# BirdDog Technology Ltd

**Initiation Report**

## A refocused opportunity

Information Technology – Hardware & Equipment

**16 September 2024**

**BirdDog Technology (ASX:BDT) designs hardware and software video technology solutions. The company has a proven suite of products including cameras, converters, various audio visual solutions and industry-specific packaged solutions, supported by proprietary software. It supplies these products to customers ranging from prosumers through to tier 1 broadcasting companies, predominantly throughout North America, the UK & Europe. After a challenging period affected by both external and internal issues, we believe BDT is now positioned to re-enter a strong growth phase, initially driven by materially increased sales on the release of its next generation camera range, on expanded margins and reduced risks through a recently diversified manufacturing and supply framework. This is set to be complemented by further product releases across its range in coming periods. The company is fully funded to execute its growth strategy, with a 30 June 2024 cash balance of $16.5m and no debt, placing the business on an enterprise value of negative $3.0m. The cash balance alone equates to 8.3cps in value (post recent buy-back) and the total NTA (net tangible assets) including inventory is 13.6cps on the same basis. This for a business that we forecast to deliver FY25 revenue of $26.6m, EBITDA of $1.6m and be cash generative over the forecast period. We initiate coverage with a DCF-based valuation of $0.27 share, representing capital upside potential of 335% on the current share price.**

## Business model

BirdDog is a proven business, highly regarded in its chosen niche in the audio visual industry. Global camera sales are forecast by RaaS to represent ~60-75% of group revenue over the forecast period, dominated by North America. Other products and solutions represent the balance of sales, with the converter range being the second-largest contributor. The company now fully designs its own products and has recently diversified its component contract manufacturers and manufacturing base to reduce supply risks and drive stronger margins, the benefits of which are clearly apparent in the data of the last three months, all of which have been bottom-line profitable for the company and delivered the strongest revenues since FY22.

## The timing is right

A challenging FY24 is now behind the business and the causes of the problems have been addressed and resolved, in our view. BDT invested heavily in R&D through the downturn with the investment program set to yield results on a strong revenue uptick from the release of multiple new products across several categories. The capital spend of the previous two years should now reduce as the company enters the commercialisation phase of the new ranges, which historically has proven often to be a good entry point from an investment perspective for companies operating in this sector. That said, management now needs to prove it can execute this turnaround and deliver traction in the new camera range, as a starting point.

## DCF valuation of $0.27/share

We have undertaken a discounted cash-flow valuation and derived a value of $0.27/share. This is supported by a significant discount on a relative peer valuation basis. BDT is currently priced on a one-year forward PE ratio of 7.0x (based on RaaS' forecasts) and at a 26% discount to balance sheet cash alone (FY25f).

**Historical earnings and RaaS estimates**

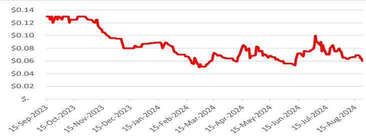
| Year end | Revenue (A$m) | EBITDA adj. (A$m) | NPAT adj. (A$m) | EPS adj (c) | P/E (x) | EV/Sales (x) |
|---|---|---|---|---|---|---|
| 06/23a | 28.8 | (4.3) | (5.5) | (2.7) | n/a | (0.4) |
| 06/24a | 18.3 | (9.0) | (10.0) | (5.0) | n/a | (0.2) |
| 06/25f | 26.6 | 1.6 | 1.4 | 0.9 | 7.0 | (0.1) |
| 06/26f | 32.9 | 3.1 | 2.5 | 1.6 | 4.0 | (0.1) |
| 06/27f | 35.9 | 3.7 | 2.9 | 1.8 | 3.4 | (0.2) |

Source: Company data, RaaS estimates for FY25f to FY27f

### Share Details

| | |
|---|---|
| ASX code | BDT |
| Share price (13-Sep) | $0.062 |
| Market capitalisation | $10.0M |
| Shares on issue | 161.5M |
| Net cash (Jun 30, 2024) | $16.5M |
| Free float | ~60% |

### Share Performance (12-months)




### Upside Case

- Accelerated roll-out of Remedi solution
- NextGen range outperforms expectation
- Strong cash balance used for growth initiatives

### Downside Case

- Shortfall in NextGen sales
- Macro weakness inhibiting growth
- Supply chain challenges

### Catalysts

- Proof of traction of "next-gen" cameras
- Proven return to profitability in the near term
- Delivery of margin expansion story

### Board and Management

| | |
|---|---|
| John Dixon | Chairman |
| Dan Miall | Founder/CEO |
| Alan Sparks | Non-Executive Director |
| Barry Calnon | Chief Financial Officer |
| Jamie Ambrose | Chief Revenue Officer |

