

# SSI2130 PRELIMINARY

## FATKEYS™ VOLTAGE CONTROLLED OSCILLATOR

The SSI2130 is a new-generation voltage controlled oscillator subsystem for high-performance electronic musical instruments. A complete analog synthesizer voice can be constructed at unprecedented cost with one or more SSI2130's, a SSI2144 Voltage Controlled Filter, and/or SSI2164 Quad VCA(s).

Outputs include triangle, sawtooth, pulse, and open collector square wave with direct voltage outputs. An on-chip five channel mixer with linear control VCA's sums triangle, saw, and pulse waveforms plus two independent auxiliary inputs into a single current output.

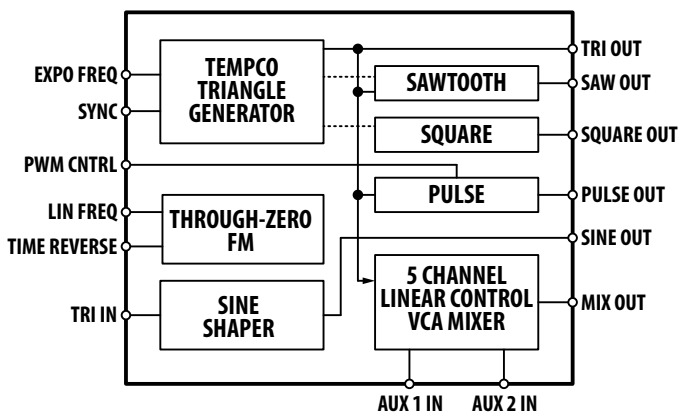
A precision analog multiplier provides unprecedented temperature-compensation, and careful attention was paid to improvement of triangle and sawtooth waveforms compared to previous-generation VCO IC's.

An accurate and temperature-stable sine wave can be produced by the internal sine shaper circuit. Through-zero FM can be achieved with an external comparator, op amp, and several discrete components.

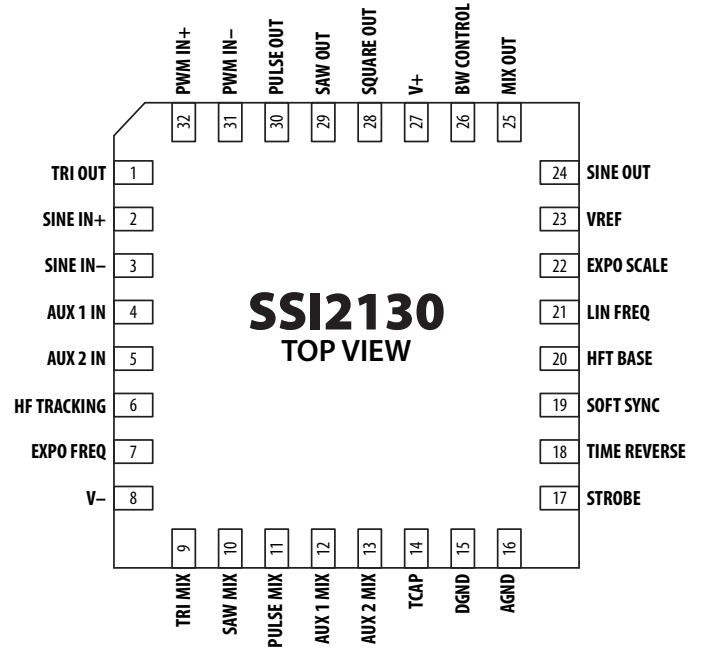
Optional trims are provided for expo scale and high frequency tracking, but unnecessary for most applications. The SSI2130 requires minimal external components and is available in a diminutive 4x4mm QFN package.

