

Project - Solution

Subroutine LIMIT:

Pseudo-code

```
if( N >= N1 )  
{  
    M = N1  
    ret  
}
```

```
if(N > N2)  
{  
    M = N  
    ret  
}
```

```
M=N2
```

Calling Program:

Pseudo-code

For-Loop1:

```
for( i = 0; i < 512, i=i+2 )
{
    output1[i] = input[j] - 425
}
```

For-Loop2:

```
if( i = 0; i < 512, i=i+2 )
{
    N1 = 500
    N2 = -250
    N = output1[i]
    call LIMIT
    output2[i] = M (output from LIMIT)
}
```

Array input

Memory Browser | Disassembly | _text | 0x4400 - _text <Memory Rendering 7> | 16-Bit Signed Int

0x004400	.text, text, input									
0x004400	50	59	69	79	89	99	108	118	128	138
0x004414	147	157	167	177	186	196	206	215	225	234
0x004428	244	253	263	272	282	291	300	310	319	328
0x00443C	337	347	356	365	374	383	392	400	409	418
0x004450	427	435	444	452	461	469	477	486	494	502
0x004464	510	518	526	534	542	549	557	565	572	579
0x004478	587	594	601	608	615	622	629	636	642	649
0x00448C	655	662	668	674	680	686	692	698	704	709
0x0044A0	715	720	725	731	736	741	746	750	755	760
0x0044B4	764	768	773	777	781	785	789	792	796	799
0x0044C8	803	806	809	812	815	818	821	823	826	828
0x0044DC	830	832	834	836	838	839	841	842	843	845
0x0044F0	846	847	847	848	849	849	849	849	850	849
0x004504	849	849	849	848	847	847	846	845	843	842
0x004518	841	839	838	836	834	832	830	828	826	823
0x00452C	821	818	815	812	809	806	803	799	796	792
0x004540	789	785	781	777	773	768	764	760	755	750

Array output1

Memory Browser | Disassembly | _data | 0x1c00 - _data <Memory Rendering 7> | 16-Bit Signed Int

0x001C00	.bss, .data, _bss, _data, _end, end, output1									
0x001C00	-375	-366	-356	-346	-336	-326	-317	-307	-297	-287
0x001C14	-278	-268	-258	-248	-239	-229	-219	-210	-200	-191
0x001C28	-181	-172	-162	-153	-143	-134	-125	-115	-106	-97
0x001C3C	-88	-78	-69	-60	-51	-42	-33	-25	-16	-7
0x001C50	2	10	19	27	36	44	52	61	69	77
0x001C64	85	93	101	109	117	124	132	140	147	154
0x001C78	162	169	176	183	190	197	204	211	217	224
0x001C8C	230	237	243	249	255	261	267	273	279	284
0x001CA0	290	295	300	306	311	316	321	325	330	335
0x001CB4	339	343	348	352	356	360	364	367	371	374
0x001CC8	378	381	384	387	390	393	396	398	401	403
0x001CDC	405	407	409	411	413	414	416	417	418	420
0x001CF0	421	422	422	423	424	424	424	424	425	424
0x001D04	424	424	424	423	422	422	421	420	418	417
0x001D18	416	414	413	411	409	407	405	403	401	398
0x001D2C	396	393	390	387	384	381	378	374	371	367
0x001D40	364	360	356	352	348	343	339	335	330	325