### Company Contact


Barry Calnon (CFO) barry@bird-dog.tv


### RaaS Contacts


Graeme Carson* +61 417 666 802
graeme.carson@raasgroup.com

Finola Burke +61 414 354 712
finola.burke@raasgroup.com


***The analyst is also a principal of Cyan IM which owns shares in BDT.**

# Table of contents

## BirdDog Technology Ltd

**After challenging periods in FY23 and FY24 BDT is now positioned to re-enter a growth phase on new product roll-out on materially improved commercial terms. We forecast this to result in strong revenue growth in the current year and an immediate return to profitability. It appears well funded with a strong cash balance and no debt, leaving significant funding headroom for any further growth initiatives beyond our current forecasts.**

### Investment Case

In our view, BirdDog Technology Limited can achieve success for the following reasons:

- **Issues addressed and resolved:** The challenges of the recent past have been systematically addressed and resolved, in our view. The most material being a recent product supply freeze and subsequent legal proceedings with the group's previous contract manufacturer, both of which are behind BDT through legal settlement and the appointment of three new contract manufacturer agreements.
- **Release of "NextGen" products set to drive strong revenue growth:** The healthy cash balance has enabled the team to continue to invest R&D capital through the challenging period, resulting in a programme of new generation products to be released in the current year and the forecast periods thereafter, which we estimate to result in revenue CAGR of 25.2% from FY24a to FY27f. The first cameras of the next-gen range were released in May 2024.
- **Margin expansion story:** We forecast gross margins to double through product design and supply diversification (already been delivered in June, July and August 2024). BDT has changed from 1 problematic contract manufacturer to 3 new contract manufacturers and moved up the supply chain through proprietary product design.
- **Strong balance sheet:** The debt-free balance sheet remains in a very strong position with a cash balance of ~$16.5m as at 30 June 2024 and we expect the business to be cash generative over the forecast period. When combined with inventory, the net tangible assets of the business stands at $22.5m (as at 30 June 2024) representing $0.13 per share, a 110% premium to the current share price. The business remains fully funded, does not require further capital to deliver the RaaS growth forecasts and has significant financial headroom and optionality over further growth initiatives.
- **Timing right and catalyst rich:** The R&D and investment spend over the past 2 years is now being commercialised. Historically, the periods directly succeeding this part of the cycle are generally the most profitable for companies in this space.
- **Clear fundamental value:** Currently priced at below cash-backing for what we believe to be a profitable and cash generative business with a solid growth profile, complemented by a recent selective buy-back to enhance "per share" profitability. Current year PER of 7.0x.

### DCF Valuation

We initiate coverage with a DCF valuation of $0.27/share.

**Exhibit 1: Base Case DCF valuation (A$m, unless otherwise stated)**

| DCF parameters and valuation | Outcome |
|---|---|
| Discount rate / WACC | 13.0% |
| Beta* | 1.5 |
| Terminal growth rate assumption | 3.0% |
| Sum of Present Value (PV) | 10.1 |
| PV of terminal value | 17.1 |
| PV of enterprise | 27.2 |
| Net cash at 30 June 2024 | 16.5 |
| Net value – shareholder | 43.7 |
| No of shares on issue (m) | 161.5 |
| **NPV per share** | **A$0.27** |

Source: RaaS estimates *Note LSEG five-year observed beta is -0.25

## Company Overview

BirdDog is a global video technology company. It manufactures, sells and supports standalone hardware, embedded hardware and software solutions to enhance the quality, speed and flexibility of **video communications** and delivery for consumers and organisations.

The company derives its revenue, on both a one-off and recurring basis, by selling the following products and solutions:

- **Cameras:** BirdDog currently manufactures and sells 5 recently released next-gen camera models across 3 ranges, or “series”. We believe there are at least a further 2 to come before calendar year end. Once complete (the whole new range should be released by the end of calendar year 2024), it will completely supersede the previous range.

  These are primarily PTZ cameras (Point Tilt Zoom) and range in retail price from ~US$995 to ~US$2,995. The BirdDog camera products are bought by individuals, prosumers, companies and other organisations. Historically camera sales have represented ~65% of group sales. After a poor FY24a we forecast cameras sales to grow materially in FY25, from $12.4m to $19.8m due to the new product releases, to represent ~74% of BirdDog’s total revenue in the current year, before normalising back towards 65% over the balance of the forecast period as other parts of the business experience accelerating growth.

