

Docklight Amulet Quickstart 09/2006

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1 Copyright

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Contact

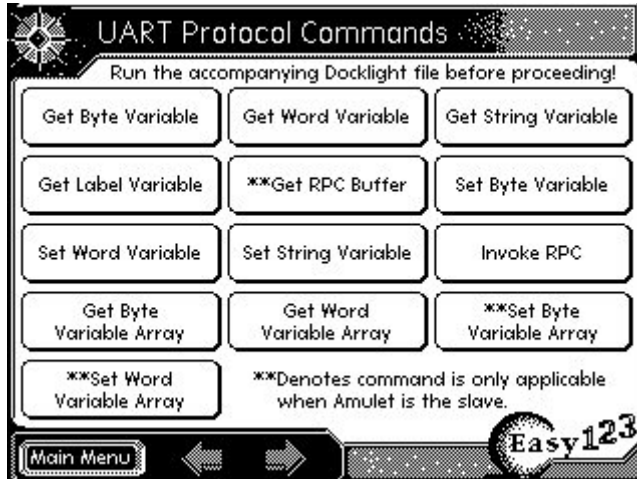
E-Mail Support: docklight@fuh-edv.de

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2 Docklight Amulet Quickstart

2.1 Before you begin

Use the Amulet HTMLCompiler to compile and program the UART Protocol Commands HTML project into your Amulet module. The example project can be found in the following directory \Projects\Examples\Docklight\index.html, subdirectory of the Amulet main directory. By default, the Amulet main directory is C:\Program Files\Amulet, however you may have specified a different path during the install. You will see the main menu with possible UART protocol commands upon successfully programming the Amulet with the Docklight project.



Connect your Amulet module to the COM port of your PC with a SUB D9 simple straight cable. (see Docklight manual, Appendix, Standard RS232 Cables)

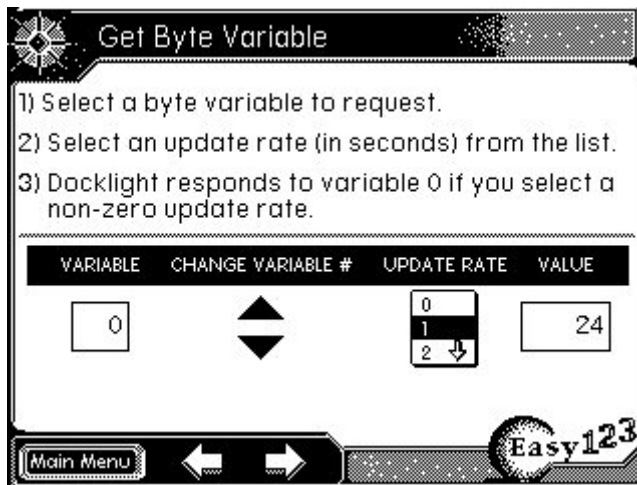
Note: If you are using a PC or a notebook without a COM port you can also use a USB to RS232 adaptor.

2.2 Testing Amulet's UART Protocol Commands

To test the UART protocol of your Amulet module you can simulate the most relevant commands with Docklight Amulet. The communication between the module and the PC will be logged in the Communication window of Docklight. Logging is possible in four views: ASCII, HEX, DEC or BINARY.

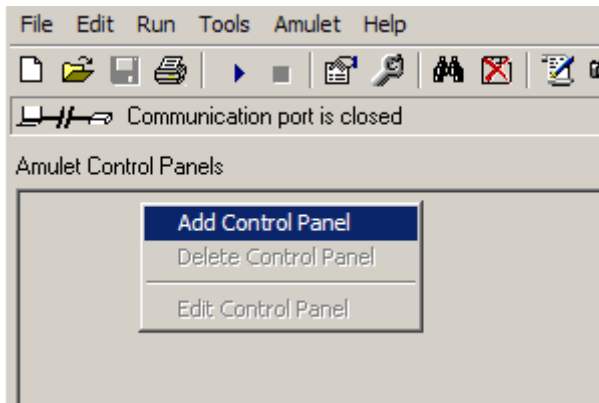
Hint: You can configure the Communication window to your own needs in the menu Tools/Options...

