Microcom DigiRIT Upgrade Procedures Revision 1 2019-03-01



Microcom Design, Inc. 10948 Beaver Dam Road Hunt Valley, MD 21030 PHN: 410 771-1070 FAX: 410 771-0018 www.MicrocomEnviro.com

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1. Introduction

The purpose of this document is to guide users through the process of updating the firmware in a Digital LRIT / HRIT Receiver (DigiRIT).

The application used to perform the upgrade is called the DigiRIT Programming Utility. It is a lightweight windows application that can be downloaded and run without needing to be installed. The Utility can be downloaded from Microcom's website under the DigiRIT webpage.

The other item needed to complete the update is a firmware image file. The firmware file is less than 200Kb in size and is a simple hex file that will be distributed as an email attachment. The DigiRIT contains two processors, the Master and the Slave this update will only require updating the Master firmware.



2. DigiRIT Upgrade Example

The following procedure will describe the steps taken to upgrade a DigiRIT from firmware version 1.13 to 1.14.

2.1. Disconnect DigiRIT

2.1.1. Turn OFF

Turn off the DigiRIT using the power switch located on the rear of the device.



2.1.2. RF Input

IMPORTANT

Disconnect the "ANTENNA IF" IN connection from the rear of the device. This will be connected to either the 140 MHz or 70 MHz input. Having a connection on either one of these ports will disrupt the upgrade process.



IMPORTANT

2.1.3. Client

IMPORTANT

Disconnect or otherwise disable any services or applications connecting to the DigiRIT receiver. If the IP address of the DigiRIT is not already known use the application to find and log the DigiRITs IP for the DCS TCP/IP port. Having a client connection on either port will disrupt the upgrade process.



IMPORTANT

2.1.4. Document Firmware and S/N

Using the power switch located on the rear of the device turn on the DigiRIT receiver. While the DigiRIT is starting up document the current firmware version and serial number shown on the front panel. In this example the current firmware is 1.13 and the serial number is 1050.



2.1.5. Verify

Verify that the RF connection has been successfully disconnected by ensuring the "SIGNAL AQUIRED" indicator LED stays red. Verify that all client connections have been successfully disconnected by ensuring the "CLIENT CONNECTED" indicator LED stays red.

2.2. PC Setup and Programming

2.2.1. Download

Download the programming utility from Microcom's website located under the <u>DigiRIT</u> <u>webpage</u>. The firmware hex file will be distributed as an email attachment once payment has been received. The Utility is recommended to be run on the PC that was running the client application connected to the DigiRIT so that this document does not need to guide the user through configuring network settings. The Utility can be run on a USB thumb drive if this is more convenient. It is assumed that the PC running the DigiRIT Programming Utility is on the same network and is able to connect with the DigiRIT through the "DCS" TCP/IP port.



2.2.2. Run

Run the DigiRIT Programming Utility by executing the "DigiRIT_Program.exe" file.



2.2.3. DigiRIT IP Address

Enter the IP address of the DigiRITs "DCS" TCP/IP port into the "Master IP Address" entry box. This was the IP found in section 2.1.3 of this document. In this example the IP was found to be 192.168.54.101.

🈿 DigiRIT Pro	ogramming Uti	ity - V1.1	
DigiRIT IP Con	trol		
192.168.54.1	01		
	Program	No DigiRIT Connected	
_	DigiRIT Master	E BL Becover	
	Program File:		
	DigiRIT Slave		
	Status:	BL Recover	
	Program File:		
			*
			-

2.2.4. Set IP Address

Use the "Tab" key on the keyboard to enter the IP address. The IP address will be displayed in the status box in the lower left corner of the Utility once entered. Once the Utility has successfully connected to the DigiRIT the status message will change from "No DigiRIT Connected" to "DigiRIT Connected".

႗ DigiRIT Pro	ogramming Utili	ity - V1.1	IX
DigiRIT IP Con	itrol		
192.168.54.1	01		
Program		\frown	
🖂 All	Program	DigiRIT Connected	
	DigiRIT Master		
	Status:	BL Recover	
	Program File:		
_	DigiRIT Slave		
	Status:	BL Recover	
	Program File:		
	,		*
			-
•			
Connected to 1	92.168.54.101	Connected	

2.2.5. Choose File

Inside of the "DigiRIT Master" group box click the file selection button. This will pop up a "Select File" window. Select the hex file "DigiRIT_MasterV114.hex" and click the "Open" button.



