



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:**
  - **Karaokes**
  - **Digital Pianos**
  - **Classical Organs**
  - **Professional Keyboards**
  - **Musical Samplers**

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