2.2.1 Example: Amulet As A Master - Get Byte Variable

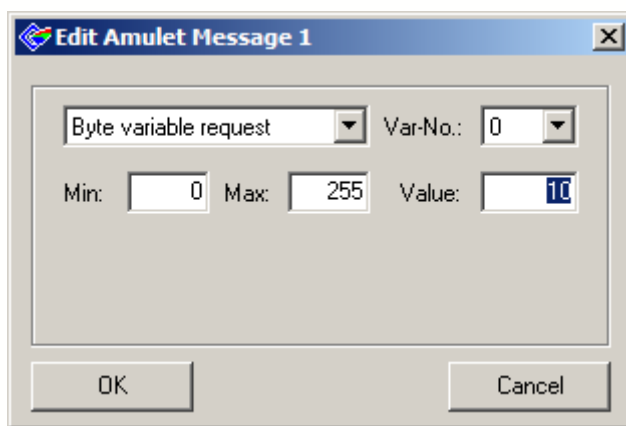


In this example the Amulet module sends a "Get byte variable" request when the update rate is set to a non-zero value. (reference the "Amulet as Master" section of the "UART Protocol" documentation for additional information)

Do the following steps to simulate the remote station with Docklight Amulet:

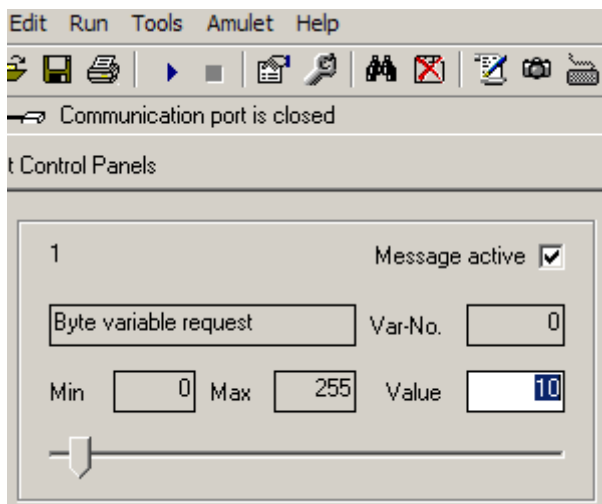


Press the right mouse button inside the window "Amulet Control Panels" to add a new control panel.




Configure your Amulet message:

1. Choose type of request in drop down menu (Byte variable request)
2. Select a variable number (0 in our case)
3. (Optional: you can edit the default Min and Max values)
4. Set a value to start with (10 for example)



Click the "OK" button and you should see a new panel with a slider bar.

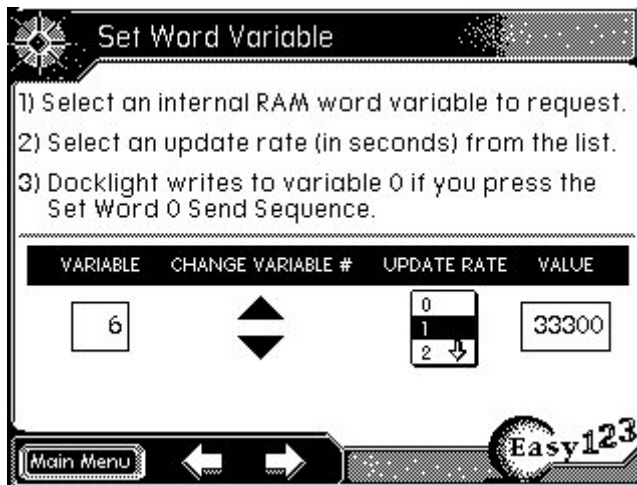
1. Make sure that the message is active, otherwise, Docklight just returns "ACK"
2. Start the communication 
3. Move the slider and watch the display of your Amulet module

```
28.04.2006 14:36:03.95 [RX] - D0 30 30
28.04.2006 14:36:03.96 [TX] - E0 30 30 30 41
28.04.2006 14:36:04.03 [RX] - D0 30 30
28.04.2006 14:36:04.04 [TX] - E0 30 30 30 41
28.04.2006 14:36:05.03 [RX] - D0 30 30
28.04.2006 14:36:05.04 [TX] - E0 30 30 30 41
```

