ORD MINNETT RESEARCH

Atomos Limited

A resolution to grow

We initiate coverage of innovative media device business, Atomos (AMS), with a Buy recommendation and $1.75 price target, implying a total shareholder return of 21%. Atomos has spent the past three years investing heavily in its IP with the design of a new chip to power its video and picture display and capture screens. This work culminated in the release of NinjaV, a hit product with Pro Video users. The business is now poised to leverage its significant R&D and proprietary relationships to push deeper into the Social and Entertainment markets which are worth multiples of Pro Video where Atomos has had most success to date. We expect operating leverage to drive EBITDA and NPAT growth of 49% pa and 71% pa respectively (FY20-25) from revenue growth of 21% pa. Buy.

Monitor-recorder market leader

Atomos is an innovative, leading provider of monitor/recorder devices. R&D investment extends that leadership and offers opportunity to broaden reach into Social and Entertainment markets, both worth multiples of its strongest market, Pro Video. With revenues from the more successful social media accounts >$5m pa and phone screen quality ever-improving, the need to monitor, capture and control higher quality content is accelerating. Industry-wide Entertainment budgets are also ramping up thanks to modern studios formed by streaming services like Netflix, Amazon, AppleTV. These markets offer significant runway.

Superior Strategic Relationships

All major camera manufacturers have provided AMS with access to their compression algorithms to allow AMS to link in with their products, thereby providing a deeper experience for users. In addition, AMS has one of only two access relationships to Apple's ProRes RAW, offering a leg-up on competitors with customers wanting to capture/edit in one of the market's leading formats.

Key risks

The key risks to AMS are: 1) potential for input price and currency fluctuation, 2) Increased competition, 3) Macro risks to the supply chain, 4) lack of formal contracts with some partners.

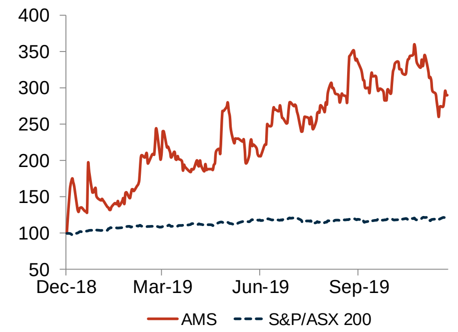
Key Financials					
Year-end July ($)	FY18A	FY19A	FY20E	FY21E	FY22E
Revenue ($m)	35.6	53.7	77.0	97.1	116.7
EBITDA ($m)	0.2	1.6	5.3	9.8	14.6
EBIT ($m)	(0.1)	0.2	2.3	5.3	9.9
Reported NPAT ($m)	(15.6)	(2.0)	3.6	5.8	8.3
Reported EPS (c)	(9.6)	(1.2)	1.9	2.9	4.2
Normalised NPAT ($m)	(1.9)	(0.7)	1.6	3.8	7.0
Normalised EPS (c)	(1.2)	(0.4)	0.9	1.9	3.6
EPS Growth (%)	-	-	-	123.5	86.2
Dividend (c)	-	-	-	-	-
Net Yield (%)	-	-	-	-	-
Franking (%)	100	100	100	100	100
EV/EBITDA (X)	-	-	45.8	25.3	16.3
Normalised P/E (x)	-	-	-	76.0	40.8
Normalised ROE (%)	-	-	4.5	7.2	11.5

Source: OML, Iress, Atomos Limited

Last Price	A$1.45
Target Price	A$1.75
Recommendation	Buy
Risk	Higher

Computer Hardware	
ASX Code	AMS
52 Week Range ($)	-
Market Cap ($m)	270.5
Shares Outstanding (m)	186.6
Av Daily Turnover ($m)	
3 Month Total Return (%)	-15.9
12 Month Total Return (%)	-
Benchmark 12 Month Return (%)	23.8
NTA FY20E (¢ per share)	18.8
Net Cash FY20E ($m)	16.0

Relative Price Performance



Source: FactSet

Consensus Earnings	FY20E	FY21E
NPAT (C) ($m)	0.8	3.5
NPAT (OM) ($m)	1.6	3.8
EPS (C) (c)	0.0	1.8
EPS (OM) (c)	0.9	1.9

Source: OML, Iress, Atomos Limited

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Executive summary

About Atomos Limited

Atomos Limited (AMS.ASX) designs and manufactures monitor-recorders, which can be added to existing video equipment to enhance standard definition camera into high-resolution systems. The monitors can be added to phones, tablets or professional video recorders, allowing for a simpler interface for editing and distributing content.

AMS' main product proposition is to converge computer and video technologies, by combining high-quality recording, monitoring and editing functionality into a low-cost, add-on device for cameras. The portable (in-field) monitor transfers raw images captured by the camera into a proprietary hard drive, which through increased data rates, enhances the quality of the video. The improved user interface of the device allows for more flexible editing and content distribution on the go.

Key Benefits

- Enhanced video quality by connecting directly to a variety of camera sensors. Improves colour and brightness of low-quality images at an affordable price.
- In field monitors introduce slow motion frame rates to standard cameras and elevates 4K definition to high resolution.
- Jointly developed technologies with large camera manufacturers (e.g. Sony) and post production software providers (e.g. Apple). This creates a fully integrated vertical in the market, achieving a seamless workflow from capture, through recording and into post production.
- Increases recording time from minutes to hours using new SSD 2TB hard drive and compressed data capability from codecs such as Apple's ProRes RAW.

Product Mix

Approximately 87% of revenue from monitor recorders. The lower end of AMS product range, including the smaller "Shinobi" and "Ninja V" monitors, target social media content creators. The number of content creators have increased 23% yoy since 2012 (prospectus). Content on these platforms is distributed through free, ad-click driven platforms like Facebook, Instagram and YouTube.

Currently Atomos' predominantly targets the professional camera and video equipment market. The end uses of this segment include promotion, events and corporate video, as well as educational content. In 2018, 81% of US companies used video promotion or training with US$135B spend in total.

AMS has recently launched its "Neon" range of cinema monitor-recorders targeted at the high-end entertainment industry, an identified growth market. Targeting news/entertainment platforms like Fox, Netflix and Amazon, the Neon range has nearly doubled AMS' product portfolio.

Background

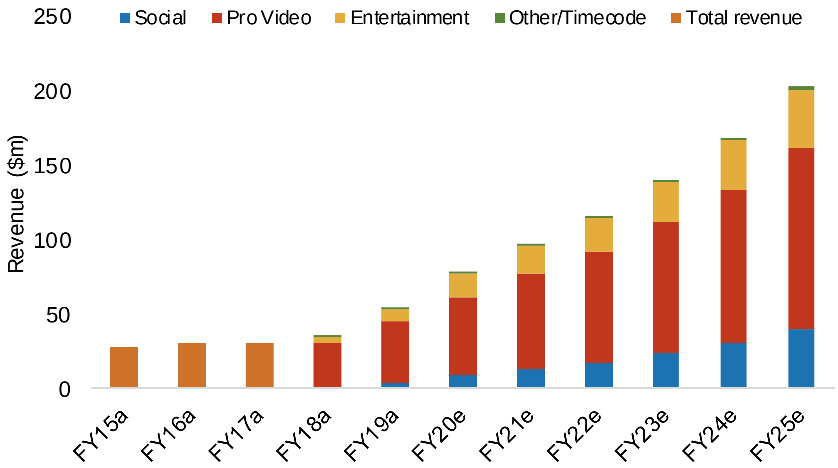
Founded in 2010 and headquartered in Melbourne, the company has grown internationally with eight offices located in five countries, each servicing a key part of the global market. The company's global sales operations are conducted via the German office in Frankfurt. CEO Jeromy Young has over 20 years of tech management experience, holding previous roles as Business Development Manager at Canopus Japan and Blackmagic Design Pty Ltd. The company has significant IP embedded in their proprietary processes, developed in-house by a team of over 30 engineers.

Key Drivers

Key Driver 1 – Growth of Social Video Market

AMS has experienced significant growth in recent years, largely off the back of demand in the social and pro video market segments. The company's focus on capturing market share in the rapidly growing social media market will be accretive, leveraging existing sales channels. This market, the lower end of Atomos' product range, constitutes social media content creators. The number of content creators have increased 23% yoy since 2012. Content on these platforms is distributed through free, ad-click driven platforms like Facebook, Instagram and YouTube.

Figure 1: Revenue Growth by segment



Source: Company Data and OML estimates

AMS has already established several other key advantages it can use to expand in these markets, which includes:

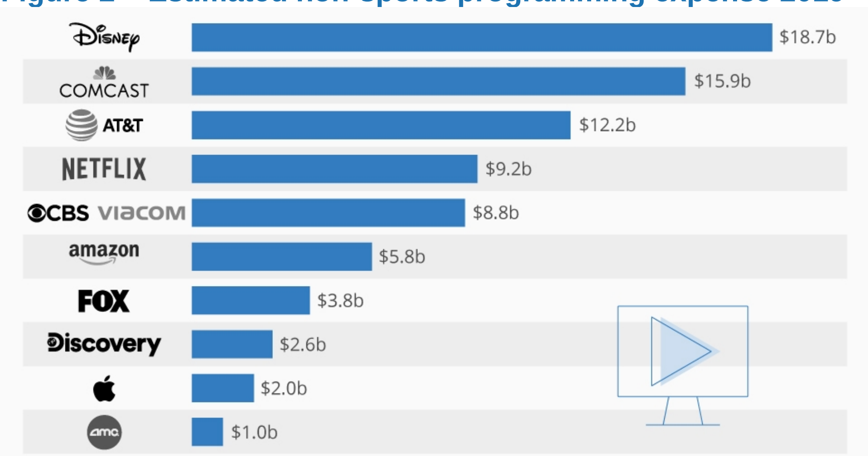
- Using the existing Ninja platform to release upgraded products based on the same core technology (reduced R&D costs).
- Leveraging existing sales channels with distributers that can supply to new and extended markets.
- Developing relationships with new camera manufacturers and other market players to attract new demand (prior partnerships have included Sony, Canon & Nikon).

Key Driver 2 – Cinema Product Launches

The Neon range of products, launched in September 2019, are 4K HDR field monitor-recorders for studio production. This is targeted at the cinema segment of the video production industry, with its need to produce premium, high-quality entertainment content. The product family offers four monitors differentiated by size (17”-55”), with prices ranging from $5,500 to $25,000 per device. While the new product range will cannibalise some of the existing high-end monitors (Sumo range), we believe the Neon family of products will drive strong sales growth.

We anticipate this product offering to be the focal point of growth in the upcoming year and is consistent with the company’s strategy to expand into the entertainment and social markets, which is estimated have a TAM 10x greater than the pro video market historically. Video streaming platforms have grown astronomically in the last decade; Netflix revenue has increased from US$1.41B in 1Q14 to US$5.25B during the same period in 2019. Netflix, Amazon and Apple are expected to grow their combined spend for original content from US$5B in 2017 to >US$23B in 2022 (AMS Prospectus). Given these hefty budgets, enhanced quality of content is required to remain competitive within the market.