2.2.6. Select Master

Now that the firmware image file has been selected check the check box to the left of the "DigiRIT Master" group box.



2.2.7. Program Master

Once the checkbox is checked the "Program" button will become active, click the "Program" button to begin the programming process.

Program DigNIT Connected DigNit maxier BL Recover Program File G: \DigRiT_Master\114.hex DigRiT Slave BL Recover Status: BL Recover Program File G: \DigRiT_Master\114.hex DigRiT Slave BL Recover Status: BL Recover Program File DigRit Slave Status: BL Recover Program File Status: BL Recover Program Fil	DigiRIT Programming Uti DigiRIT IP Control Master IP Address 192.168.54.101	lity - V1.1	XI DigiRIT Programming Utility - V1.1 DigiRIT IP Control Master IP Address
1.2 055400048BT70102A467720A77887BF77A7579071294E350071294BE4F78014720A7769 1.2 0556000487BF77A7579141294E350071294E3500326655000A5B 1.2 055600060278974203E28400E5003266550030266550030026655003002665500300266550030026655003002665500300266550030026655003002665500300266550030026655003002665500300266550030026655003002665500300266550030026655003002665500300266550034004 1.2 056600000580055004507585224460558343920746139300B76CDF0A35DF0CFEXCFEZ26C 1.2 0666000058005500450758522446055834392704139300B76CDF0A35DF0CFEXCFEZ26C 1.2 06660000058004500550445075892434605583439704139300B76CDF0A35DF0CFEXCFEZ26C 1.2 0666000005800450758522434605583439704139300B76CDF0A35DF0CFEXCFEZ26C 1.2 0666000005800450758522434605583439704139300B76CDF0A35DF0CFEXCFEZ26C 1.2 0666000005800450758522434605583439704139300B76CDF0A35DF0CFEXCFEZ26C 1.2 066600005800450758522434605583439704139300B76CDF0A35DF0CFEXCFEZ26C 1.2 066600005800450758522434605583439704139300B76CDF0A35DF0CFEXCFEZ26C 1.2 0666000058074507575978D12174C5003403980121100000001270298055 1.2 06660000587467802344605583439704139300B76CDF0A35D20077575784221400B490 1.2 056600005874678023446055804337420044058200575757878212400004000 1.2 056600005874670374457842400440120300155703370757840112955641275250 1.2 0566000058746780374457024000580735707855787352044105250 1.2 0566000058746780374457804005850337075758788121745004500375757882140005400 1.2 05660000587467800374457804005804407580201275557887121400054007 1.2 056600005874678003744578040058044075802014075820 1.2 0566000058746780780785784578040057805 1.2 056600005876467807807867887888781217600756841057820 1.2 0566000058764678078457880814057820044057820044057820 1.2 056000058764578078078787845780410552003700755578787205044105520 1.2 0566000058764578780040748	Program Pro	BL Recover	Program Fitz Pigfill Master Status: M10 Programming Program File: G:\DigRill_Master/114.hex DigRill Slave BL Recover Status: BL Recover Program File: G:\DigRill_Master/114.hex
1 2066C00063400054300054300543005401758024110582243400558307757018E7A4748511 1 2066C00076322570340875832755832701501575018E7A47424585255703408758327F5837404F07557018E7A47 1 2057200024E2F582255703408F58327F5837404F07557018E7A47 1 2057200024E2F582255703408F58327F5837404F07557018E7A47 1 2057200024E2F582255703408F58327F5837404F07557018E7A47 1 2057200024E2F58255703408F58327F5837404F07557018E7A47 1 2057200024E2F58255703408F58327F5837404F07557018E7A47 1 2057200024E2F58255703408F58327F5837404F07557018E7A47	3	<u>×</u>	205540004398770102A4677E0A77887BF7A7579071294E3500712A9BE54FF50147E0A7F0E. 2055600087BF7A7579141294E3500812A9B8770102A2D7507F037B017A0A796812965A 2055600087BF7A7579141294E3500812A9B8770102A2D75037B017A0A796812965A 20556000087CA350D900211507EA3DF7F070129500126057C007D5012157A400A5 2055600087CA350D900211507EA3DF7F070129500202502401F75002102940044 2055500081017A35F79000211507EA5177F0013950020252401F75002102940044 20555000025502467755225434605F838493F7740139300875CDF0A35DF0CFECFEF7555. 2056400012570C7BF7AC59793A7838C312176500A90195012181D0000000127129902573. 2056400012570C7BF7AC59793A7838C312176500A90195012181D0000000127129902573. 20566000074A7590580746F752254344605F838493F7740139300877575F61250038573. 205640001247D673850724410244875490152570412957857422900BB740DF43851. 20566000074A7590580746F03474487549151257047559422900BB740DF43851. 2056600074A0759058746F03475622410F582543400F583807F57510125475424470158302 20562000740AF90908746F03475502411755204300F58580FF55701BE7A424E517501858257 20562000740AF90905746F034755024105525304400F58380F5575101BE7A424E5175018574574075501405755825570409F5832574040755701BE7A424E57040755804105832575 205720002482550340BF5832F75858347502410575701BE7A424E5793404075583257630409F5832575374040755701BE7A424E57934087583257630409F58325763409F583257630409F58327557611BE7A424E5793409F58327550409F58325763409F583275755711BE7A424E5793409F583275534400F583275534409F58327550409F58327580409F5832755074040759501BE74424058225F03409F583275503409F58327550409F5832755074040755701BE74424575501BE74424575501BE74424575501BE74424575501BE74424575501BE74424575501BE74424575501BE74424575501BE74424575501BE74424575501BE74574457057501BE745744575501BE7457445750409F583275503409F583275503409F583275503409F583275503409F583275503409F58