### FEATURES

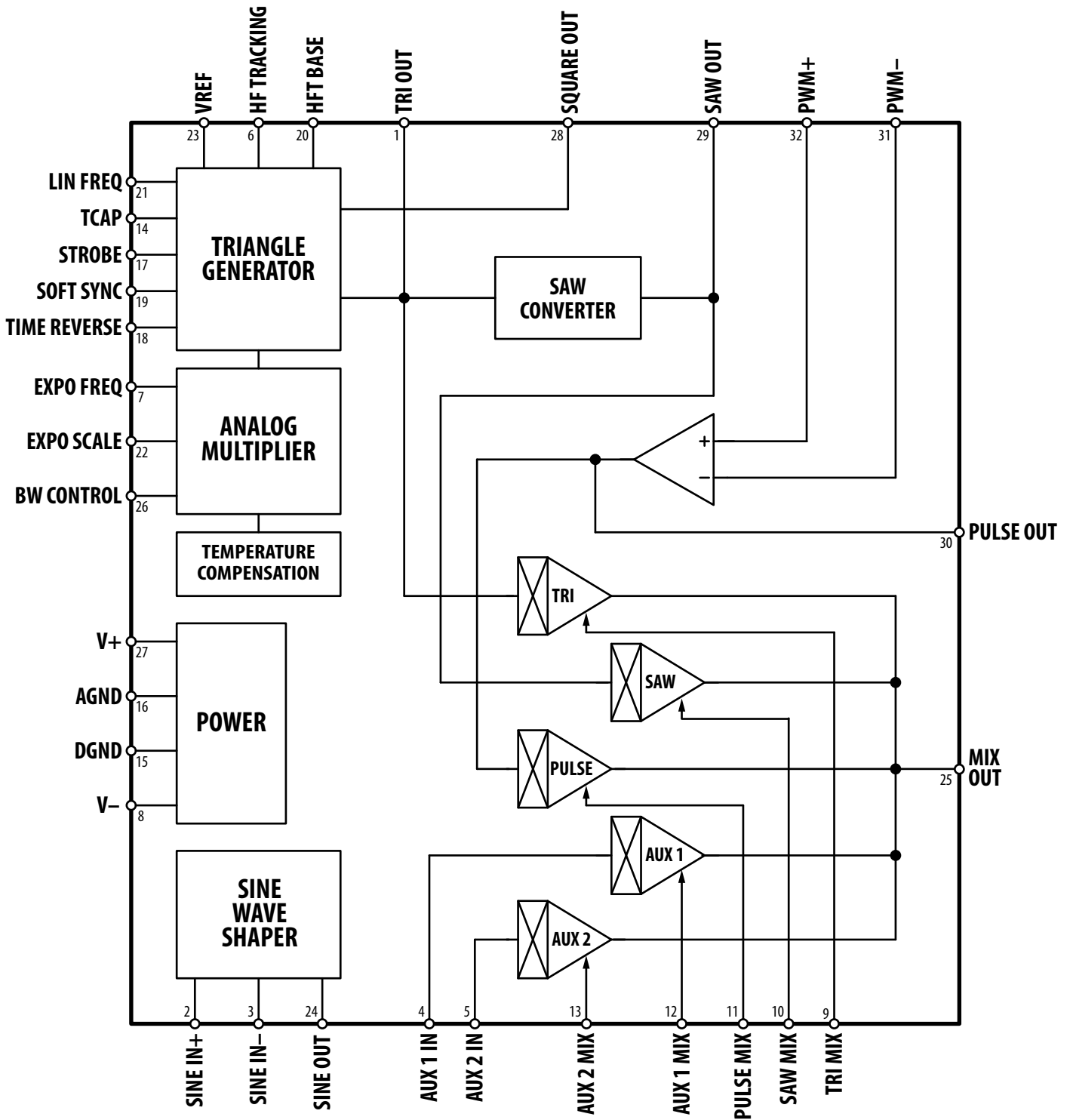
- **Highly Integrated Synth Voice Front-End**
- **Triangle, Saw, Pulse, and Open Collector Square Wave Outputs**
- **On-Chip Five-Channel Mixer with VCA's**
- **Two Auxiliary Inputs**
- **Excellent Temperature Stability**
- **Exponential and Linear Controls**
- **Integrated Sine Wave Shaper**
- **No Trimming Required for Most Applications**
- **Optional Through-Zero FM**
- **Few External Components Overall**
- **Ultra-Compact 32-Lead 4x4 QFN Package**



**SIMPLE BLOCK DIAGRAM**



**PIN CONNECTIONS**  
32-LEAD 4x4 QFN



**SS12130 FUNCTIONAL  
BLOCK DIAGRAM**