX2V164G	UMX2V164I	UMX2V164J	UMX2V164K	UMX2V165C
2V164-SK1	BBBBB	●										●	●	●					●	
2V164-SK2	BBBAB	●										●	●	●					●	
2V164-SK3	BBBAB-K03	●														●				
2V164-SK4	BAAAB	●										●	●	●					●	
2V164-SK5	BCAAB	●										●	●	●					●	
2V164-SK6	BBBBB-K06	●													●					
2V164-SK7	BCCBB	●										●	●	●					●	
2V164-SK8	BCCAB	●										●	●	●					●	
2V164-SK9	BCCA-K09	●														●				
2V164-SK10	BAAB-K10	●															●			
2V164-SK11	AAABB	●										●	●	●					●	
2V164-K12	BBAAB	●										●	●	●						
2V164-SK13	BAABB	●										●	●	●						
2V164-SK14	AAAAB	●										●	●	●						
2V164-SK15	BBABB	●										●	●	●						
2V164-SK16	BCBAB	●										●	●	●						
2V164-SK17	BBBBB-K17	●														●				
2V164-SK18	ABBBB	●										●	●	●						
2V164-SK19	BBBAA	●										●	●	●						
2V164-SK20	BDDBB	●										●	●	●						
2V164-SK21	AAABB-K21	●														●				
2V164-SK22	BDDAB	●										●	●	●						
2V164-SK23	BDDAA	●										●	●	●						
2V164-SK24	BCCAA	●										●	●	●						
2V164-SK25	ADDBB	●										●	●	●						
2V164-SK26	BCCBA	●										●	●	●						
2V164-SK28	BBBBA	●										●	●	●						
2V164-SK29	BDDBB-K29	●															●			
2V164-SK30	BDDAB-K30	●															●			
2V164-SK31	ADDBB-K31	●															●			

TYPE NO.	ORDER CODE	BIOS	APPLICATION SOFTWARE - UMX																	
			UMX2H034A	UMX2H034B	UMX2H034C	UMX2SY212A	UMX2V067A	UMX2V067B	UMX2V067C	UMX2V067D	UMX2V067E	UMX2V067H	UMX2V164A	UMX2V164B	UMX2V164C	UMX2V164G	UMX2V164I	UMX2V164J	UMX2V164K	UMX2V165C
2V165-K1	BBBBB	●																		●
2V165-K2	BAAAA	●																		●
2V165-K3	AAAAB	●																		●
2V165-SK4	BDDDBB	●																		●
2V165-SK5	BDDDAB	●																		●
2V165-SK6	ADDDBB	●																		●

Australian Content

Unless otherwise stated the product(s) quoted are manufactured by RMS at our production facility in Melbourne Australia. Approximately 60% of our sales volume is derived from equipment manufactured in house with a local content close to 80%. Imported components such as semi-conductors are sourced from local suppliers & preference is given for reasonable stock holding to support our build requirements.

Quality Assurance

RMS holds NCSI (NATA Certification Services International), registration number 6869 for the certification of a quality assurance system to AS/NZS ISO9001-2008. Quality plans for all products involve 100% inspection and testing carried out before despatch. Further details on specific test plans, quality policy & procedures may be found in section A4 of the RMS product catalogue.

Product Packaging

Protection relays are supplied in secure individual packing cardboard boxes with moulded styrene inserts suitable for recycling. Each product & packing box is labeled with the product part number, customer name & order details.

Design References

The products & components produced by RMS are based on many years of field experience since Relays Pty Ltd was formed in 1955. A large population of equipment is in service throughout Australia, New Zealand, South Africa & South East Asia attesting to this fact. Specific product & customer reference sites may be provided on application.

Product Warranty

All utility grade protection & auxiliary relay products, unless otherwise stated, are warranted for a period of 24 months from shipment for materials & labour on a return to factory basis. Repair of products damaged through poor application or circumstances outside the product ratings will be carried out at the customer's expense.

Standard Conditions of Sale

Unless otherwise agreed RMS Standard Terms & Conditions (QF 907) shall apply to all sales. These are available on request or from our web site.



Relay Monitoring Systems Pty Ltd

6 Anzed Court, Mulgrave, Victoria 3170, AUSTRALIA

Tel: +61 3 8544 1200 Fax: +61 3 8544 1201 Email: rms@rmspl.com.au Web: www.rmspl.com.au