Watch the communication (here in HEX view)

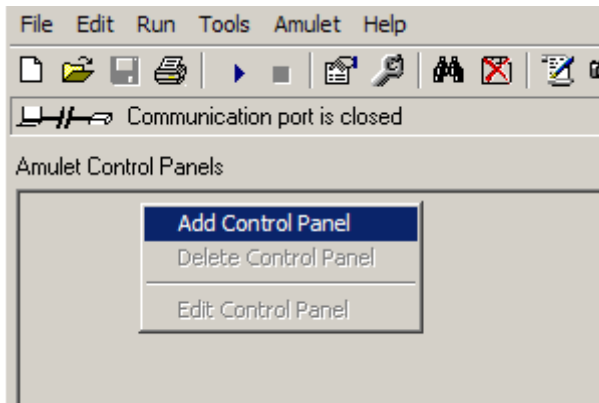
- RX (red) messages from Amulet module
- TX (blue) messages from Docklight

2.2.2 Example: Amulet As A Slave - Set Word Variable

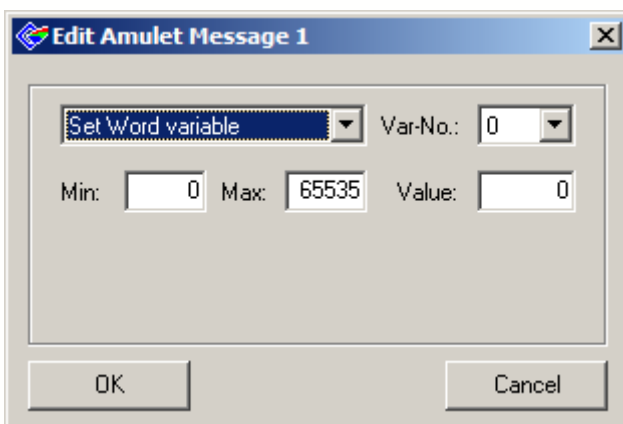


In this example the Amulet module waits for a "Set Internal RAM word variable" command. (reference the "Amulet as Slave" section of the "UART Protocol" documentation for additional information)

Do the following steps to simulate the remote station with Docklight Amulet:

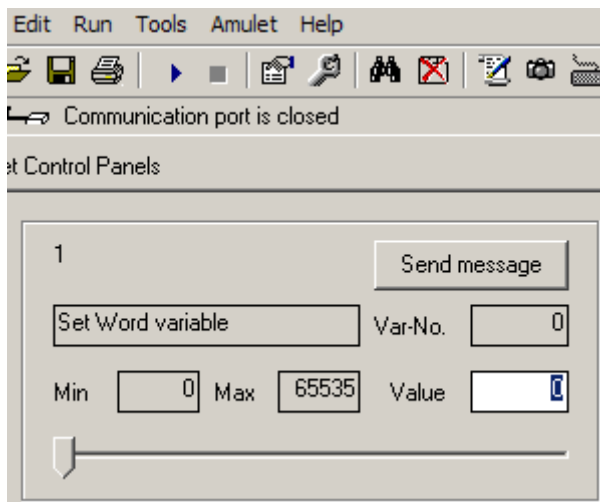


Press the right mouse button inside the window "Amulet Control Panels" to add a new control panel.




Configure your Amulet message:

1. Choose type of request in drop down menu (Set Word variable)
2. Select a variable number (0 in our case)
3. (Optional: you can edit the default Min and Max values)
4. Set a value to start with (0 for example)



Click the "OK" button and you should see a new panel with a slider bar.

1. Start the communication 
2. (Optional: you can move the slider if you want to choose a different value)
3. Click the "Send message" button

```
19.05.2006 13:06:06.23 [TX] - D6 30 30 30 30 30 30
```

```
19.05.2006 13:06:06.25 [RX] - E6 30 30 30 30 30 30
```

Watch the communication (here in HEX view)

- RX (red) messages from Amulet module
- TX (blue) messages from Docklight

2.3 Docklight Amulet Panels - Overview

1 Message active

Byte variable request Var-No.

