



THE NEW SOUND GENERATION

# SG-TITA128, SG-TITA64, SG-TITA32

Sound Synthesis Board Family

SGDS1A – SEPT 2007

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## Data Sheet

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### Features

- 128-voice Wavetable Synthesis Board
- Two Independent 16-Channel MIDI Synthesizers
- Full-Dynamic Voice Poliphony
- Voice Synthesis Model
  - 44.1-kHz sampling-rate Wavetable Oscillator
  - Sample Playback at arbitrary sampling-rate
  - Maximum upward pitch-shift to two octaves @ 44.1-kHz
  - Resonant Low-Pass Filter with dynamic Cutoff Frequency and fixed Resonance (Q)
  - DAHDSR Volume Envelope Generator for controlling the final Gain Amplifier
  - Programmable Sends to Pan, Reverb and Chorus Effects Units
  - Two Low-Frequency Oscillators for modulating Pitch, Filter Cutoff and Amplitude
  - DAHDSR Modulation Envelope Generator for controlling Pitch and/or Filter Cutoff
- High Performance 32-Bit 300-MHz Floating-Point DSP
- On-Board Data Memory
  - 128M/64M/32M Bytes of In-System Self-Programmable Flash
  - 128M/64M/32M Bytes of In-System SDRAM
  - 256K Bytes of Internal RAM
- Standard Sound Development Tools
  - No Dedicated Hardware Board Required
  - Compatible with all Free/Commercial SoundFont Editors
- Multichannel Audio Serial Port
  - Dedicated 26-pin Data Connector
  - Up to 24 Audio Channels (I2S) @ 32-bit precision
  - Programmable Audio I/O Routing
- Two Programmable UART Serial Ports
- USB 2.0 Full-speed (12 Mbps) or Low-speed (1.5 Mbps) Port
  - High-speed Firmware Downloading
  - High-speed PCM sound bank Data Import
  - Standard USB-MIDI Driver Supported
  - Integrated transceiver, no external resistors required
- Customizable Firmware and Algorithms On-Demand
- Voltage Supply Input: 4.5 - 5.5V
- Typical Applications:
  - Karaoke
  - Digital Pianos
  - Classical Organs
  - Professional Keyboards
  - Musical Samplers