Figure 2 – Estimated non-sports programming expense 2019



Source: Statista, Moffett Nathanson, Company Reports,
https://www.statista.com/chart/13076/video-content-spending

Beyond growing the top line, we think the introduction of new product lines will affect both the gross margin and operating margin of the business. While a gross margin of ~45% in FY20e is consistent with companies in the consumer durables sector, we anticipate that the pricing structure of the higher-end Neon products will offer improved gross margin dynamics for the business as these products rise in the mix. While consumers are fairly price sensitive, enterprises with budgets exceeding $1M are often less focused on price and more focused on technology offering. As sales grow, we also anticipate better rates with the manufacturer for larger orders, which would also be accretive to gross margins. With a richer product mix, we think operating expenses will need to increase to support the anticipated sales growth. We expect sales and marketing costs to grow as the company penetrates the professional market. Engineering costs will also expand in line with the product line up as AMS broadens its reach throughout the eco-system.

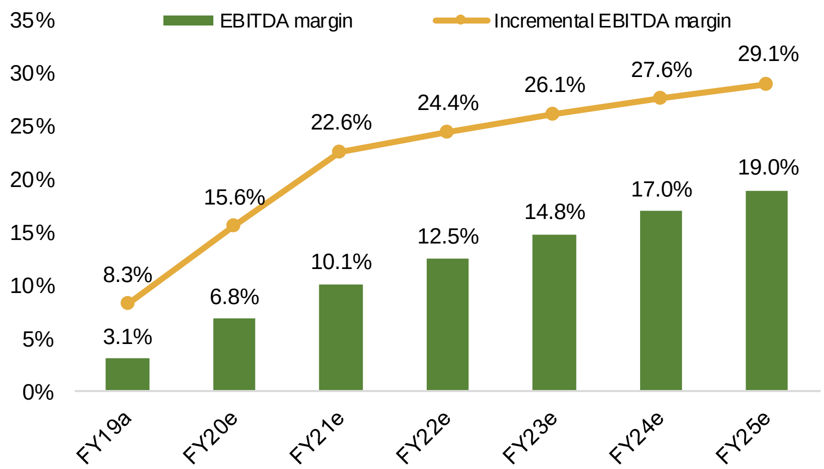
Key Driver 3 – Operating leverage

Atomos has invested heavily in opex to bolster internal research and development, marketing and administrative support in recent years which came at the detriment of profitability in FY17 and FY18.

Profitability rebounded strongly in FY19, with an EBITDA margin of 3%, but an incremental EBTIDA margin of ~8%. We expect these overheads investments to incrementally slow going forward, allowing EBITDA margin to expand up toward 20%.

This leverage means we forecast a CAGR in revenue FY19-25 of ~22% versus an EBITDA CAGR of ~50%, and an NPAT CAGR of ~72%.

Figure 3 – EBITDA margin and incremental EBITDA margin



Source: OML

Key Driver 4 – Develop Strategic Relationships

AMS aims to evolve its current strategic relationships with global camera manufacturers and major software video editing providers, in order to achieve end-to-end integrated solutions. AMS monitors assimilate with global camera manufacturers, allowing for cross promotion. Further, by achieving a seamless workflow from capture, through recording and into post production, software relationships create an efficient process. The key strategic relationships are below:

Apple

In 2011, CEO Jeremy Young pitched his original Ninja 1 monitor to Steve Jobs. His proposition was recording ProRes directly from the sensor, which launched the strategic relationship with Apple and established credibility for the brand. Last year, AMS was granted a license by Apple for use of its updated recording format, “ProRes RAW”; a codec which creates much smaller video file sizes, while retaining the quality video data rates and editing capabilities. By achieving a seamless workflow from capture, through recording and into post production, ProRes RAW creates an efficient production process for AMS customers.

Adobe

The US manufacturer of computer software enables editing of video directly recording on an AMS device, removing the need for transcoding. This enables windows devices the same access to RAW workflows as IOS, using Adobe Premiere Pro CC or Adobe After Effects CC.

Cannon and Nikon

AMS products integrate with numerous camera manufacturers, including Canon and Nikon. By gaining access to proprietary image processing algorithms, AMS monitors can process colour, brightness, and image clean up. Marketing synergies are also established, with the example of Nikon’s Z6 & Z7 mirrorless cameras being cross promoted with AMS’ Ninja V monitor recorders. This is accretive for AMS, as products are sold with these Japanese cameras, driving monitor sales. Canon and Nikon’s market share is 2nd (36%) and 3rd (24%) in the mirrorless camera market respectively, based on sales figures between Nov 18 and Oct 19.

JVC Kenwood

In 2017 AMS signed a partnership with JVC Kenwood Corporation (JVC), a global Japanese electronics and Camera manufacturer. This agreement specifies JVC may acquire products from AMS, however there is no minimum volumes in the contract. There is also the option, if the requirement arises, for AMS to use JVC production facilities down the track, diversifying production risk for the company.

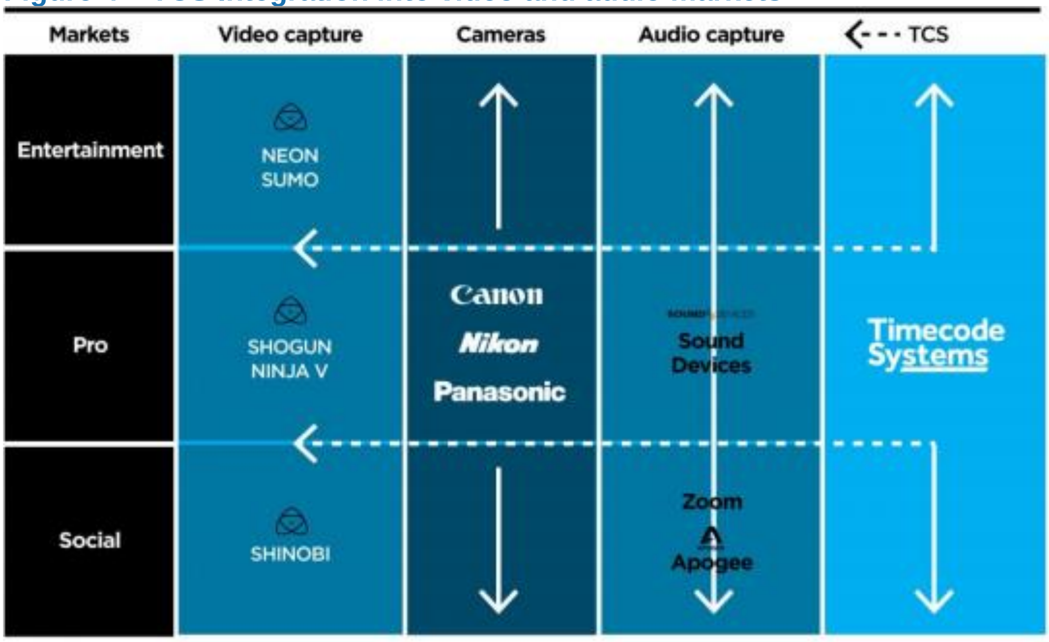
The two organisations have shared software and hardware technologies including AtomIC (under license), AMS’ first custom built silicon development project, which was licensed to JVC to be used in one or more of their products. These chips provide proprietary low power, high function video capability and are one of AMS’ key in-house proprietary technologies.

Key Driver 5 - Acquisitions

Following its recent $7.5M capital raise, AMS acquired UK based company Timecode Systems Ltd (TCS). TCS has developed unique IP, which allows multi-device synchronisation of video and audio capture device. This includes any combination of large-scale film cameras, to DSLRs, GoPros and smart phones. This will be accretive for AMS due to the following factors:

- With several patents on the IP, TCS will create a technological advantage for AMS. They now can license this technology to audio and camera companies, should this become the standard within the industry.
- Timcode devices can be accurately synchronised up to 300 meters away, a process which is repeatable so effective at even further distances. At a local level, external devices connect to Timecode products via Bluetooth.
- Market position will be strengthened by the expansion of current core partnerships. TCS products help link numerous devices and they already have established relationships with camera manufacturers.
- Ownership of TCS will enable full integration of the TCS sync technology throughout the AMS product line-up. TCS expected to be earnings accretive in FY21 and we estimate to provide roughly 10% uplift in sale of monitor recorders over the medium term.
- By transitioning to AMS' supplier arrangements and manufacturing processes, significant cost synergies will result. The company estimates a 30% reduced production cost and sales uplift from leveraging AMS' distribution channels and marketing.
- TCS is already working on complex multicamera productions with Marvel Studio's, Amazon Studios and Walt Disney. These relationships will assist with promotion AMS' existing cinema quality product offerings (e.g. Neon).

Figure 4 – TCS Integration into video and audio markets



Source: Atomos.com

Risks

Higher Input Prices

- AMS cost of revenues will be sensitive to input prices of certain products, including semiconductor chips, LCD panels and memory.
- The memory chip market, mired in a significant downturn throughout 2019, seems to have bottomed out. Inventories are dropping and demand is rising, indicating a brighter year for the sector in 2020.
- The semiconductor market is expected to reach $573 billion by 2024, with a CAGR of 4.1% from 2019 to 2024. This will likely increase the price of manufacturing for AMS, impacting gross margins in the medium term.

https://www.asiatimes.com/2019/12/article/after-dire-year-memory-chips-poised-for-strong-2020/
https://www.businesswire.com/news/home/20191007005567/en/Global-Semiconductor-Market-Report-2019-573-Billion

Increased Competition

There are a range of other companies who produce similar monitor-recorder products in the market. We see competitors as a key risk to medium term growth, but we think this is partially offset by the growing TAM. Amateur content creation is still growing, and with the added product range, AMS can address new markets. Key competitors include, Blackmagic Design, Convergent Design and SmallHD.

AMS faces the risk that:

- Existing competitors could increase their market share through aggressive sales and marketing.
- Customers substitute with these alternative products.
- They may fail to anticipate and respond to changing opportunities or develop new products.
- Customers or strategic partners who purchase from or cross promote, may develop products which compete with AMS.

Macro Risks to Supply Chain

There are certain inputs for which the AMS has a single or limited source of supply. This inherently increases risk in the production process. Specific macro conditions affecting supply chain, including:

- US China trade war
- Hong Kong Protests

Lack of formal written distribution agreements

Given that in the USA a small number of distributors are responsible for 50% of the group's revenue, AMS is materially exposed to this risk. AMS does not have formal written contracts in place with most of its distributors, who order and purchase products on an ad hoc basis with no minimum purchase order obligations. Distributors may decide not to continue buying AMS products, which would have an impact on future revenue. AMS product cannot be bought from any source other than Atomos, however.