Min Max Value

Message	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5
Amulet Get Byte Variable	0xD0	Var Hi Nibble	Var Low Nibble	-	-
	0xE0	Var Hi Nibble	Var Low Nibble	Value Hi Nibble	Value Lo Nibble

2 Message active

Word variable request Var-No.

Min Max Value

Message	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
Amulet Get Word Variable	0xD1	Var Hi Nibble	Var Low Nibble	-	-	-	-
	0xE1	Var Hi Nibble	Var Low Nibble	MSBVal Hi Ni	MSBVal Lo Ni	MSBVal Hi Ni	MSBVal Lo Ni

3 Message active

String variable request Var-No.

Message	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7		Byte N
Amulet Get String Variable	0xD2	Var Hi Nibble	Var Low Nibble	-	-	-	-	-	-
	0xE2	Var Hi Nibble	Var Low Nibble	char	char	char	char	char	0x00

4 Message active

Label variable request Var-No.

My label

Message	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte N
Amulet Get Label Variable	0xD3	Var Hi Nibble	Var Low Nibble	-	-	-	-	-
	0xE3	Var Hi Nibble	Var Low Nibble	char	char	char	char	0x00

5 Message active

Invoke RPC request Var-No.

Message	Byte 1	Byte 2	Byte 3
Amulet Invoke RPC	0xD8	Var Hi Nibble	Var Low Nibble
	0xE8	Var Hi Nibble	Var Low Nibble

6 Send message

Set Byte variable Var-No.

Min Max Value

Message	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
Amulet Set Word Variable	0xD6	Var Hi Nibble	Var Low Nibble	MSBVal Hi Ni	MSBVal Lo Ni	MSBVal Hi Ni	MSBVal Lo Ni
	0xE6	Var Hi Nibble	Var Low Nibble	MSBVal Hi Ni	MSBVal Lo Ni	MSBVal Hi Ni	MSBVal Lo Ni

7 Send message

Set Word variable Var-No. 6

Min 0 Max 65535 Value 65535

Message	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5
Amulet Set Byte Variable	0xD5	Var Hi Nibble	Var Low Nibble	Value Hi Nibble	Value Lo Nibble
	0xE5	Var Hi Nibble	Var Low Nibble	Value Hi Nibble	Value Lo Nibble

8 Send message

Set String variable Var-No. 7

Another string

Message	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7		Byte N
Amulet Set String Variable	0xD7	Var Hi Nibble	Var Low Nibble	char	char	char	char	char	0x00
	0xE7	Var Hi Nibble	Var Low Nibble	char	char	char	char	char	0x00

9 Send message

Send RPC Buffer request Var-No. 0

Message	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7		Byte N
Amulet Set String Variable	0xD4	RPC flag Nibble	RPC flag Nibble	-	-	-	-	-	-
	0xE4	RPC flag Nibble	RPC flag Nibble	RPC1 Hi Ni	RPC1 Lo Ni	RPC2 Hi Ni	RPC2 Lo Ni	...	0x00

3 Support

3.1 Web Support and Troubleshooting

- For questions concerning the Amulet Module please contact our partners at Amulet Technologies, Santa Clara, USA
<http://www.amulettechnologies.com/support/support.html>
- If you have questions regarding Docklight Amulet, have a look at
<http://www.docklight.de/amulet.htm>
- For up-to-date FAQs and troubleshooting information, see our online support pages available at
http://www.docklight.de/support_en.htm
This section covers all issues related to the standard Docklight functions, not the Amulet-specific extensions.

3.2 E-Mail Support

- Support for your Amulet Module
If you did not find a solution on the Amulet Web Support pages please contact devSupport@AmuletTechnologies.com
- Support for Docklight Amulet
We provide individual e-mail support to our registered customers. Please include your Docklight license key number in your request. We will contact you as soon as possible to find a solution to your problem. Send your support request to docklight@fuh-edv.de