

AMBA Management Meeting

Ambarella (AMBA, \$12.79 -0.95, Rated Not Compelling/Hold in my latest Chip Investment Ideas)

Management Meeting: I met with the CEO and CFO yesterday and was impressed. AMBA is largely the former C-Cube Microsystems team now building single-chip HD and UltraHD video encoders—that's encoders or compression chips, and not decoders. I am impressed with its technology, familiar with its history, consider its competitive differentiation significant enough to support sustained gross margin in excess of 60%, and agree it is well positioned to garner an unfair share of emerging market opportunities in a variety of standalone camera applications. Nevertheless, I will need to model potential growth at some level of detail before possibly extending my enthusiasm for its technology and business to its shares based fundamental valuation at current price levels.

AMBA builds single-chip HD video encoders at 45/35nm from foundry Samsung with embedded DSP and ARM processors and competitive differentiation that includes decades of experience with algorithm development, a custom DSP engine and chip architecture, and proprietary in-house design verification tooling. Camera markets, which are transitioning to digital from analog and to HD and UltraHD from SD, will always account for the bulk of revenue and include professional and consumer IP security, wearable/sports cams, and automotive dashboards. High-end standalone cameras supporting ASPs in the \$5-18 range and gross margin over 50% are targeted as management consciously avoids the smartphone curse of 'good enough'—although it will certainly consider licensing IP. It won the Flip design at CSCO just ahead of that product's cancellation. Wearable sports market at 18Mu with a +54% CAGR and AMBA is the leading supplier; IP security at 60Mu with a +31% CAGR and ABMA is a top 2 supplier; automotive at 25Mu with +63% CAGR and AMBA is a top 2 supplier. Camera OEM customers include Bosch, Samsung, Woodman Labs and GoPro, while competition includes TXN, HiSilicon, NovaTek, SunPlus, CSR(/ZRAN), and Fujitsu. Dashboard cams are growing nicely in Russia, China, Korea and Taiwan for insurance purposes amid high accident rates and sparse law enforcement, and are credited with capturing the recent Russian meteorite. DSC and traditional camcorder markets are in decline due to smartphone encroachment. AMBA's new A9 device in 32nm technology was introduced at CES to good reception supporting 4K ultraHD resolution but also 1080HD at 120fps allowing for slow-motion playback—which is hot in wearable sports cams.

Infrastructure business is very high-end, single-chip video encoder sales to professional broadcast studio equipment makers like Harmonic, Ericsson, Motorola and RGB Networks. This offering has a huge die size in an 800-bump package with over-sized ASP and gross margin that pulls the company's technology development, but will probably always be limited to 10-20% of sales given the narrow customer base and TAM. Competition includes Magnum (former CUBE), TXN, and INTC.

AMBA raised \$32M from its offering October 10, employs 444 of which 76% are in Taiwan and China, just reported \$121M in FY13 sales, has been profitable for 16 quarters, cash-flow positive for 5 years, and delivered gross margin over the last 3 years between 60-71% and operating margin between 8-23%. Target pro forma model out 1-2 years: gross margin 60-63%, R&D 26-29%, SG&A 11-13%, op margin 19-22%, tax 13%, net 17-20%. Seasonality is muted due to the emerging nature of its camera markets, but 3Q is a peak and 4Q does ease. It is 20% owned by employees, the lock-up expires on April 7, and an offering may occur out in the future. The company announced January-ended F4Q earnings last week above expectations at \$31.5M in sales down -11.8% sequentially with gross margin at 63.3%, EPS at \$0.18, and guided for -2+5% revenue growth. Cameras were 83% of sales, infrastructure market at 17%, distributor WTMicro at 50%, and ODM Chicony at 30% supporting multiple OEMs.

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