



**AIT1005**  
PicoTuner™  
Complete Integrated Data Tuner  
Product Brief - Rev 1

**FEATURES**

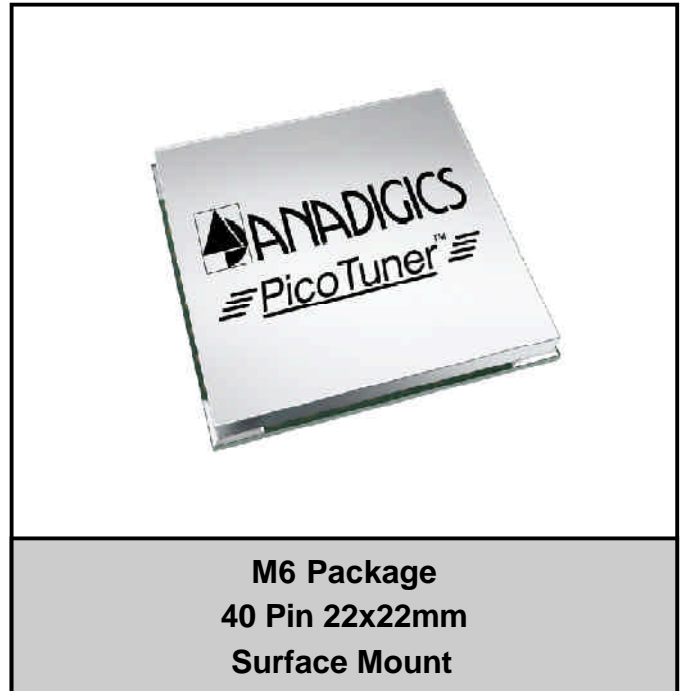
- Complete Integrated RF Tuner Front End
- Up Converter, Down Converter, Dual PLL, VCOs, SAW Filter and Discrete Passive Components Integrated in Package
- No External Components or Tuning Required
- 38 dB Gain, Flat Response over Input Band
- AGC Response Repeatable and Stable over Temperature
- -85 dBc Phase Noise (10 KHz offset)
- Better than -50 dBc Image Rejection
- 3 Wire Serial Programming
- Small Footprint
- DOCSIS Compliant
- -40°C to +85°C

**APPLICATIONS**

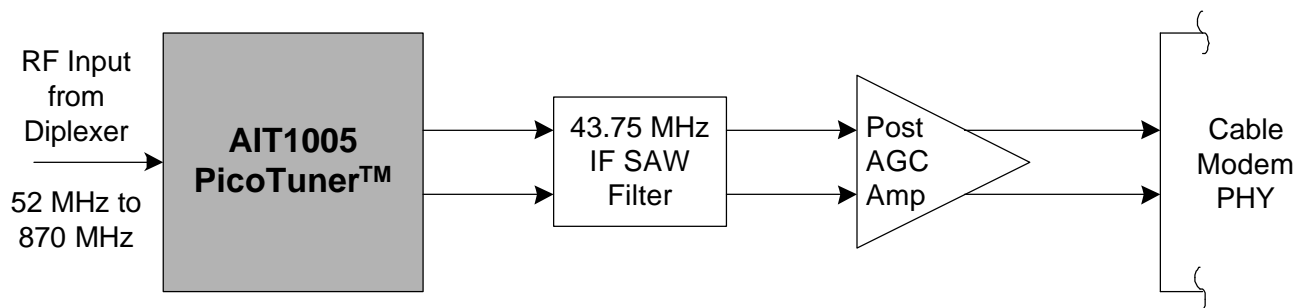
- Cable Modems
- CATV Data Tuner
- Set Top Box
- Home Gateway
- PC Add-on Card or Motherboard

**PRODUCT DESCRIPTION**

The AIT1005 PicoTuner™ is a complete integrated data tuner that includes all the necessary RF tuner front end circuitry for cable modem applications. The AIT1005 combines GaAs and Silicon CMOS technology - which include the up converter, down converter and dual synthesizer circuits - along with a SAW filter, VCO tuning circuits, and passive



components, to facilitate a complete double conversion tuner architecture. The AIT1005 is offered in a 40 lead package and requires one +5V supply, plus a low-power +28V supply for varactor tuning. It is well suited for applications that require complete, low cost, small size, high performance RF modules.



**Figure 1: Tuner Downstream Path**