Keil uVision 4 Settings for Programming Firmware to DEVRAM or OTP

	get Outpu	ut Listing User	C51 A51 BL51 Locate BL	.51 Misc Debug Utilities	
	🗌 Use I	Memory Layout from	Target Dialog		
			Code Range: 0X2000-0X3FFF	>	
Space	Base	Segments:	Xdata Range: 0X0000-0X041F		
Code:	_	?pr?external1_l	GR?PGA450_isrs (0X2100), ?pr?timer0	_ISR?PGA450_isrs (0X2400), ?pr?timer	
Xdata					
Pdata:					
Precede:					
Bit:					
Data:					
data:					
Stack:					
Linker control	TO ".\ou PRINT("	tput\PGA450" .Vist\PGA450.m51) IXREF	A T	

Figure 1: DEVRAM Target Options

evice Tar	get Output	Listing User	C51 A51	BL51 Locate	BL51 Misc Debug Utilities	
	🔲 Use M	emory Layout fror	n Target Dialog			
			Code Range:	0X0000-0X1F	FF	
Space	Base	Segments:	Xdata Range:	0X0000-0X04	1F	
Code:	_					
Xdata						
Pdata:						
Precede:						
Bit:						
Data:						
ldata:						
Stack:						
Linker control string	nker TO ".\output\PGA450" A Introl PRINT(".\ist\PGA450.m51") IXREF				۸ ۳	



	To program to DEVRAM:		To Program to OTP:
1.	Change the code range to the DEVRAM memory space	1.	Change the code range to the OTP memory space
	a. Right click on "Target 1" in the Project Window, and select		a. Right click on "Target 1" in the Project Window, and select
	"Options for Target".		"Options for Target".
	b. Go to the "BL51 Locate" tab, and modify the Code Range to go		b. Go to the "BL51 Locate" tab, and modify the Code Range to go
	from 0x2000-0x3FFF.		from 0x0000-0x1FFF.
2.	Copy the following to the "Code" box:	2.	Delete everything in the "Code" box.
		3.	Comment out the DEVRAM section in STARTUP.A51, and uncomment
	?pr?external1_ISR?PGA450_isrs (0X2100),		the OTP section
	<pre>?pr?timer0_ISR?PGA450_isrs (0X2400), ?pr?timer1_ISR?PGA450_isrs</pre>		a. An example of this is shown in Figure 4 below.
	(0X2800), ?pr?serial_ISR?PGA450_isrs (0X2C00),		
	?pr?linPID_ISR?PGA450_isrs (0X3000),		
	?pr?linSciRxData_ISR?PGA450_isrs (0X3400),		
	<pre>?pr?linSciTxData_ISR?PGA450_isrs (0X3800),</pre>		
	?pr?external0_ISR?PGA450_isrs (0X3900),		
	?pr?linSync_ISR?PGA450_isrs (0X3D00)		

114	//	For DEVR	AM program
115			
116	?STACK	SEGMENT	IDATA
117			
118		RSEG	?STACK
119		DS	1
120			
121		EXTRN C	CODE (?C START)
122		PUBLIC	?C STARTUP
123			-
124		CSEG	AT 0
125	?C_STARTUP:	LJMP	STARTUP1
126			
127		CSEG	AT 0x2000 ; relocate to Development RAM;
128	//end of	DEVRAM p	rogram section
129			
130	//OTP section	currently	commented out
131	/*		
132	//	For OTP p	rogram
133	?C_C51STARTUP	SEGMENT	CODE
134	?STACK	SEGMENT	IDATA
135			
136		RSEG	?STACK
137		DS	1
138			
139		EXTRN C	ODE (?C_START)
140		PUBLIC	?C_STARTUP
141			
142		CSEG	AT 0
143	<pre>?C_STARTUP:</pre>	LJMP	STARTUP1
144			
145		RSEG	?C_C51STARTUP
146			
147	//end	of OTP pr	ogram section
148	*/		
149			

115	//DEVRAM section	on curren	tly commented out		
116	/*				
117	//	For DE	VRAM program		
118					
119	?STACK	SEGMENT	IDATA		
120					
121		RSEG	?STACK		
122		DS	1		
123					
124		EXTRN C	ODE (?C START)		
125		PUBLIC	?C STARTUP		
126					
127		CSEG	AT 0		
128	?C STARTUP:	LJMP	STARTUP1		
129	-				
130		CSEG	AT 0x2000 ; relocate to Development RAM;		
131	//end of DEVRAM program section				
132	*/				
133					
134	//	For O	TP program		
135	?C C51STARTUP	SEGMENT	CODE		
136	?STACK	SEGMENT	IDATA		
137					
138		RSEG	?STACK		
139		DS	1		
140					
141		EXTRN C	CODE (?C START)		
142		PUBLIC	?C STARTUP		
143			-		
144		CSEG	AT 0		
145	?C STARTUP:	LJMP	STARTUP1		
146	-				
147		RSEG	?C_C51STARTUP		
148					
149	//en	d of OTP	program section		

Figure 3: DEVRAM STARTUP.A51 example

Figure 4: OTP STARTUP.A51 example