Product Obsolesce

The computer industry has very quick rates of product obsolescence, as new designs continue to eat up existing technology. Further, given the monitor recorder industry in which AMS exists is relatively juvenile, the rate of improvement is high. The typical customer cycle for AMS products is 3-5 years.

Remaining at the forefront of technological advancements in the industry depends heavily on the key strategic relationships AMS has in place; Apple, Sony, Nikon, Adobe etc. Were these relationships to break down or these large corporations take a different approach to the sector, AMS' growth prospects would be materially affected.

Valuation and recommendation

Given the long-dated nature of AMS growth and its working capital consumptive model, we focus on DCF in deriving a valuation for the business.

Our assumptions and outputs are shown below, with the result a valuation of $1.56 per share and a rolled-forward price target of $1.75 per share. This offers a TSR of ~21% which underpins our Buy recommendation.

We are cautious in issuing a Buy recommendation on a stock trading on 40x FY22 PE (on OMLe), but take confidence from:

- The low level of market share AMS holds across the Social and Entertainment device markets (~0.01% currently), offering significant upside risk
- The IP portfolio built over recent years continuing to be leveraged into new products and markets
- The affiliation with Apple driving users to AMS products in order to work in what is likely to become most popular editing format – ProRes RAW
- The stock is already trading on 47x FY22 PE on the other broker's EPS forecasts. Our target implies 49x on our higher EPS forecast. If the market takes our forecast as probable, if AMS holds the same multiple, it would trade close to our target
- Operating leverage driving compelling profit growth
- Strong gross margins and supply chain controls
- Conservative balance sheet

Figure 5 – DCF valuation overview

DCF inputs	
Beta	1.20
Risk free rate	5.0%
Market risk premium	6.0%
Cost of equity	12.2%
Debt premium	4.0%
Cost of debt (after tax)	6.3%
D/E	20.0%
WACC	**11.0%**
Terminal growth rate	**3.0%**

DCF outputs	
Forecast cash flows ($m)	68
Terminal value ($m)	220
Franking value	3
Enterprise value ($m)	**291**
Add net cash (FY20e) ($m)	-16
Equity value ($m)	**307**
Implied equity value (p.s.)	1.56
Rolled fwd at Ke	12%
Price target	**1.75**
Implied CAGR (FY20-25)	
Revenue	21.4%
EBITDA	48.9%
NPAT	70.8%
Implied FY21 PE	91.5
Implied FY22 PE	49.2
Implied FY23 PE	30.6
Implied FY24 PE	20.8

Source: OML

Atomos (AMS) Overview

Atomos Limited

Atomos Limited (AMS) is a manufacturer of monitor recorders, supplying to a network of wholesale distribution partners. AMS products ensure content creators have access to the latest video monitoring, processing and recording technologies, regardless of how advanced the camera or production equipment they use.

AMS key product strength versus competitors is its developed intellectual property concerning high quality video monitoring and recording devices and software, operating system and apps. This portfolio of key products and accessories are a result of its developed R&D capability, aided by an in-house team of over 30 engineers.

Atomos generates most of its revenue (85% in FY19) from the sale of monitor recorder products. The remaining revenue is generated from video and broadcast converters, cables, licencing and accessories. Atomos sells its products through a network of wholesalers across the world, who sell into a broad network of resellers and retailers in each geographic region. 50% of Atomos' revenues come from the US in FY19, followed by 28% in EMEA and 21% in Asia Pacific.

Product Proposition

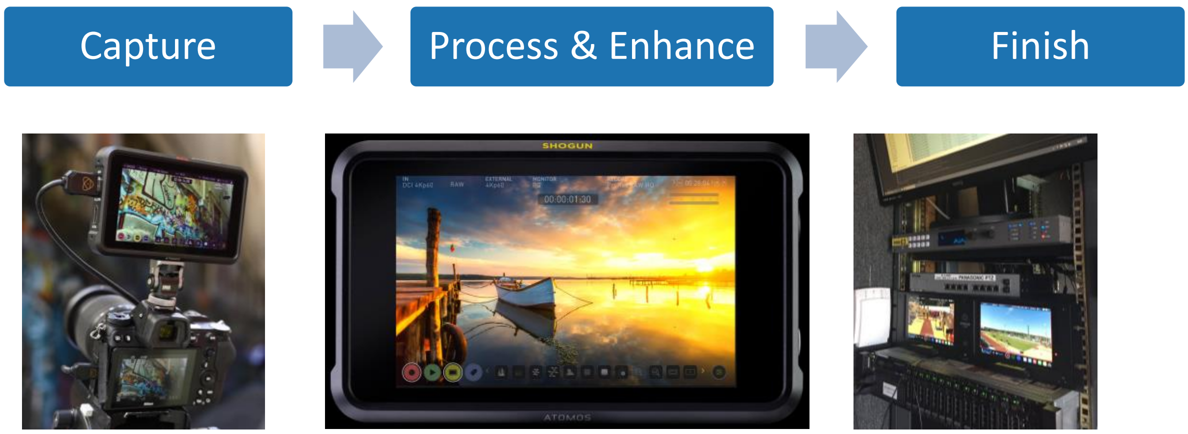
Despite modern digital camera's providing exceptional quality images, customers are limited by:

- Heavily compressed recorded data.
- Camera's not being designed for post-production editing software.
- Short recording times due to large file sizes.
- Small, low resolution monitors

AMS' main product proposition is to unlock the creative, and commercial, potential of these digital cameras. They converge computer and video technologies, by combining high-quality recording, monitoring and editing functionality into a low-cost, add-on device for existing cameras. The portable (in-field) monitor transfers raw images captured by the camera into a proprietary hard drive, which through increased data rates, enhances the quality of the video. The improved user interface of the device allows for flexible editing and content distribution on the go.

Figure 3 below shows the content creation workflow. The monitor connects via HMDI or SDI cable, capturing data directly from the camera's sensor. This is stored on an inbuilt hard drive, with the customer able to record, edit and playback using the large interface. The content is then edited and finished using post production software.

Figure 6: Content Creation Workflow

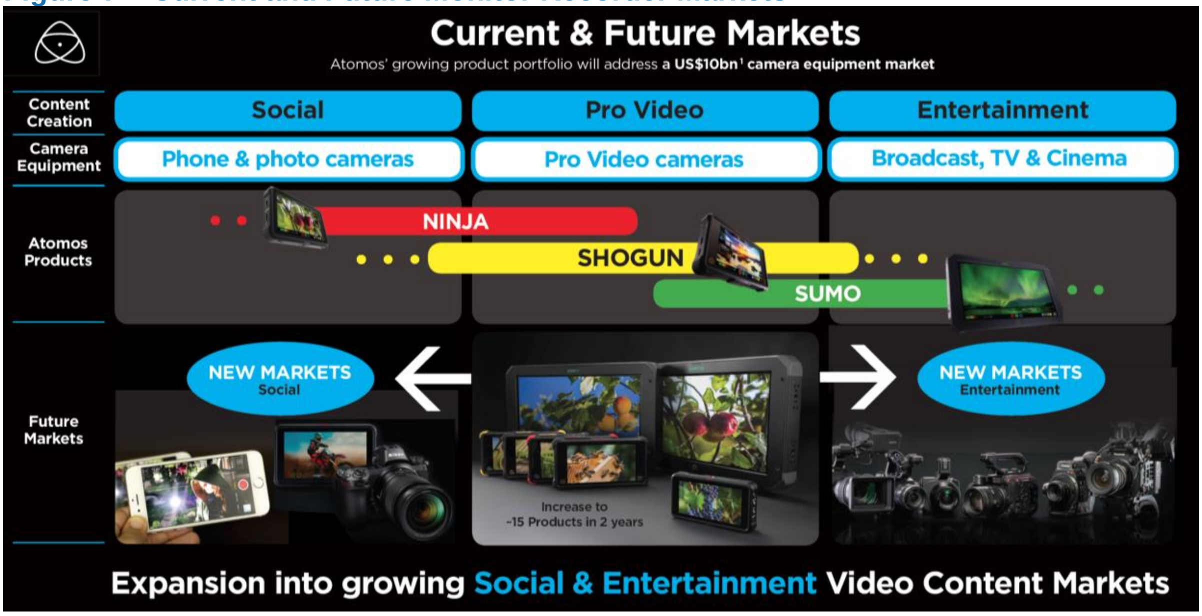


Source: Atomos.com

Types of Monitor Recorders

- **Shinobi** - stand-alone small monitor with a high brightness 1000nit 5-inch HDMI screen that's used for vloggers, creatives and photographers.
- **Ninja V** – records in 4Kp60 10-bit HDR (high-dynamic-range) imaging video direct from camera's sensor. Able to record Apple ProRes RAW from Nikon mirrorless cameras. HDMI connection only.
- **Shogun** - designed for the film and video professional. 8K resolution, 12bit+ colour and data rates of up to 1.8Gbs, 220MB/s.
- **Sumo** - 19" 1920 x 1080 LCD panel with 10-bit processing. Used as director monitor in the field, or an affordable HDR studio monitor.
- **Neon** – Monitor range comes in 17", 24", 31" and 55" screen sizes, and complements other Atomos products. Targeted at the cinema segment of the video production industry.

Figure 7 – Current and Future Monitor Recorder Markets



Source: Atomos.com

Market Segments

AMS currently targets the Pro Video segment of the Global Camera and Video Equipment Market, which has a value of over $1b. This segment covers video production for promotion/advertising, events, business and corporate video. It also includes in house training, event capture and university education with the cost of cameras used usually between $1,000 and $10,000. AMS's main proposition is to converge the computer and video technologies using add-on, emulating exorbitant cinema quality cameras at a fraction of the price.

AMS have also expanded their offerings into the social and Entertainment markets, worth an estimated >$9b in aggregate. The number of content creators in the social segment have increased 23% yoy since 2012. Content on these platforms is distributed through free, ad-click driven platforms like Facebook, Instagram, Twitter and YouTube. Content produced for this segment typically has no budget or a budget of up to $1,000.

The company recently launched its "Neon" range of cinema monitor-recorders targeted at the high-end entertainment industry, an identified growth market. Used for news/entertainment platforms like Fox Corporation, Netflix and Amazon, the Neon range doubled AMS' product portfolio and we anticipate will account for an increasing proportion of sales over time. We expect this product offering to be the focal point of growth in the upcoming year and is consistent with the company's strategy to expand into the entertainment market.