Array output2

Memory Browser Disassembly

0x1e00 - _data(+0x200) <Memory Rendering 7>

16-Bit Signed Int

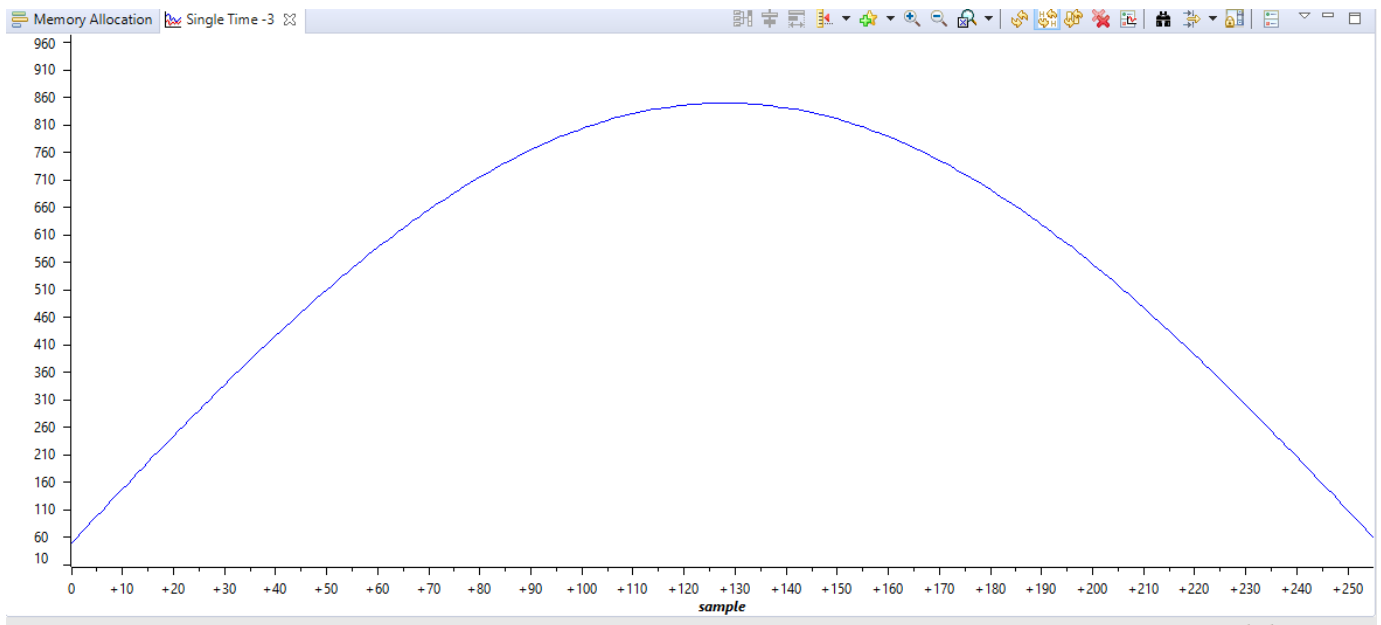
0x001E00	output2									
0x001E00	-250	-250	-250	-250	-250	-250	-250	-250	-250	-250
0x001E14	-250	-250	-250	-248	-239	-229	-219	-210	-200	-191
0x001E28	-181	-172	-162	-153	-143	-134	-125	-115	-106	-97
0x001E3C	-88	-78	-69	-60	-51	-42	-33	-25	-16	-7
0x001E50	2	10	19	27	36	44	52	61	69	77
0x001E64	85	93	101	109	117	124	132	140	147	150
0x001E78	150	150	150	150	150	150	150	150	150	150
0x001E8C	150	150	150	150	150	150	150	150	150	150
0x001EA0	150	150	150	150	150	150	150	150	150	150
0x001EB4	150	150	150	150	150	150	150	150	150	150
0x001EC8	150	150	150	150	150	150	150	150	150	150
0x001EDC	150	150	150	150	150	150	150	150	150	150
0x001EF0	150	150	150	150	150	150	150	150	150	150
0x001F04	150	150	150	150	150	150	150	150	150	150
0x001F18	150	150	150	150	150	150	150	150	150	150
----	----	----	----	----	----	----	----	----	----	----

Array input

Graph Properties

Property	Value
▼ Data Properties	
Acquisition Buffer Size	256
Dsp Data Type	16 bit signed integer
Index Increment	1
Q_Value	0
Sampling Rate Hz	1
Start Address	0x4400
▼ Display Properties	
Auto Scale	<input checked="" type="checkbox"/> true
Axis Display	<input checked="" type="checkbox"/> true
Data Plot Style	Line
Display Data Size	256
Grid Style	No Grid
Magnitude Display Scale	Linear
Time Display Unit	sample
Use Dc Value For Graph	<input type="checkbox"/> false

