ADAPTIVE DIGITAL
TECHNOLOGIES, INC.

HD AEC STM32F746xx ARM® 32-bit Cortex®-M7

High Definition Acoustic Echo Canceller

HD AEC product provides superior voice clarity and true full duplex performance under a wide set of challenging acoustic environments. It is capable of eliminating the acoustic echo in difficult conditions such as unbalanced speech levels, close speaker to mic proximity, indoor/outdoor environments, background noise, reflective room surface, double talk, and echo path changes.

The demo uses a (1) STM32F769I Discovery board configured to provide full duplex audio communication. Two (2) boards are required for a board to board demo configuration. The demo allows the HD AEC to be enabled and disabled for evaluation.

HD AEC FEATURES:

Handles echo tails up to 400 msec. and greater
Automatically adjusts for unknown bulk delay
Integrated Automatic Gain Control
Adaptive nonlinear processor
Integrated Next Gen Noise reduction
Integrated Transmit Equalization
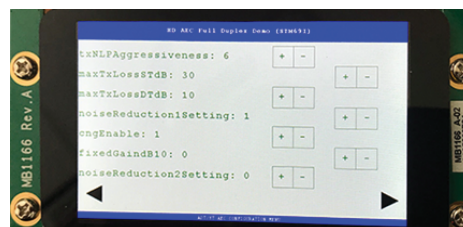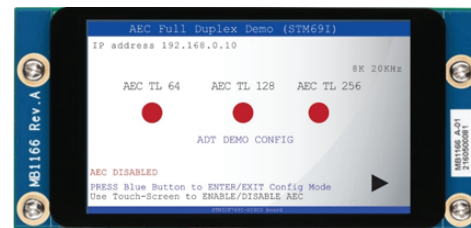Anti Howling

Demo Requirements
Hardware
STM32F769I-DISCOVERY Development Board - STM32F769I-DISCO with LCD display (**2**) for board to board demo
Windows® OS (XP, 7, 8) or Linux 64-bit or OS X®
-            Speaker/headphone (1)

Demo Settings examples:

STM32 F7
Discovery
High-performance

STM32F7 Discovery Kit - STM32F769I

ADT HD AEC - CORTEX- M7
CPU UTILIZATION & MEMORY REQUIREMENTS

All Memory usage is given in units of kbyte

| Function | MIPS | | Program Memory | Data Memory | Scratch Memor | Per Channel Data Memory |
	Average	Max				
Encode	33.4	36.8	--	--	4960	1960
Decode	6.9	7.5	--	--	1024	1400
Encode/Decode	40.3	44.3	49 kbytes	6100	5984	3360