Atomos' Competitors

Figure 8 – Competitive Landscape

	Blackmagic	Convergent Design	Small HD	Atomos
Products	Cameras, broadcast converters, codecs, video/audio monitoring	Monitor recorders	Field monitors for HDMI and SDI cameras (no recording)	Monitor recorders, SSD drives, cables, converters
Camera Compatibility	Blackmagic	ARRI, Canon, Sony LUT	Sony, Canon	Sony, Panasonic, Nikon, Canon et al.
Monitor Price $US	$1,625 - $9765	$2195 - $3250	$499 - $5699	$695 - $16,999
Codecs	ProRes RAW x Blackmagic RAW ✓ Apple ProRes x Avid DNxHD ✓	Apple ProRes RAW x Blackmagic RAW x Apple ProRes ✓ Avid DNxHD ✓	Internal control software for RED & ARRI cameras only	ProRes RAW ✓ Blackmagic RAW x Apple ProRes ✓ Avid DNxHD ✓
Markets	Pro, Entertainment	Pro, Entertainment	Social, Pro, Entertainment	Social, Pro, Entertainment

Source: Company Websites

The following are two of the market leading monitors for DSLR and mirrorless cameras on the market, used by the social and pro segments. Importantly, the Small HD Focus is a *monitor only* without recording capability of the Ninja V. Once all accessories have been purchased, the price differential between them is negligible. We see the price differential as marginal given Ninja V offers recording and superior features vs the Small HD product.

Figure 9 - Atomos Ninja V vs Small HD Focus

	Atomos Ninja V	Small HD Focus
Price $US	$695 + local tax	$499 + local tax
Recording	Yes	No
Resolution	1920 x 1080 (true HD)	1280 x 720
Brightness	1000 nits	800 nits
Operating System	Tap to zoom	Pinch to zoom
Battery life	3 hours (with Sony NPF)	4 hours (with Sony NPF)
Build quality	Aluminium alloy (solid)	Rubberised plastic
Weight	12.7 ounces	Weight: 6.1 ounces
Software capability	ProRes RAW	N/A

Source: Company websites

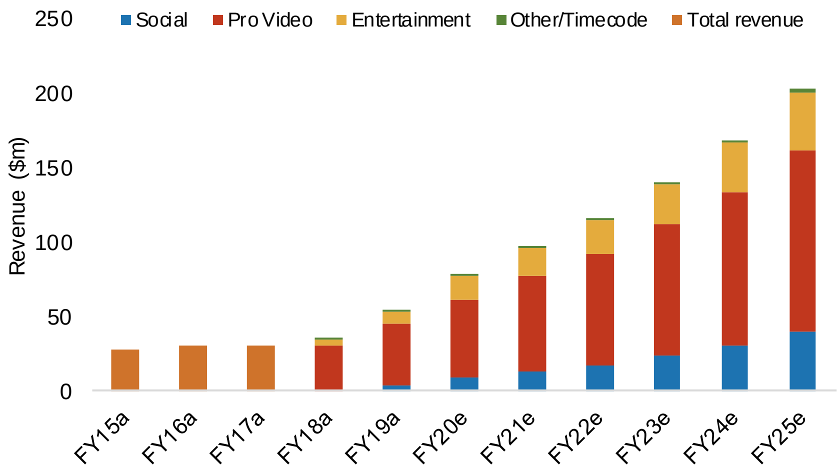
We note that with limited barriers to entry and high growth projections, the market could attract interest from multinational manufacturers including Panasonic, Sony and Nvidia. For this reason, AMS' IP and strong process know-how could make them an attractive takeover target. Further, with AMS engaging in strategic partnerships with some of these companies, there is a risk they attempt to "build their own". While AMS would not be able to compete with these players on R&D spend, it has a solid moat which prevents large players from competing:

- AMS can capture video and export through a variety of codecs into different post-production software. Large manufacturers tend to create in-house products which can't be used with other cameras, an example being Blackmagic's new codec "RAW" (only functional with Blackmagic cameras). With AMS, content creators can match different cameras, codecs and software in the one production.

Key Driver 1 – Growth of Social Video Market

AMS has experienced significant growth in recent years, largely off the back of demand in the social and pro video market segments. The company's focus on capturing market share in the rapidly growing social media market will be accretive, leveraging existing sales channels. This market, the lower end of Atomos' product range, constitutes social media content creators. The number of content creators have increased 23% yoy since 2012. Content on these platforms is distributed through free, ad-click driven platforms like Facebook, Instagram and YouTube.

Figure 10: Revenue Growth by segment



Source: Company Data and OML estimates

AMS has already established several other key advantages it can use to expand in these markets, which includes:

- Using the existing Ninja platform to release upgraded products based on the same core technology (reduced R&D costs).
- Leveraging existing sales channels with distributers that can supply to new and extended markets.
- Developing relationships with new camera manufacturers and other market players to attract new demand (prior partnerships have included Sony, Canon & Nikon).

The focus on capturing market share in the social video market has proved successful, but we anticipate further growth into FY20. Part of AMS' strategic direction is connecting with the up and coming YouTube stars. They are professional-amateurs who have regular production schedules, contributing to the global camera market. As the individuals develop and add click through money, they upgrade video production equipment, resulting in repeat purchases and strong organic growth.

Figure 11 – Highest Earnings "Youtubers" 2018

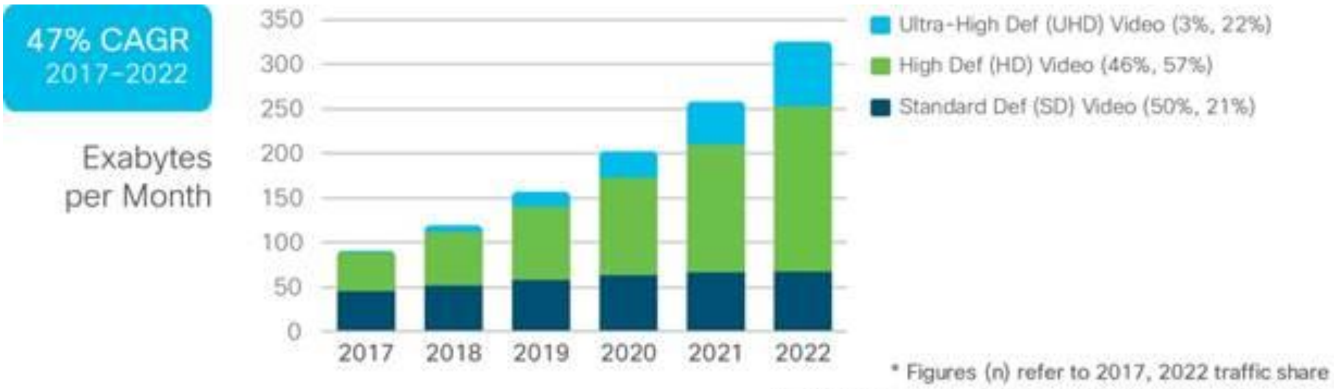
YouTuber	Content	Subscribers	Income '18 (US$)
Ryan ToysReview	Toy Reviews	22.8M	$22 million
Jake Paul	Comedy	19.7M	$21.5 million
Dude Perfect	Sports Trick Shots	47.5M	$20 million
DanTDM	Gaming	22.2M	$18.5 million
Jeffree Star	Makeup Tutorials	16.7M	$18 million

Source: Forbes, YouTube

Globally, web video traffic will be 82% of all IP traffic (also known as web traffic), for both corporate and consumer, by 2022. IP video traffic will grow 4X from 2017-2022, a CAGR of 29%. Internet video traffic will grow 4X 2017 to 2022, a CAGR of 33%.

Additionally, the quality of video content produced is increasing - UHD (or 4K) video will account for an estimated 22% of global IP Video traffic by 2022. The demand for devices which meet these standards will increase, driving revenue for AMS.

Figure 12 – Global UHD IP Video Traffic



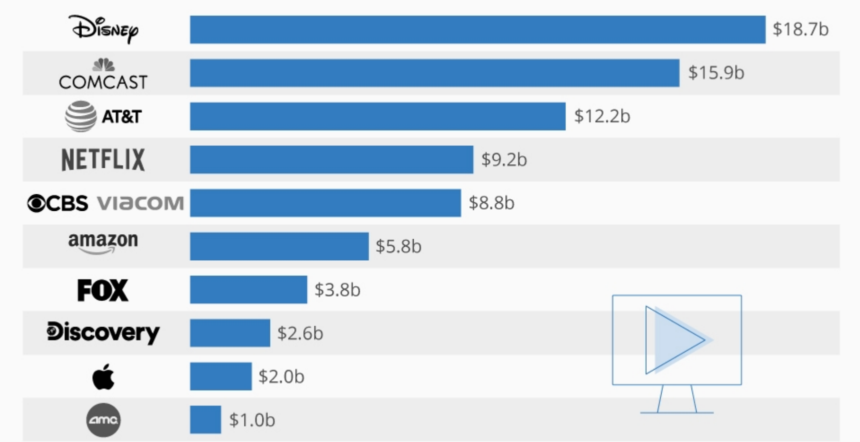
Source: Cisco VNI Global IP Traffic Forecasts https://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/white-paper-c11-741490.html#_Toc532256800

Key Driver 2 – Cinema Product Launches

The Neon range of products, launched in May 2019 (shipping in December), are 4K HDR field monitor-recorders for studio production. This is targeted at the cinema segment of the video production industry, with its need to produce premium, high-quality entertainment content. The product family offers four monitors differentiated by size (17”-55”), with prices ranging from $5.5-25k each. While the new product range will cannibalise some of the existing high-end monitors (Sumo range), we believe the Neon family of products will grow net revenue significantly.

We anticipate this product offering to be the focal point of growth in the upcoming year and is consistent with the company’s strategy to expand into the entertainment and social markets, which is estimated have a TAM 10x greater than the pro video market historically. Video streaming platforms have grown astronomically in the last decade; Netflix revenue has increased from $1.41B in 1Q14 to $5.25B during the same period in 2019. Netflix, Amazon and Apple are expected to grow their combined spend for original content from US$5B in 2017 to >US$23B in 2022 (AMS Prospectus). Given these hefty budgets, enhanced quality of content is required to remain competitive within the market.

