



Adaptive Digital Technologies, Inc.

## Adaptive Feedback Control

### PRODUCT DESCRIPTION

In many acoustic applications, the presence of feedback can cause a resonance to occur. Whether or not the resonance occurs as well as the frequency of the resonance depends upon many variables: is a function of gain/loss, acoustic reflections, room size, and system delay.

Adaptive Digital's Adaptive Feedback Control algorithm analyzes an input signal, determines whether or not there is a resonance, and eliminates the resonance while minimizing the effect on the desired signal.

### FEATURES

- Functions are C-callable
- Multiple channel operation
- Maximum suppression is user configurable
- Minimal effect on desired signal
- Adapts quickly to changing conditions

### AVAILABILITY

ADT AFC is available on the TMS320™ DSP Family  
C55x & C64x™DSP, & C64x+™DSP Generations

### SPECIFICATIONS

#### C55x

All Memory usage is given in units of byte.

Adaptive Feedback Control	Sampling Rate	MIPS (Peak)	Program Memory	Data Memory	Per-Channel Data Memory
AFC_ADT_run	8000	67	2339	5542	3504

#### C64x

All Memory usage is given in units of byte.

Adaptive Feedback Control	Sampling Rate	MIPS (Peak)	Program Memory	Data Memory	Per-Channel Data Memory
AFC_ADT_run	8000	22	5216	4854	1676
AFC_ADT_run	16000	61	5216	5190	2544
AFC_ADT_run	44100	333	5216	6254	5244
AFC_ADT_run	48000	364	5216	6414	5676

**C64x+**

All Memory usage is given in units of byte.

Adaptive Feedback Control	Sampling Rate	MIPS (Peak)	Program Memory	Data Memory	Per-Channel Data Memory
AFC_ADT_run	8000	32	5216	4854	1676
AFC_ADT_run	16000	64	5216	5190	2544
AFC_ADT_run	44100	339	5216	6254	5244
AFC_ADT_run	48000	397	5216	6414	5676

**FUNCTIONS**

*API function call summary*

AFC\_ADT\_init(. . .)

AFC\_ADT\_initObj(. . .)

AFC\_ADT\_run(. . .)



Adaptive Digital is a member of the Texas Instruments Developer Network, and ARM Connected Community.

**CONTACT INFORMATION**

Web: [www.adaptivedigital.com](http://www.adaptivedigital.com)  
 Email: [information@adaptivedigital.com](mailto:information@adaptivedigital.com)  
 Tel: 610.825.0182  
 Toll Free: 1.800.340.2066  
 Fax: 610.825.7616  
 Address: 525 Plymouth Road, Suite 316, Plymouth Woods  
 Plymouth Meeting, PA 19462



**IMPORTANT NOTICE:** Data subject to change, for the most up to date information visit our website. Customers are advised to obtain the most current and complete information about Adaptive Digital products and services before placing orders.

All trademarks are property of their respective owners.