



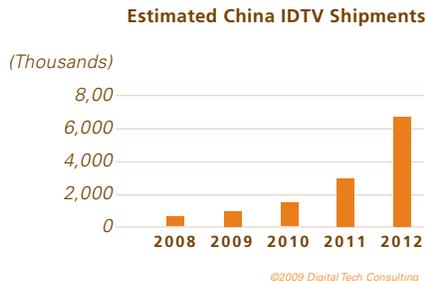
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## IDTV Market in China: A Slow Start

As the digital TV market begins to mature in North America, Western Europe and Japan, all eyes turn to emerging markets where many digital TV platforms are getting their first nudges out of the nest. Perhaps no other market has the binoculars more sharply focused on it than the Chinese market.

All major digital TV delivery platforms (satellite, cable, terrestrial, IP, and mobile) have been launched with digital cable flying the highest. The set-top box (STB) market is booming driven by the hot digital cable market, but the Integrated Digital TV (IDTV) market is only just now hatching with a handful of IDTVs available in the Chinese market. Hisense, TCL, Skyworth, and Konka are among the local brands with IDTVs (most with digital terrestrial and/or IP receivers) currently in stores. DTC estimates that fewer than a million of these will ship this year – just a tiny morsel in a country with about 385 million TV households.

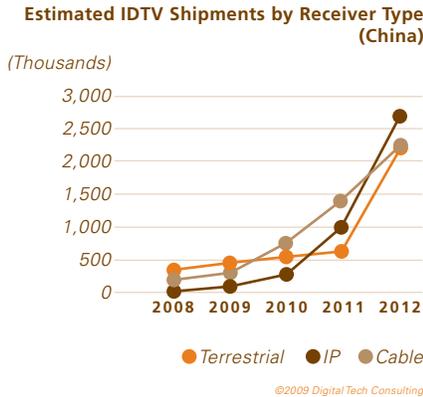


The trouble is that the IDTV market is aimed squarely at the high-end market and digital TV in China is mostly received through low-cost low-margin STBs. And all around the world consumers are opting for smaller-screened and priced TVs putting off those high-end purchases for post recession.

Suppliers that play on the wider market, such as Samsung, LG and Toshiba, have either put their first IDTV models in the Chinese market or have plans to land there soon. But it will be 2010 before DTC forecasts that IDTV shipments will pass the 1 million mark.

Aside from the popularity of low-cost STBs, there are more fundamental reasons why the market is small. These have more to do with technology development and government policy than with little demand for high-end TV sets.

Although digital terrestrial transmission began in 2008 in time for the Beijing Olympics, the incentive for infrastructure roll out has slowed since the Games have come and gone. The government is encouraging cable operators to upgrade from analog to digital systems and is further emphasizing the rollout of mobile TV infrastructure. It appears that terrestrial will have to wait its turn in the spotlight. SARFT has not given a clear signal as to when it might institute a TV tuner mandate. Industry observers believe that a mandate could resemble the gradual approach similar to the one instituted in the U.S. DTC's forecasts operate under the assumption that 2012 will be the earliest year in which a graduated mandate might be put in place.

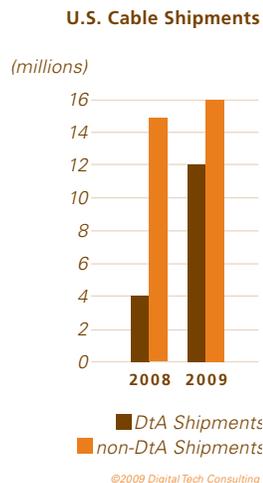


We have generated a similar conservative estimate for TVs with integrated digital cable receivers as little work has been done to develop a standard “operating system” that will allow consumers to use IDTVs in multiple cable systems. Conditional access systems are also not unified and there appears to be little unified effort to develop downloadable conditional access software.

“Connected” TVs – those that feature IP receivers that enable consumers to access video programming from the Internet — are getting some traction in the market as they are being spotlighted at some retail outlets and are coupled with select content that is being aggregated or made available by, some retailers.

For now look for digital IDTVs to play a small role in the Chinese TV market. But for the country with the greatest number of TV households, stay tuned.

## US Cable Shipments Spike on DtA Adapter Deployments



U.S. digital cable STB shipments are estimated to grow to 28 million units shipped in 2009, a nearly 50% spike over 2008 shipments. This dramatic uptick is fueled almost entirely by the emergence of Digital-to-Analog (DtA) adapters, which began deploying en masse during the second half of 2008. The DtA adapter is a low-cost (reportedly in the range of \$35-\$50 per unit) one-way device which allows cable operators to cheaply incorporate analog customers into an all-digital infrastructure.

Comcast has led the charge with DtA adapters, deploying more than 5 million of them during 2008 in conjunction with its “Project Cavalry” which seeks to completely digitize all Comcast systems over 5 years, eliminating the use of bandwidth-hogging analog tiers in favor of more HD and advanced services. The use of DtAs in this strategy has not been without controversy; since their chief cost savings has been in their lack of a separable security component, as per the July 2007 FCC mandate for digital STBs. Comcast has so-far skirted this mandate by deploying the DtA adapters without any security at all, though apparently these could receive software updates to firmware which would install Motorola’s “privacy mode” at some future date.