Figure 13 – Estimated non-sports programming expense 2019

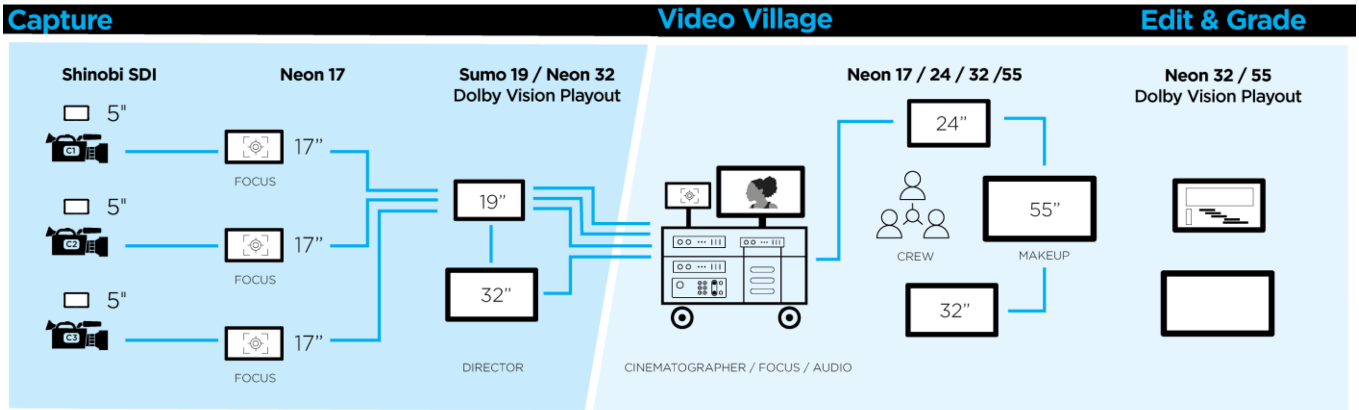


Source: Statista, Moffett Nathanson, Company Reports, https://www.statista.com/chart/13076/video-content-spending

Beyond growing the top line, we think the introduction of new product lines will affect both the gross margin and operating margin of the business. While a gross margin of ~45% in FY20e is consistent with companies in the consumer durables sector, we anticipate that the pricing structure of the higher-end Neon products will offer improved gross margin dynamics for the business as these products rise in the mix. While consumers are fairly price sensitive, enterprises with budgets exceeding $1M are often less focused on price and more focused on technology offering. As sales grow, we also anticipate better rates with the manufacturer for larger orders, which would also be accretive to gross margins. With a richer product mix, we think operating expenses will need to increase to support the anticipated sales growth. We expect sales and marketing costs to grow as the company penetrates the professional market.

The challenge with HDR production is maintaining the creative intent at the time of shooting vs the finished product, viewed on devices and TVs. AMS have created a solution, as directors can view TV and Cinema standard quality images on Neon devices. This also saves the creator time, allowing them to make more decisions in the moment of recording, playback and editing. Given the gross demand for content on streaming services discussed above, production efficiency is crucial. All Neon units are designed with a Master Control Unit, which can be swapped out to take advantage of the latest video recording technologies, reducing the risk of obsolescence.

Figure 14 – Cinema and Episodic TV Production



Source: Atomos.com

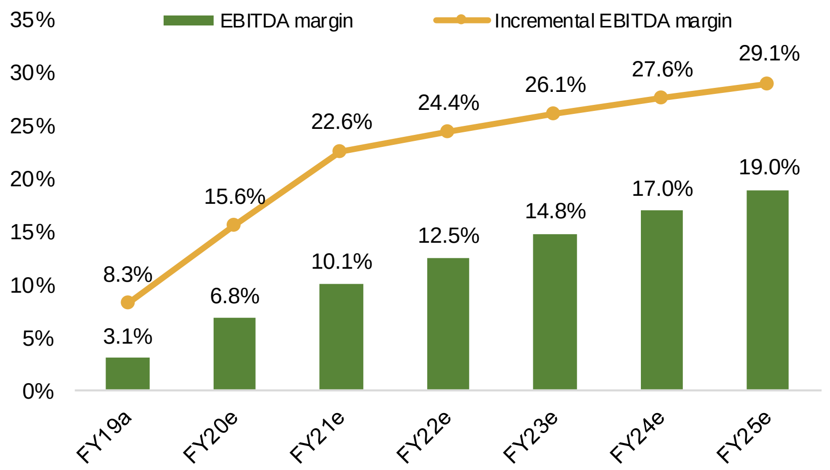
Key Driver 3 – Operating leverage

Atomos has invested heavily in opex to bolster internal research and development, marketing and administrative support in recent years which came at the detriment of profitability in FY17 and FY18.

Profitability rebounded strongly in FY19, with an EBITDA margin of 3%, but an incremental EBTIDA margin of ~8%. We expect these overheads investments to incrementally slow going forward, allowing EBITDA margin to expand up toward 20%.

This leverage means we forecast a CAGR in revenue FY19-25 of ~22% versus an EBITDA CAGR of ~50%, and an NPAT CAGR of ~72%.

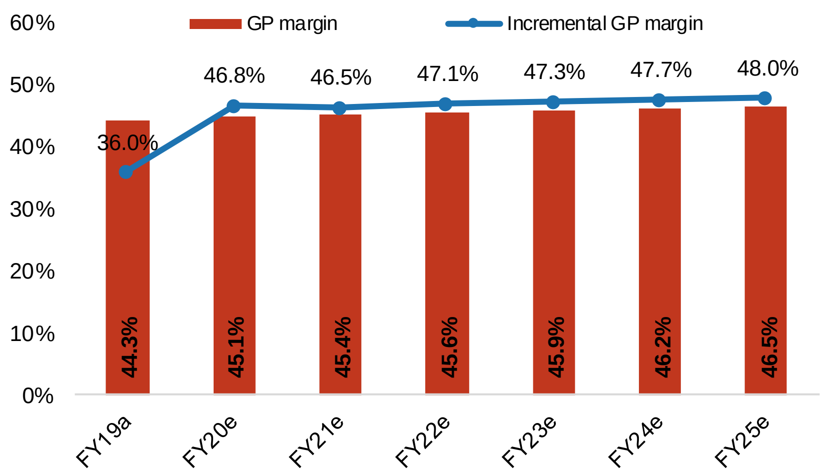
Figure 15 – EBITDA margin and incremental EBITDA margin



Source: OML

We do not anticipate significant changes in GP margin to drive this operating leverage, only assuming a ~1.7% point improvement in GM between FY20 and FY27. New products target higher than reported GM, while legacy products may be priced more sharply to clear inventory. We expect a slow improvement in margin as new products into new segments drive revenue growth and improved margin mix shift.

Figure 16 – GP margin and incremental GP margin



Source: OML

Key Driver 4 – Strategic Relationships

AMS aims to evolve its current strategic relationships with global camera manufacturers and major software video editing providers, in order to achieve end-to-end integrated solutions. AMS monitors assimilation with global camera manufacturers, allows for cross promotion. Further, by achieving a seamless workflow from capture, through recording and into post production, software relationships create efficiency of process. The key strategic relationships are below:

Software manufacturers

Apple

In 2011, CEO Jeremy Young pitched his original Ninja 1 monitor to Steve Jobs. His proposition, recording ProRes directly from the camera sensor, launched a strategic relationship with Apple and established credibility for the brand. Last year, AMS was granted a license by Apple for use of its updated recording format, "ProRes RAW"; a codec which creates much smaller video file sizes, while retaining the quality video data rates and editing capabilities. By achieving a seamless workflow from capture, through recording and into post production, ProRes RAW creates an efficient process for AMS product users. The material impacts for AMS:

- Allows for one of the only fully integrated verticals in the market.
- Strengthens competitive position - ProRes RAW is currently only licenced globally to AMS and one other, camera company DJI Technology Co who focus on aerial video and drone production (not direct competitor).
- Promotes the newly released Neon products to be utilised in Cinema production. ProRes RAW is one of the most popular codecs in professional post-production. When combined with the upcoming 8K Neon module, customers will also be able to record in resolutions up to 8K. As mentioned, we anticipate Neon to drive strong incremental sales.

Figure 17 – ProRes RAW product capability

	NINJA V	SHOGUN INFERNO / 7	SUMO 19	NEON + 4K MASTER CONTROL UNIT	NEON + 8K MASTER CONTROL UNIT
4Kp60	✓	✓	✓	✓	✓
8Kp60	✗	✗	✗	✗	✓
HDMI 2.0	✓	✓	✓	✓	✓ HDMI 2.1
SDI 12G		✓	✓	✓	✓

Source: Atomos.com

Through ProRes RAW, AMS also enables instant availability to the world's most advanced editing and colour grading suite - final Cut Pro X by Apple. Facilitating this connection between the best digital cameras and best production software is what gives AMS its competitive advantage in the entertainment market. All Neon monitors are built to facilitate ProRes RAW 8K capture, which will be available in 2020.

AMS products can also link directly to the Apple iPhone, allowing customers to record and monitor their phone screen.

Adobe

The US manufacturer of computer software enables editing of video directly recording on an AMS device, removing the need for transcoding. This enables windows devices the same access to RAW workflows as IOS, using Adobe Premiere Pro CC or Adobe After Effects CC.

Global Camera Manufacturers

Cannon and Nikon

AMS products integrate with numerous camera manufacturers, including Canon and Nikon. By gaining access to proprietary image processing algorithms, AMS monitors can process colour, brightness, and image clean up. Marketing synergies are also established, with the example of Nikon's Z6 & Z7 mirrorless cameras being cross promoted with AMS' Ninja V monitor recorders. Canon and Nikon's market share is 2nd (36%) and 3rd (24%) in the mirrorless camera market respectively, based on sales figures between Nov 18 and Oct 19. This is accretive for AMS, as products are sold with these Japanese cameras, driving monitor sales.

https://www.bcnretail.com/market/detail/20191124_146544.html&SAR
https://www.techradar.com/au/news/sony-conquers-canon-and-nixes-nikon-in-the-full-frame-mirrorless-market

Figure 18 – Product Bundling

https://www.teds.com.au/canon-eos-r-24-105mm-ninja-v-kit, Atomos.com

JVC Kenwood

In 2017 AMS signed a partnership with JVC Kenwood Corporation (JVC), a global Japanese electronics and Camera manufacturer. This agreement specifies JVC may acquire products from AMS, however there is no minimum volumes in the contract. There is also the option, if the requirement arises, for AMS to use JVC production facilities down the track, diversifying production risk for the company.

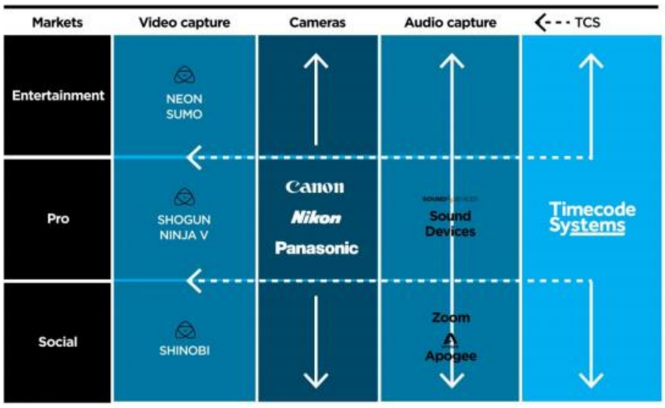
The two organisations share IP over software and hardware technologies including AtomIC (under license), AMS' first custom built silicon development project, which was licensed to JVC to be used in one or more of their products. These chips provide proprietary low power, high function video capability and are one of AMS' key in-house patented technologies.

