Trident introduces the DRX 3933J, world’s smallest 8VSB and QAM demodulator IC. The DRX 3933J demodulates standard- and high-definition television signals according to ATSC-A/53, the North American digital television broadcast standard. It also demodulates QAM 64/256 signals as specified by ITU-T J.83 Annex B. Providing unparalleled PCB real estate benefits, Trident offers the world’s smallest ATSC and QAM demodulator in a QFN48 package (7 × 7 mm). This represents an 80%-reduction in size compared to any similar demodulator available today. The DRX 3933J may be used with highly integrated silicon tuners.

Based on market leading primeD® technology, the DRX 3933J enables the final step into the digital future for a large variety of consumer electronics devices.

PrimeD is the field-proven “ghost-friendly” 8VSB demodulator IP from Trident which further improves performance under multipath-rich environments and ensures reliable reception under severe signal conditions.

Designed with the complete system solution in mind, the DRX 3933J enables highly optimized adjacent-channel performance by integrating a broadband input power detector. Additional features enable customers to utilize low-cost tuner options, further reducing the overall system cost.

The API-based software interface enables effortless implementation into any system. Compatibility with existing Trident ATSC receivers and other Trident demodulator products reduces engineering cost by maximizing the re-use of existing software and product experience.

### Main Features

- ATSC demodulator for 8VSB with excellent multipath performance, meeting:
  - ATSC Digital Television Standard A/53
  - ATSC recommended practices A/74
  - Brazil ensembles A, B, C, D, E
- OpenCable™-compliant digital cable demodulator supporting ITU-T J.83 Annex B (DOCSIS, OpenCable)
- Integrated microprocessor provides a high-level command interface to the host processor
- Low power consumption
- Support for low IF
- Selectable I2C addresses

**DRX 3933J**

Single-Chip 8VSB/QAM Digital Demodulator
PRODUCT INFORMATION

DRX 3933J

Interfaces

- RF and IF gain control output
- Parallel or serial MPEG_TS output
- I2C interface
- CEA909-compliant smart antenna interface
- JTAG
- GPIO
- Broadband power detector input

Applications

- DCR TV
- Low-cost DTV
- DVD-R / PVR
- STB
- PC TV
- USB TV
- Tuner NIM

Versions

<table>
<thead>
<tr>
<th>Type</th>
<th>Standard</th>
<th>Package</th>
</tr>
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<tbody>
<tr>
<td>DRX 3933J</td>
<td>8VSB, QAM 64/256</td>
<td>PQFN48</td>
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Fig. 1: Block diagram of the DRX 3933J