2.2.8. Close

After the programming has completed programming the DigiRIT Master processor close the "DigiRIT Programming Utility".

Z DigiRIT Pr	ogramming Uti	ity - V1.1	_02	<
Master IP Add	tress			
192.168.54.1	01			
Program				
∏ All	Program	DigiRIT Connected		
	DigiRIT Master			
	Status: Progr	am Complete	BL Hecover	
	Program File:	G:\DigiRIT_MasterV114.hex		
	DigiRIT Slave			
	Status:		BL Recover	
	Program File:			
	ļ			
:20ABE00078	E0D394014003	D38001C322534D0D0A00303030002530337500	9019AEE004F0AA.	•
:20AC0000B	4FD2007D021	95A722901FD3E0B40103D38001C322901FCBE0	FEA3E0F5828E52.	
:20AC40008	322E4901E57F	A3F0A3F0A3F022EE30E707C3E49FFFE49EFE22	201407E4F58410.	
:20AC6000D2	299F584229011	54E004FD7F0202AAE7EF540F2490D43440D4FF	22E4F58475C001.	
:20ACA00010	327E0C7FA67I	0302A48F12808412003602A9797B017A1F7959	0299E275D000C3.	
:20ACC00078	58178024AB59	1547EEF0A3EFF022901F13E04408F022D2A612	A31802789375D0.	
: 20ACE000FI	FDE75FFAD22E	F58475D103227E087F9D020086901E60E013B3	227878E4F6D8CA.	
:20AD200041	08D3D02A24A81	78D21A22A2A122FFFFFFFFFFFFFFFFFFFFFFFFFFFF	FFFFFFFFFFFFFA6.	
:20F7E0007		CEFFFFFFFFFFFFFFFFFFFF6C524954204D5354	5202ACBDC9F74F.	
DigiRIT May	F. Brogers	r Brogrammad		
:020000303	300F8.	1 rigrammed		
DigiRIT Res	started			
				-
4		-	Þ	
Connected to 1	92.168.54.101	DigiRIT Restarted		

2.3. Cleanup and Log

Now that the Master processors firmware has been successfully updated it would be a good time to verify and log the updated firmware version.

2.3.1. Turn Off

Turn off the DigiRIT using the power switch located on the rear of the device.

2.3.2. Reconnect RF

Reconnect the RF input connection that was disconnected in step 2.1.2 of this document.

2.3.3. Restart Client

Restart any clients that were disconnected in step 2.1.3 of this document.

2.3.4. Restart DigiRIT

Turn on the DigiRIT receiver using the power switch located on the rear of the device. While the DigiRIT is starting up document the updated firmware version shown on the front panel. In this example the firmware was updated to 1.14.



2.3.5. Verify connections

Ensure that both "SIGNAL AQUIRED" and "CLIENT CONNECTED" LED indicators turns green.



2.4. Notes

If the IP address of the DCS Ethernet connection is unknown Microcom recommends downloading and installing <u>Moxa's search utility</u> this will find and list the IP address of any Moxa modules on the network.