Key Driver 5 – Acquisitions

Following its recent $7.5M capital raise, AMS acquired UK based company Timecode Systems Ltd (TCS). TCS has developed unique IP, which allows wireless multi-device synchronisation of video and audio capture device. Genlock is the wired solution which emits a pulse to synchronise devices via cable. This is impractical, and expensive, as cameras can't be maneuvered at speed. Timecode devices use a form of radio frequency and is usable with any combination of large-scale film cameras, to DSLRs, GoPros and smart phones. This will be accretive for AMS due to the following factors:

- With several patents on the IP, TCS will create a technological advantage for AMS. They now can license this technology to audio and camera companies, should this become the standard within the industry.
- Timecode devices can be accurately synchronised up to 300 meters away, a process which is repeatable so effective at even further distances. At a local level, external devices connect to Timecode products via Bluetooth.
- Market position will be strengthened by the expansion of current core partnerships. TCS products help link numerous devices and they already have established relationships with camera manufacturers.
- Ownership of TCS will enable full integration of the TCS sync technology throughout the AMS product line-up. TCS expected to be earnings accretive in FY21 and we estimate to provide roughly 10% uplift in sale of monitor recorders over the medium term.
- By transitioning to AMS' supplier arrangements and manufacturing processes, significant cost synergies will result. The company estimates a 30% reduced production cost and sales uplift from leveraging AMS' distribution channels and marketing.
- TCS is already working on complex multicamera productions with Marvel Studio's, Amazon Studios and Walt Disney. These relationships will assist with promotion AMS' existing cinema quality product offerings (e.g. Neon).

Figure 19 – TCS Integration into video and audio markets



Source: Atomos.com

Evidently, potential targets for AMS include companies with strong complimentary technology. A horizontal acquisition would appear unlikely given AMS's position as a market leader and the lack of quality direct competitor products.

With high growth projections, this market could yet attract interest from multinational manufactures including Panasonic, Sony and Nvidia. While Atomos would not be able to compete with these players on R&D spend, their IP and strong process know-how could make them an attractive takeover target.

Risks

Higher Input Prices

- AMS cost of revenues will be sensitive to input prices of certain products, including semiconductor chips, LCD panels and memory.
- The memory chip market, mired in a significant downturn throughout 2019, seems to have bottomed out. Inventories are dropping and demand is rising, indicating a brighter year for the sector in 2020.
- The semiconductor market is expected to reach $573 billion by 2024, with a CAGR of 4.1% from 2019 to 2024. This will likely increase the price of manufacturing for AMS, impacting gross margins in the medium term.

https://www.asiatimes.com/2019/12/article/after-dire-year-memory-chips-poised-for-strong-2020/
https://www.businesswire.com/news/home/20191007005567/en/Global-Semiconductor-Market-Report-2019-573-Billion

Increased Competition

There are a range of other companies who produce similar monitor-recorder products in the market. We see competitors as a key risk to medium term growth, but we think this is partially offset by the growing TAM. Amateur content creation is still growing, and with the added product range, AMS can address new markets. Key competitors include, Blackmagic Design, Convergent Design and SmallHD.

AMS faces the risk that:

- Existing competitors could increase their market share through aggressive sales and marketing.
- Customers substitute with these alternative products.
- They may fail to anticipate and respond to changing opportunities or develop new products.
- Customers or strategic partners who purchase from or cross promote, may develop products which compete with AMS.

On the pricing front, AMS is currently priced towards the affordable end of the market, with their goal to democratise content creation. However, large multinational players that could enter the market include Panasonic, BLA and Nvidia if they saw a possibility for profitable growth in the industry. Unless AMS became a takeover target, the entrance of a big multinational player into the space would be a threat to AMS' business, as they would have a greater ability to compete on price than existing competitors.

Macro Risks to Supply Chain

There are certain inputs for which AMS has a single or limited source of supply. This inherently increases risk in the production process. Specific macro conditions affecting supply chain are summarised below:

US China Trade War

AMS manufactures in China, with nearly 50% of sales in the US, so tariffs from US/China Trade War could potentially affect demand in the US. President Donald Trump recently warned the China trade war could go beyond the 2020 election. AMS are currently looking at establishing manufacturing in Thailand with JVC to help mitigate this risk slightly. Certain components of monitors have single or limited supply, namely FPGA chips supplied by Xilinx and LCD panels. Disruptions to these components could have a material impact on AMS' ability to generate revenue or result in increased costs.

Hong Kong Protests

A new US law in support of Hong Kong’s pro-democracy protesters stand in the way of a formal trade agreement. This also adds fuel to the already raging protests, resulting from a perceived infringement on Hong Kong's autonomy among other issues. AMS Inventory is stored in 3PL warehouse in Hong Kong. Current airport shutdowns could potentially affect access to inventory.

Lack of formal written distribution agreements

Given that in the USA a small number of distributors are responsible for 50% of the group’s revenue, AMS is materially exposed to this risk. There are 25 distributors across the globe in total. AMS does not have formal written contracts in place with most of its distributors, who order and purchase products on an ad hoc basis with no minimum purchase order obligations. Customers and distributors may decide not to continue buying through AMS in the future, or to a lesser degree. Should AMS lose one of these distributors, the impact is likely to have a substantial impact on their future revenues.

The safeguard to losing these distributors is a lack of quality like for like products in the market. They are currently working on formal contracts with most large suppliers, as well as diversifying the supply network. Generally, AMS relies on a single distribution partner within each jurisdiction in which it operates.

Product Obsolescence

The computer industry has very quick rates of product obsolescence, as new designs continue to eat up existing technology. Further, given the monitor recorder industry in which AMS exists is relatively juvenile, the rate of improvement is high. The typical customer cycle for AMS products is 3-5 years.

Remaining at the forefront of technological advancements in the industry depends heavily on the key strategic relationships AMS has in place; Apple, Sony, Nikon, Adobe etc. Were these relationships to break down or these large corporations take a different approach to the sector, AMS’ growth prospects would be materially affected.

Financials

Revenue

We model revenue growth by end-market, being Social, Pro Video and Entertainment. Given AMS's low share of sales in the Social and Entertainment markets, we forecast higher growth rates there vs Pro Video, expecting a revenue CAGR FY20-25 of 36% and 21% respectively vs pro-video at 18%.

Given the significance of Social and Entertainment, we see significant capacity for surprise in these segments in which we only assume combined revenue of $78m in FY25 compared with estimated combined market size of >$9b.

Gross profit

We expect AMS to improve GM incrementally over time as new products are rolled out at higher margin and legacy products as a % of overall sales declines. As the business grows we expect better and more stable relationships to be formed and reinforced with suppliers.

EBITDA

We expect continued investment in overheads as the business grows, with Marketing, people and R&D key areas for investment. That said, we anticipate strong operating leverage to drive EBITDA margin up toward 20% and for EBITDA to grow at more than double the pace of revenues between FY20 and FY25.

Figure 20 – P&L overview

P&L	FY18a	FY19a	FY20e	FY21e	FY22e	FY23e	FY24e	FY25e
Social	0.0	4.3	8.6	12.9	17.4	23.5	30.6	39.7
Pro Video	30.9	41.0	53.3	64.0	75.2	88.3	103.8	121.9
Entertainment	3.5	8.3	14.9	18.7	22.4	26.9	32.3	38.7
Other/Timecode	1.2	0.1	0.1	1.5	1.8	2.0	2.3	2.5
Total revenue	**35.6**	**53.7**	**77.0**	**97.1**	**116.7**	**140.7**	**168.9**	**202.9**
COGS	-18.3	-29.9	-42.3	-53.0	-63.5	-76.1	-90.8	-108.5
GP	**17.3**	**23.8**	**34.7**	**44.0**	**53.3**	**64.6**	**78.1**	**94.4**
Overheads (ex-D&A)	-17.2	-22.2	-29.4	-34.2	-38.7	-43.7	-49.4	-55.8
EBITDA	**0.2**	**1.6**	**5.3**	**9.8**	**14.6**	**20.9**	**28.7**	**38.6**
D&A	-0.3	-1.5	-3.0	-4.5	-4.7	-4.9	-5.1	-5.3
EBIT	**-0.1**	**0.2**	**2.3**	**5.3**	**9.9**	**16.0**	**23.6**	**33.3**
Net interest	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2
PBT	**-0.1**	**0.2**	**2.3**	**5.4**	**10.0**	**16.1**	**23.7**	**33.4**
Tax expense	-1.8	-0.8	-0.7	-1.6	-3.0	-4.8	-7.1	-10.0
Normalised NPAT	**-1.9**	**-0.7**	**1.6**	**3.8**	**7.0**	**11.3**	**16.6**	**23.4**
One-offs, FX	-13.7	-1.3	2.0	2.0	1.3	0.0	0.0	0.0
Reported NPAT	**-15.6**	**-2.0**	**3.6**	**5.8**	**8.3**	**11.3**	**16.6**	**23.4**
Incremental GP margin	24.6%	36.0%	46.8%	46.5%	47.1%	47.3%	47.7%	48.0%
GP margin	**48.5%**	**44.3%**	**45.1%**	**45.4%**	**45.6%**	**45.9%**	**46.2%**	**46.5%**
Incremental EBITDA margin	102.3%	8.3%	15.6%	22.6%	24.4%	26.1%	27.6%	29.1%
EBITDA margin	**0.4%**	**3.1%**	**6.8%**	**10.1%**	**12.5%**	**14.8%**	**17.0%**	**19.0%**
Social growth			100.0%	50.0%	35.0%	35.0%	30.0%	30.0%
Pro Video growth		32.7%	30.0%	20.0%	17.5%	17.5%	17.5%	17.5%
Entertainment growth		137.1%	80.0%	25.0%	20.0%	20.0%	20.0%	20.0%
Other/Timecode growth		-90.7%	20.0%	1000.0%	15.0%	14.0%	13.0%	12.0%
Total revenue growth	**14.7%**	**50.7%**	**43.3%**	**26.1%**	**20.3%**	**20.5%**	**20.0%**	**20.2%**
COGS growth		63.0%	41.4%	25.4%	19.6%	19.9%	19.4%	19.5%
GP growth		37.6%	45.7%	26.9%	21.0%	21.3%	20.8%	20.9%
Overheads (ex-D&A) growth		29.2%	32.8%	16.3%	13.0%	13.1%	12.9%	13.0%
EBITDA growth		**989.4%**	**220.4%**	**86.3%**	**49.0%**	**42.9%**	**37.2%**	**34.5%**
Normalised NPAT growth		-65.4%	-347.1%	133.5%	86.2%	60.9%	47.2%	41.1%
Normalised EPS (diluted) growth		-66.0%	-318.1%	123.5%	86.2%	60.9%	47.2%	41.1%

Source: OML

D&A and development capex

AMS only capitalises external R&D and amortises this more quickly as products reach commercialisation. To that end, we forecast some acceleration in amortisation from FY20 onward which drives D&A higher. Development capex is also expected to increase over time also, leading to a sustained and growing level of D&A.

Tax

Atomos carries a ~$5.25m derecognised tax loss balanced, implying that its next $17.5m of PBT is tax-free. We expect it to recognise a tax asset over time, with $2m in FY20 and FY21 and a residual $1.25m in FY22. FY23 will be the first year we expect the business to pay full cash tax.

Working capital and cash flow

The recent capital raise by AMS was designed to bolster the working capital position, in part to facilitate sea freight over air freight which assist in improving gross profit margins. Payables were also shortened up in this process.

