The STiD337 is a system-on-chip (SoC) for bidirectional interactive satellite applications. The forward link comprises an integrated demodulator and data demultiplexer. The compute platform is based on a dual ARM® Cortex®-A9 architecture with Neon coprocessors and multiple ST231 DSP offload processors. The return link implements an IQ streamer which streams a linked list of pre-calculated data to the integrated DACs for IQ output to external up-converters. Accurate Network Clock Recovery (NCR) with precision real-time control is implemented for the most demanding applications. A full range of interfaces and peripherals are provided to achieve very low cost solutions.

**KEY FEATURES & BENEFITS**
- Best in class power consumption exploiting 28 nm FDSOI process
- Integrated DVB-S/S2/S2X demodulator up to 60 Msps
- Dual-core ARM® Cortex®-A9 application CPU: with NEON™ accelerator
- Quad ST231 offload CPUs to ensure sufficient compute for the most demanding applications
- High quality return channel processing including integrated FIR filters and dual 10 bit DACs.
- Range of peripherals
  - High-precision DACs, ADCs, USB, PCIe, SD card, eMMC, PCI, UART, etc.
  - Integrated Ethernet PHY
- Secure version with safe-boot and preloaded keys

**KEY APPLICATIONS**
- Outdoor ‘Smart LNBs’
- Low-cost satellite modems
- Feeder and back-haul satellite infrastructure solutions
- Internet of Things (IoT) machine-to-machine (M2M) satellite comms
- Point-to-point telecoms
**STiD337 BLOCK DIAGRAM**

Supplies, power
- Consumption ≤ 3.5 W
- Temperature range: -40 to 85 °C

ICs & package
16 x 16 mm FCBGA with 0.65 mm pitch and 552 balls

**REFERENCE DESIGN**
- Hardware design kit
- Schematic – Layout

**SOFTWARE DEVELOPMENT KIT**
- ST-Linux
- SDK2-lite

**HARDWARE AND SOFTWARE RESOURCES**

<table>
<thead>
<tr>
<th>Order code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STiD337-YCB</td>
<td>Samples, precision real time control enabled, non-secure version</td>
</tr>
<tr>
<td>STiD337-32C15YB</td>
<td>B2232C Hardware design kit, STiD337-YCB version, precision real time control enabled, non-secure</td>
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Available through ST sales under NDA

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