Import Export OK Cancel

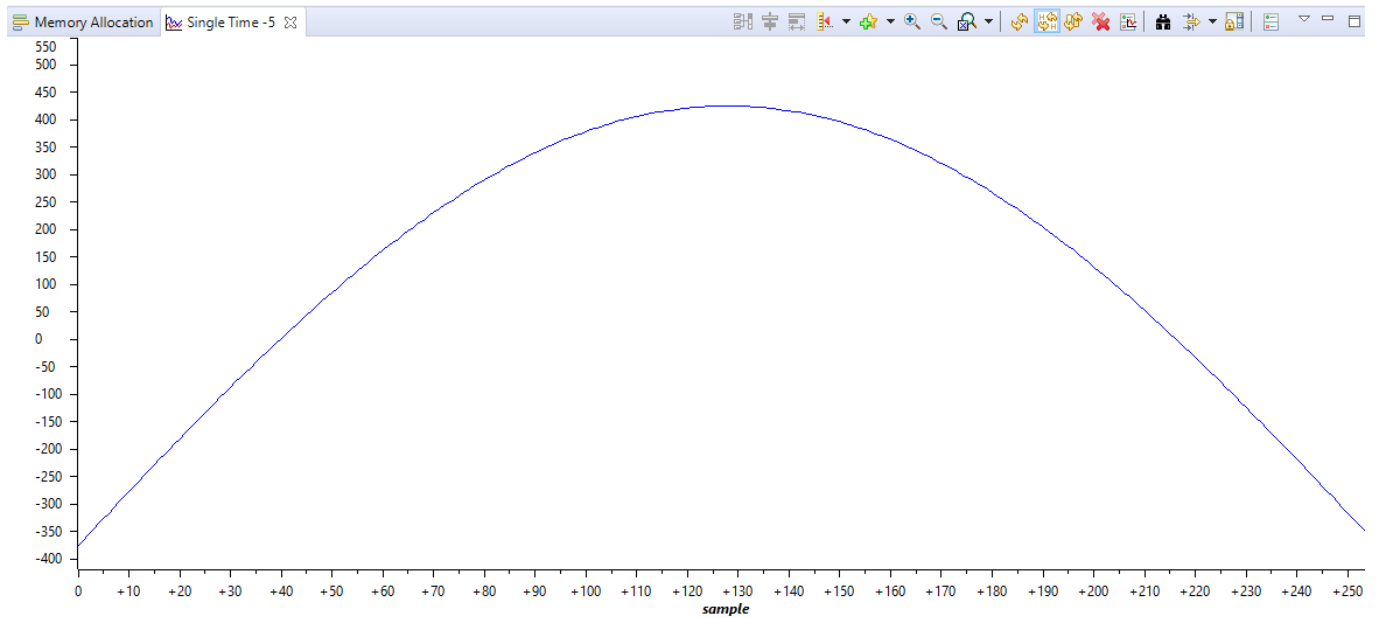


Array output1

Graph Properties

Property	Value
▼ Data Properties	
Acquisition Buffer Size	256
Dsp Data Type	16 bit signed integer
Index Increment	1
Q_Value	0
Sampling Rate Hz	1
Start Address	0x1c00
▼ Display Properties	
Auto Scale	<input checked="" type="checkbox"/> true
Axis Display	<input checked="" type="checkbox"/> true
Data Plot Style	Line
Display Data Size	256
Grid Style	No Grid
Magnitude Display Scale	Linear
Time Display Unit	sample
Use Dc Value For Graph	<input type="checkbox"/> false

Import Export OK Cancel



Array output2

Graph Properties

Property	Value
▼ Data Properties	
Acquisition Buffer Size	256
Dsp Data Type	16 bit signed integer
Index Increment	1
Q_Value	0
Sampling Rate Hz	1
Start Address	0x1E00
▼ Display Properties	
Auto Scale	<input checked="" type="checkbox"/> true
Axis Display	<input checked="" type="checkbox"/> true
Data Plot Style	Line
Display Data Size	256
Grid Style	No Grid
Magnitude Display Scale	Linear
Time Display Unit	sample
Use Dc Value For Graph	<input type="checkbox"/> false

Import Export OK Cancel