We expect EBITDA to cash flow conversion to be rather weak in FY20 as a result, but for this to be a "reset" year followed by conversion upwards of 85% through time.

Our free cash flow forecasts are shown at the bottom of the below table. We anticipate ongoing development and physical capex of $4-5m pa, and cash tax to begin being paid from FY23 onward. While FY20 is expected to be free cash flow negative, we anticipate that stabilised working capital days will lead to improved free cash flow from FY21 onward.

Figure 21 – Working capital

Working Capital	FY18a	FY19a	FY20e	FY21e	FY22e	FY23e	FY24e	FY25e
Debtor days (based on Revenue)	50	44	42	42	43	43	43	42
Current Receivables % of Revenue	13.6%	14.9%	12.5%	13.0%	12.9%	12.8%	12.7%	12.6%
Accounts Receivables	**4.8**	**8.0**	**9.6**	**12.6**	**15.1**	**18.0**	**21.4**	**25.6**
Creditor Days (based on COGS)	168	116	104	107	112	116	119	121
Payables as a % of COGS	46.1%	35.2%	32.0%	33.0%	34.0%	35.0%	36.0%	36.0%
Accounts Payable	**8.5**	**10.5**	**13.5**	**17.5**	**21.6**	**26.6**	**32.7**	**39.1**
Inventory days (based on COGS)	118	123	107	113	111	110	110	109
Inventory as a % COGS	32.4%	32.1%	36. 0%	33.0%	33.0%	33.0%	32.5%	32.5%
Inventories	**6.0**	**9.6**	**15.2**	**17.5**	**20.9**	**25.1**	**29.5**	**35.3**
Total working capital	**2.3**	**7.1**	**11.3**	**12.6**	**14.4**	**16.5**	**18.3**	**21.8**
Change in working capital	2.3	4.8	4.2	1.3	1.8	2.1	1.8	3.5
Total working capital as a % of revenue	6.6%	13.2%	14.7%	13.0%	12.4%	11.7%	10.8%	10.7%
EBITDA	0.2	1.6	5.3	9.8	14.6	20.9	28.7	38.6
GCF to EBITDA conversion	nm	*nm*	*20.2%*	*107.1%*	*96.2%*	*90.1%*	*93.8%*	*90.9%*
Gross operating cash flow	-2.9	-3.2	1.1	10.5	14.1	18.8	26.9	35.1
Tax	0.0	-0.2	0.0	0.0	-0.1	-4.8	-7.1	-10.0
Capex	-4.4	-3.1	-4.3	-3.9	-4.2	-4.5	-4.8	-5.1
Free cash flow	**-7.3**	**-6.5**	**-3.2**	**6.6**	**9.8**	**9.5**	**15.0**	**19.9**

Source: OML

Balance sheet

The AMS balance sheet is rather "clean" with limited debt and few liabilities outside trade payables. Following the recent capital raise, we expect the business to end FY20 with net cash of ~$16m

Figure 22 – Balance sheet overview

Balance sheet	FY18a	FY19a	FY20e	FY21e	FY22e	FY23e	FY24e	FY25e
Current Assets								
Cash and cash equivalents	1.4	5.1	17.5	24.1	34.0	43.6	58.7	78.8
Trade receivables	4.8	8.0	9.6	12.6	15.1	18.0	21.4	25.6
Inventory	6.0	9.6	15.2	17.5	20.9	25.1	29.5	35.3
Other current assets	1.7	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Total Current Assets	**14.0**	**25.7**	**45.3**	**57.3**	**73.0**	**89.7**	**112.7**	**142.7**
Non-Current Assets								
Deferred Tax Assets			1.3	1.7	0.0	0.0	0.0	0.0
Property, Plant & Equipment (Net)	0.8	1.7	2.4	2.2	2.0	2.0	1.9	2.0
Intangibles	7.7	8.5	15.1	14.7	14.3	14.0	13.7	13.5
Total Non-Current Assets	**8.5**	**10.1**	**18.8**	**18.5**	**16.3**	**15.9**	**15.6**	**15.4**
Total Assets	**22.5**	**35.9**	**64.1**	**75.8**	**89.4**	**105.7**	**128.3**	**158.1**
Current Liabilities								
Trade payables	8.5	10.5	13.5	17.5	21.6	26.6	32.7	39.1
Interest-bearing liabilities	2.7	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Provisions	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Other	1.5							
Total Current Liabilities	**13.2**	**12.6**	**15.6**	**19.6**	**23.7**	**28.7**	**34.8**	**41.2**
Non-Current Liabilities								
Provisions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Non-Current Liabilities	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Total Liabilities	**13.2**	**12.7**	**15.7**	**19.7**	**23.7**	**28.8**	**34.8**	**41.2**
Net Assets	**9.3**	**23.2**	**48.4**	**56.1**	**65.6**	**76.9**	**93.5**	**116.9**
Net Debt (Cash)	1.3	-3.6	-16.0	-22.6	-32.5	-42.1	-57.2	-77.3

Source: OML

Comparable Companies

AMS is a rathe unique company from an Australian listed perspective. We see the following attributes in the business and product:

- **Large addressable market** in production/camera/entertainment equipment of ~US$10b vs AMS FY20e revenue of ~US$50m (ie market share of ~50bps)
- **Strong branding** in the market for its product due to its Apple affiliation, high quality design and durability, IP developed over a number of years
- **High value IP** following years of product development and reinvestment, plus a strategically significant affiliation with Apple on their ProResR RAW format
- **Device manufacturer** with strong gross margins and a rapidly expanding NPAT line thanks to operating leverage

Below is a collection of ASX-listed companies with attributes across some or all of the areas listed above. We stick to ASX companies, seeing little value in looking at offshore comparables.

Assessing AMS against these comparables on consensus (one broker) and OMLe leads us to the following observations:

- OMLe sits well above consensus (one broker), with an FY22 on OMLe at 41x vs the other broker at 47x (ie OMLe FY22 EPS is ~27% higher, off a low base). This is driven by 8% higher revenue, 9% higher EBITDA and slightly lower D&A
- Medical device/patent companies garner a significant premium by virtue of their gross margins and end-market sizes
- Audinate is in the sound and vision field, but perhaps exhibits higher margins long-term and superior growth, trading on an FY22 PE of 60x vs AMS on OMLe at 41x currently and 49x at our price target

Overall, we do not see AMS trading cheap on face value, but the runway for continued future growth in revenue and magnified profit growth thanks to operating leverage provide us comfort that there remains upside in the share price long-term, in addition to a capacity to surprise in the short-term.

Figure 23 – Comparables

Large market opportunity IP/Brand/Device											
		Price	Mkt Cap	EV/EBITDA		PE		EPS Growth		PEG	
Code	**Company**	**Last**	**AUD**	**FY21**	**FY22**	**FY21**	**FY22**	**FY21**	**FY22**	**FY21**	**FY22**
PNV AU	PolyNovo Ltd	1.93	1,273	129.5	64.3	160.4	77.0	1100%	108%	0.15	0.71
EOF AU	Ecofibre Ltd	2.73	860	18.0	12.5	29.4	20.1	102%	46%	0.29	0.43
BWX AU	BWX Ltd	4.48	557	18.6	15.7	28.7	23.6	24%	22%	1.21	1.08
BUB AU	Bubs Australia Ltd	0.98	535	61.5	26.0	61.3	28.8	-	113%	na	0.26
AD8 AU	Audinate Group Ltd	7.76	526	57.8	32.4	121.3	60.6	121%	100%	1.00	0.61
CBR AU	Carbon Revolution Ltd	3.96	504	43.9	12.7	660.0	21.8	-	-	na	na
CLV AU	Clover Corp Ltd	2.80	466	20.6	17.1	29.2	24.1	33%	21%	0.88	1.16
CAT AU	Catapult Group International	1.65	315	13.3	9.6	41.3	25.0	-	65%	na	0.38
AMS AU	Atomos Ltd	1.45	271	28.6	19.9	72.5	48.3	300%	50%	0.24	0.97
NUC AU	Nuchev Ltd	3.53	159	-	41.6	-	60.9	-	-	na	na
RDF AU	Redflex Holdings Ltd	0.52	79	3.0	2.6	65.0	28.9	-	125%	na	0.23
	Average			**39.5**	**23.1**	**126.9**	**38.1**	**280%**	**72%**	**0.63**	**0.65**
	Median			**24.6**	**17.1**	**63.1**	**28.8**	**111%**	**65%**	**0.58**	**0.61**
AMS AU	Atomos Ltd (OMLe @ market)	1.45		27.5	18.4	76.0	40.8	123%	86%	0.62	0.47
AMS AU	Atomos Ltd (OMLe @ OML PT)	1.75		33.4	22.4	91.5	49.2	123%	86%	0.74	0.57

Source: Bloomberg, OML

Valuation and recommendation

Given the long-dated nature of AMS growth and its working capital consumptive model, we focus on DCF in deriving a valuation for the business.

Our assumptions and outputs are shown below, with the result a valuation of $1.56 per share and a rolled-forward price target of $1.75 per share. This offers a TSR of ~21% which underpins our Buy recommendation.

We are cautious in issuing a Buy recommendation on a stock trading on ~40x FY22 PE (on OMLe), but take confidence from:

- The low level of market share AMS holds across the Social and Entertainment device markets (~0.01% currently), offering significant upside risk
- The IP portfolio built over recent years continuing to be leveraged into new products and markets
- The affiliation with Apple driving users to AMS products in order to work in what is likely to become most popular editing format – ProRes RAW
- The stock is already trading on 47x FY22 PE on the other broker's EPS forecasts. Our target implies 49x on our higher EPS forecast. If the market takes our forecast as probable, if AMS holds the same multiple, it would trade close to our target
- Operating leverage driving compelling profit growth
- Strong gross margins and supply chain controls
- Conservative balance sheet

Figure 24 – DCF valuation overview

DCF inputs	
Beta	1.20
Risk free rate	5.0%
Market risk premium	6.0%
Cost of equity	12.2%
Debt premium	4.0%
Cost of debt (after tax)	6.3%
D/E	20.0%
WACC	**11.0%**
Terminal growth rate	**3.0%**

DCF outputs	
Forecast cash flows ($m)	68
Terminal value ($m)	220
Franking value	3
Enterprise value ($m)	**291**
Add net cash (FY20e) ($m)	-16
Equity value ($m)	**307**
Implied equity value (p.s.)	1.56
Rolled fwd at Ke	12%
Price target	**1.75**
Implied CAGR (FY20-25)	
Revenue	21.4%
EBITDA	48.9%
NPAT	70.8%
Implied FY21 PE @$1.75	91.5
Implied FY22 PE @$1.75	49.2
Implied FY23 PE @$1.75	30.6
Implied FY24 PE @$1.75	20.8

Source: OML

Appendix 1 – Management and Board

Management

The senior management team is set out below.