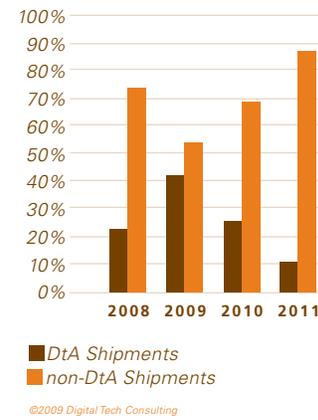
Of course this limits the use of DtA adapters within a system, since content providers are bound to protest any extensive deployment of non-content-protected devices, particularly if these evolve to HD capabilities. That’s why several STB vendors (Motorola, Cisco, Pace, and most recently Disney), have responded by applying for FCC waivers to allow embedded security, characterizing DtA adapters as a low-cost transitional technology that will enable operators to quickly go all digital, which will ultimately fuel retail based sales of other

CableCard and tru2way products. In fact, Evolution Broadband received such a waiver earlier this summer.

The Consumer Electronics Association (CEA), along with several public interest groups, oppose these waivers, arguing that such devices will inhibit the adoption of tru2way products and a more retail-based market for digital STBs, since operators will be more likely to opt for quickly deploying cheaper digital STBs.

Certainly this is true in the short term, but DtA adapters are a transitional technology, and shipments will surely wane as the broader base of US TV HHs becomes digital following the recent June 2009 analog shutoff. Indeed, DTC estimates DtA adapter shipments will make up only 10% of U.S. digital cable STB unit shipments by 2011 (see chart), making their impact on the adoption of CableCard and tru2way a small one over time.

**DtA% of U.S. Cable STB Shipments**



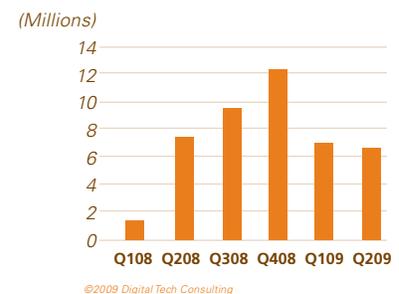
## Appetite for Converter Boxes Hearty for Analog TV Shut Off

With the U.S. digital conversion squared away, DTC's most current research suggests an interesting occurrence in DtA converter box shipment levels. While shipments between the first and second quarter of 2009 did drop, the expectation that shipments in Q209 would be nearly minimal were far from realized. First quarter 2009 estimated shipments were 7.2 million units, with the second quarter coming in only 5% lower at 6.9 million units. The surprisingly strong 2009 quarters bring lifetime-to-date totals to an astounding 45 million units, with 50 million units quite possible by the end of the year.

DTC believes that demand for converter boxes is now primarily fueled by the government subsidized coupon program. June and July 2009 saw hefty consumer coupon requests which could suggest that the third and even fourth quarters of the year will see notable shipments as well. The last coupon requests were taken on July 31st which puts it well into November when those coupons reach their 90 day expiration date. Although DTC believes that converter box sales are now mostly driven by the coupon distribution, there will likely continue to be a small market for boxes through 2009 and into the next year.

While DtA converter boxes may not be considered cash cows, their volume of sales has certainly surpassed the industry's expectations. This has lent a bright spot to retailers and box makers at a time when fewer and fewer people are buying electronics during the Great Recession.

**DtA Converter Box Shipments**



## DIGITAL TERRESTRIAL TV TRANSITION: THE ESSENTIAL PLANNING GUIDE

TV reception is a perceived right. A misstep in a DTV transition can be disastrous for a nation's spectrum management and general stability. When embarking on a DTT transition, proper planning is critical.

DTC's DTV transition consulting services are designed to avoid missteps. Tracking DTT activity since its inception and working with government regulators to analyze STB specifications and costs make DTC uniquely qualified for DTT transition planning. We are also the only organization to track quarterly DtA converter box sales for the world's largest transition.

If you're planning your country's DTT transition, you should be able to answer these questions: How will your DTT system be integrated

with other digital platforms like radio and mobile TV? What market factors must be considered when choosing a standard? Do you have an insider's understanding of equipment costs in accordance with your technical specifications and population? Does your finance agency have all the information it needs to make informed decisions on subsidizing receiver costs?

If you can't answer these questions, your DTV transition could benefit from the experience and expertise of DTC. For more information on our DTV Transition services, please contact Myra Moore at 214.915.0930 or at [myra@dtcreports.com](mailto:myra@dtcreports.com)

## TRACKING SERVICE

### D-t-A Converter Box Tracking Service Q1 08 - Q3 09

DTC's converter box research provides vital data essential for understanding and measuring this unique product category. The service is made up of six reports that provide sales estimates and market share estimates for U.S. DtA boxes from the 1st quarter of 2008 through the 3rd quarter of 2009.

Each report includes:

- Est. total U.S. DtA converter box shipments to the distribution channel for specified quarter(s)
- Est. total shipments to the distribution channel for top brands/suppliers
- Est. total shipments to the distribution channel for most brands by manufacturer
- Analysis notes highlighting converter-box sales trends
- Spreadsheet that includes cumulative estimates

*Please contact Myra Moore at 214-915-0930 or [myra@dtcreports.com](mailto:myra@dtcreports.com) for more information or pricing.*

*Digital Tech Consulting is a market research firm providing strategic information and analysis to help companies succeed in the consumer digital marketplace. To learn more about DTC and how our analysts might help your company, please contact us at the information below.*

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