Jeromy Young (Chief Executive Offer and Executive Director)

Jeromy founded AMS in 2010 and has been the CEO since inception. He has more than 20 years of technology and management experience. After completing an engineering cadetship at BHP, Jeromy moved to Japan where he commenced at Canopus (GV) and learned the language. He advanced to become Business Development Director, growing sales from $5 million to $60 million. Following this, Jeromy moved to a Business Development Manager role at one of Atomos' current competitors, Blackmagic Design Pty Ltd. He now boasts strong relationships with Silicon Valley software and hardware manufacturers, critical to AMS' success. Jeromy has a Materials Engineering, Ceramics & Manufacturing degree from the University of Wollongong.

James Cody (Chief Financial Officer)

James has over 20 years of accounting and finance experience in private and public firms. He has experience in providing quality financial management to organisations, especially in the retail sector. This includes four years as CFO of Funtastic, an Australian publicly listed supplier of products for families, with revenue over $200m, selling to 50+ countries. Following this, he worked as Principal and CFO at Henslow Pty Ltd, an independent advisory firm that supports growing companies, entrepreneurs and investors. James is a qualified chartered accountant.

Trevor Elbourne (Chief Technology Officer)

Trevor is a design engineer, with over 18 years of experience in designing and verifying digital systems. Since joining AMS as a Senior Hardware Engineer in 2010, he was promoted to Director of Systems Engineering before being appointed CTO in 2017. At the beginning of his career, Trevor was a Senior ASIC design Engineer at Canon Inc, the world's leading provider of cameras. Since then, he worked in various management roles including Engineering leader at SNR Electronics, Engineering manager at Reptechnic and Project team leader Salmat VeCommerce. Trevor holds a Bachelor of Engineering, Electrical and Electronics Engineering), from the University of New South Wales.

Board of Directors

The Board of Directors are set out below.

Chris Tait (Chairman of the Board and Non-Executive Director)

Chris has over 25 years of experience advising local and multinational companies. He is the co-founder and managing director of Henslow Pty Ltd. where AMS CFO James Cody was previously employed. Henslow has a focus on strategic advice, M&A, private capital raises and transaction structuring. Additionally, Chris is the chairman of The BlueRock and Neo Products. Early in his career, he progressed to become a director at Deloitte in the UK. He moved on to be Director of Strategy and Acquisitions for WH Smith PLC and subsequently CFO of WHSmith's APAC operations out of Melbourne. Chris has been a director since 2017.

Jeromy Young (Chief Executive Offer and Executive Director)

See above.

Sir Hossein Yassaie (Non-Executive Director)

A Non-Executive Director since 2016, Sir Hoessein Yassaie has over 35 years of experience in specialised R&D and semiconductors. He was founder and CEO of Imagination Technologies Plc for 18 years, taking the company from £15m to £1bn+. Their focus was on semiconductor and associated intellectual property licensing. Currently, he is on the board of technology companies Ultrahaptics, Uniphy Ltd, Pure International Limited and Mindtrace ai. Sir Hossein holds a Bachelor of Science (Electronics & Electrical Engineering) degree and a PhD in Electronics and communication from the University of Birmingham. Sir Hossien received knighthood at 2013 New Year Honours for services to UK Technology.

Stephen Stanley (Non-Executive Director)

Stephen also joined as AMS director this year, bringing 25 years' logistics experience in Asia, Australia, Europe and North America. He was the Director for Corporate Development for Toll Holdings from 1999 until 2012. Stephen is currently Chairman of Ventura Motors Pty Ltd and was formerly a Non-Executive Director of Cabcharge Australia Ltd.

Atomos Limited

Buy

PROFIT & LOSS (A$m)	2018A	2019A	2020E	2021E	2022E
Revenue	35.6	53.7	77.0	97.1	116.7
Operating costs	(35.5)	(52.1)	(71.7)	(87.2)	(102.1)
Operating EBITDA	**0.2**	**1.6**	**5.3**	**9.8**	**14.6**
D&A	(0.3)	(1.5)	(3.0)	(4.5)	(4.7)
EBIT	**(0.1)**	**0.2**	**2.3**	**5.3**	**9.9**
Net interest	-	(0.0)	0.0	0.1	0.1
Pre-tax profit	**(0.1)**	**0.2**	**2.3**	**5.4**	**10.0**
Net tax (expense) / benefit	(1.8)	(0.8)	(0.7)	(1.6)	(3.0)
Normalised NPAT	**(1.9)**	**(0.7)**	**1.6**	**3.8**	**7.0**
Reported NPAT	**(15.6)**	**(2.0)**	**3.6**	**5.8**	**8.3**
Normalised dil. EPS (cps)	(1.2)	(0.4)	0.9	1.9	3.6
Reported EPS (cps)	(9.6)	(1.2)	1.9	2.9	4.2
Effective tax rate (%)	(1,381.9)	472.6	30.0	30.0	30.0
DPS (cps)	-	-	-	-	-
Dividend yield (%)	-	-	-	-	-
Payout ratio (%)	-	-	-	-	-
Franking (%)	100.0	100.0	100.0	100.0	100.0
Diluted # of shares (m)	163.6	166.5	188.6	197.0	197.0

CASH FLOW (A$m)	2018A	2019A	2020E	2021E	2022E
EBITDA incl. adjustments	0.2	1.6	5.3	9.8	14.6
Change in working capital	(3.1)	(4.8)	(4.2)	0.7	(0.6)
Net Interest (paid)/received	(0.4)	0.0	0.0	0.1	0.1
Income tax paid	-	(0.2)	-	-	(0.1)
Other operating items	-	-	-	-	-
Operating Cash Flow	**(3.3)**	**(3.3)**	**1.1**	**10.6**	**14.1**
Capex	(4.4)	(3.1)	(4.3)	(3.9)	(4.2)
Acquisitions	-	-	(6.0)	-	-
Other investing items	-	-	(6.0)	-	-
Investing Cash Flow	**(4.4)**	**(3.1)**	**(16.3)**	**(3.9)**	**(4.2)**
Inc/(Dec) in borrowings	1.0	6.6	-	-	-
Dividends paid	-	-	-	-	-
Other financing items	(0.4)	(2.4)	(1.0)	-	-
Financing Cash Flow	**7.6**	**10.1**	**21.6**	**-**	**-**
Net Inc/(Dec) in Cash	(0.1)	3.7	12.4	6.7	9.9

BALANCE SHEET (A$m)	2018A	2019A	2020E	2021E	2022E
Cash	1.4	5.1	17.5	24.1	34.0
Receivables	4.8	8.0	9.6	12.6	15.1
Inventory	6.0	9.6	15.2	17.5	20.9
Other current assets	1.7	3.0	3.0	3.0	3.0
PP & E	0.8	1.7	2.4	2.2	2.0
Intangibles	7.7	8.5	15.1	14.7	14.3
Other non-current assets	-	-	1.3	1.7	-
Total Assets	**22.5**	**35.9**	**64.1**	**75.8**	**89.4**
Short term debt	2.7	1.5	1.5	1.5	1.5
Payables	8.5	10.5	13.5	17.5	21.6
Other current liabilities	0.5	0.6	0.6	0.6	0.6
Long term debt	-	-	-	-	-
Other non-current liabilities	0.0	0.0	0.0	0.0	0.0
Total Liabilities	**11.7**	**12.7**	**15.7**	**19.7**	**23.7**
Total Equity	**9.3**	**23.2**	**48.4**	**56.1**	**65.6**
Net debt (cash)	1.3	(3.6)	(16.0)	(22.6)	(32.5)

DIVISIONS	2018A	2019A	2020E	2021E	2022E

KEY METRICS (%)	2018A	2019A	2020E	2021E	2022E
Revenue growth	-	50.7	43.3	26.1	20.3
EBITDA growth	-	989.4	220.4	86.3	49.0
EBIT growth	-	-	1,189.7	134.2	86.7
Normalised EPS growth	-	-	-	123.5	86.2
EBITDA margin	0.4	3.1	6.8	10.1	12.5
OCF /EBITDA	-	-	20.2	107.1	96.2
EBIT margin	-	0.3	2.9	5.5	8.5
Return on assets	-	-	3.2	5.3	8.4
Return on equity	-	-	4.5	7.2	11.5

VALUATION RATIOS (x)	2018A	2019A	2020E	2021E	2022E
Reported P/E	-	-	75.7	49.6	34.6
Normalised P/E	-	-	-	76.0	40.8
Price To Free Cash Flow	-	-	-	28.9	21.5
Price To NTA	136.3	16.3	7.7	6.5	5.3
EV / EBITDA	-	-	45.8	25.3	16.3
EV / EBIT	-	1,340.3	106.3	46.6	24.0

LEVERAGE	2018A	2019A	2020E	2021E	2022E
ND / (ND + Equity) (%)	11.9	(18.4)	(49.3)	(67.6)	(98.2)
Net Debt / EBITDA (%)	833.8	(219.6)	(303.0)	(230.6)	(222.4)
EBIT Interest Cover (x)	-	176.0	-	-	-
EBITDA Interest Cover (x)	-	1,645.0	-	-	-

SUBSTANTIAL HOLDERS	m	%
Jeromy Young and family	17.7	9.5%
Perennial	17.4	9.3%
Domazet	16.4	8.8%

VALUATION	
Cost of Equity (%)	12.2
Cost of debt (after tax) (%)	9.0
D / EV (%)	20.0
WACC (%)	**11.0**
Forecast cash flow ($m)	68.0
Terminal value ($m)	219.6
Franking credit value ($m)	3.3
Enterprise Value ($m)	303.5
Less net debt / add net cash & investments ($m)	(16.0)
Equity NPV ($m)	**287.6**
Equity NPV Per Share ($)	**1.56**
Target Price Method	Rolled forward DCF
Target Price ($)	1.75
Valuation disc. / (prem.) to share price (%)	20.5

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SPECULATIVE BUY	We expect the stock's total return (nominal yield plus capital appreciation) to exceed 20% over 12 months. The investment may have a strong capital appreciation but also has high degree of risk and there is a significant risk of capital loss.
BUY	The stock's total return (nominal dividend yield plus capital appreciation) is expected to exceed 15% over the next 12 months.
ACCUMULATE	We expect a total return of between 5% and 15%. Investors should consider adding to holdings or taking a position in the stock on share price weakness.
HOLD	We expect the stock to return between 0% and 5%, and believe the stock is fairly priced.
LIGHTEN	We expect the stock's return to be between 0% and negative 15%. Investors should consider decreasing their holdings.
SELL	We expect the total return to lose 15% or more.
RISK ASSESSMENT	Classified as Lower, Medium or Higher, the risk assessment denotes the relative assessment of an individual stock's risk based on an appraisal of its disclosed financial information, historic volatility of its share price, nature of its operations and other relevant quantitative and qualitative criteria. Risk is assessed by comparison with other Australian stocks, not across other asset classes such as Cash or Fixed Interest.

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