- **Converters:** A range of encoders and decoder products that allow various other products (such as cameras and computers), to be used across certain protocols that enhance the quality and flexibility of video content. In simple terms, BirdDog's converters take video signals from cameras or other video sources and change them into a format that can be easily sent over a computer network rather than traditional cable networks required to maintain high quality imaging. This makes it easier to set up and manage video systems, especially in large or complex environments.

  BDT offers a suite of 8 converter products, ranging in price from ~US$290 to ~US$1690. It uses the NDI® protocol (we explain the NDI® protocol later) to bridge the gap between traditional baseband video to NDI®. These products allow for non-NDI® cameras, computers and other sources to be retrofitted to enable the use of NDI®. The NDI® protocol and its importance to BirdDog is explained throughout the document.

  Converter sales have historically represented around 20% of total BDT sales. Going forward we estimate them to represent ~18% of the company’s total annual revenue (post FY25). We forecast revenue of ~$3.5m in FY25 before accelerating in FY26 to $5.9m.

- **Audio Visual (AV):** A range of audio visual proprietary and partnership products including wall plates, BirdDog Play, SDM and the more recent Pod (which enables NDI® to USB webcam).

  The AV products have a wide range of use cases targeting areas such as digital signage and various others. We forecast sales to contribute ~7%-9% of BDT total revenue, equating to $2.4m in FY25.

- **Remedi:** BirdDog’s first packaged industry-specific solution. This medically-focussed connected workflow provides a training and communication solution for medical device manufacturers and in-theatre/hospital deployment. It is sold as a kit containing BirdDog cameras, converters, software, and some third-party ancillary products such as iPads and trolleys. The Remedi solution sales model is still in its infancy, but traction is beginning to build and although we forecast it to only represent ~2% of revenue in FY25 at $0.6m, the opportunity appears significant. Importantly, this strategy encompasses componentry from almost all of BDT's product/solution verticals, so we see its success or otherwise as an important leading indicator of future packaged solutions for other industries.

- **Software:** A range of software solutions that support and complement BirdDog's product range. Stand-alone software revenue is currently a very small contributor to group revenue (~1%) but we expect it to grow and is of material strategic importance going forward (BDT often doesn't charge separately for its embedded software solutions, but this strategy is changing as evidenced in the Remedi medical solution which includes subscription revenue).

Exhibit 2 illustrates some of the products in the BirdDog range.

**Exhibit 2: The BirdDog product ecosystem**

Source: Company presentation

BirdDog's customers, as depicted in Exhibit 3, are predominantly prosumers, groups and organisations who produce and use broadcast quality video content. For the size of the company we believe the customer base is genuinely impressive and in our view strong validation for the quality of the product.

**Exhibit 3: BirdDog customers**


Source: Company material

It's worth noting that in many cases, more than one of the products is bought by the same customer to deliver the best solution (e.g. cameras, convertors, AV products and software are often used together). Some examples of use cases for the products and solutions are:

- **Corporate:** Various uses in the corporate environment including video for marketing, video for social media, meeting rooms, conferences, boardrooms, webinars and digital signage.
- **Medical:** Uses primarily for education and training at this stage, but potentially in-theatre situations in the future.
- **Live Streaming:** Live delivery with broadcast quality for uses including sports, weddings, gaming, product reviews, training, church services or webinars.
- **Live Event Productions:** Complex production setups with multiple cameras, audio sources and lighting equipment including concerts, theatre productions, conferences and hybrid events (requiring both in-person and virtual elements).
- **Education:** Education facilities use AV solutions to facilitate remote learning, broadcast special events, sports and ceremonies. e.g. Harvard, livestream plus connect to screens around the campus.
- **House of worship:** Widely used and now a vital tool to connect with congregations, mostly as a result of the Covid affected period.

For example, Exhibit 4 illustrates a workflow solution for a live on-site production and distribution in the corporate environment.

RAAS
Research as a Service

**Exhibit 4: Workflow example**


Source: Company presentation

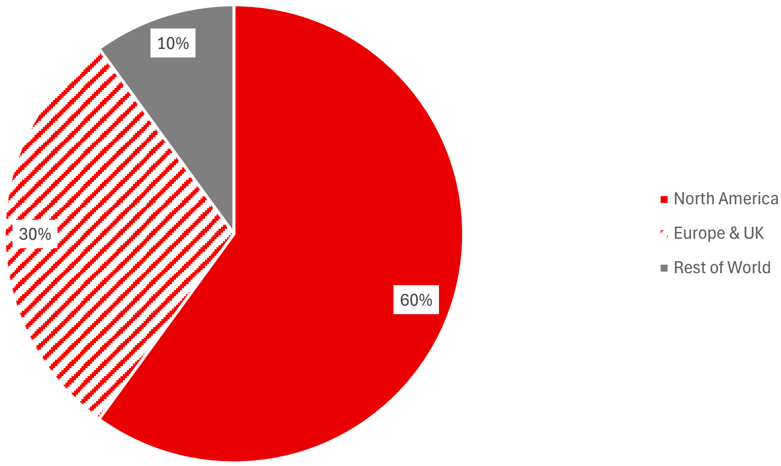
The workflow explained:

1. Converters transfer video over local network or the internet. Easily take a computer or camera source and instantly makes it available on any network.
2. Multiple BirdDog PTZ cameras located on-site at event. Cameras are remotely controllable and configurable, with real-time crew communication.
3. BirdDog Cloud enables centralised control and management of the whole organisation regardless of geographical locations.
4. BirdDog Decoders coupled with BirdDog central a management software make it easy to control what video is displayed on each screen.
5. Live production tolls which are NDI® compatible allow for broadcast productions from global BirdDog NDI® sources.

BirdDog currently has ~34 employees with corporate offices in Melbourne, Australia and Michigan, US, plus points of presence throughout Australia, the US, the UK, Spain and Germany. Around 12 staff are employed in engineering or technical support roles, 11 in sales and marketing and the balance in support, finance, product management, logistics and executive roles.

Its contract manufacturing partners are in China and Taiwan across 3 recently appointed companies to replace the single contract manufacturer that had previously presented challenges. Its products are sold through sales and distribution partners in the US, the UK & Europe and APAC, resulting in sales in more than 100 countries globally. The sales contribution by region in FY25f is illustrated in Exhibit 5 (this is broadly in line with recent past periods):

**Exhibit 5: Sales contribution by region expected in FY25f**




Source: RaaS Research

## Company Background

Established in 2016 by the current CEO Dan Miall, current CFO Barry Calnon and a recently exited co-founder to capitalise on an opportunity Dan Miall identified to solve the complex workflow problems for those looking to deliver high-quality and low-latency video connections with affordable video technologies.

BirdDog introduced its inaugural product in December 2017, which was the world's first NDI® converter device, Studio NDI®. Over the next year the company sold ~1,000 units of Studio NDI®. Subsequently, it broadened its portfolio to a diverse range of ~30 products encompassing cameras, converters, embedded NDI® technologies, software solutions, and an array of accessories.

The company grew revenue from $2.3m in FY19 to $10.0m in FY20 and $38.4m in FY21, delivering bottom line profitability both in FY20 and FY21. Looking to execute its growth strategy, the business listed in December 2021, raising $33.0m with a post-money market cap of $133.0m at a share price of $0.65. The IPO was completed with no vendor sell-down and the company hasn't raised any capital since.

December 2021 was approaching the end of the Covid-affected period (certainly from a "lockdown" perspective), but obviously the flow-on effect through the global economy was largely unknown. In hindsight, it proved to be a challenging time to list for the following key reasons:

- The business had enjoyed momentum over the lockdown period, unsurprisingly due to high adoption of video technology products. This would prove difficult to maintain as demand subsided, and general demand for products in key regions declined even further on subsequent economic weakness in key regions of the US and Europe.

- Supply chain challenges took hold for much longer than anticipated. This not only resulted in some componentry being difficult to secure and made inventory management challenging, but also drove input and distribution costs higher, negatively affecting margin.
- Interest rate rises and other factors have affected the performance of micro-cap and small-cap growth companies, resulting in significant share price weakness for BDT, which also limited its ability to execute alternative economically viable growth paths through acquisition, or even find the radar of investors due to its size, in our view.

In summary, the post-Covid world has been extremely challenging for BirdDog. We believe the business held up reasonably well in FY22, but FY23 proved difficult. Here are two extracts from the FY23 Annual Report:

> *"Throughout FY23, BirdDog faced continued economic challenges, industry-specific nuances and fluctuations in market demand, across all the geographies in which it operates. Despite this, the Company managed to generate total revenue of $28.8 million. European revenues were the hardest hit because of regional instability, declining 35% compared to the prior year, surpassing the reduction observed in our core U.S. market and Asia Pacific markets…."*

> *"…net profit before tax (NPBT) for the year recorded a loss of $4.8 million, primarily due to our strategic decision to invest significantly across research and development (R&D), in a targeted effort aimed at expanding BirdDog's ecosystem of products and solutions. Specifically, we invested $3.8 million across R&D throughout the year in what the Board view as critical investment towards the future growth of the Company, particularly in the form of enabling increased recurring software licensing income in the future."*

FY24 proved to be even more challenging. BDT continued to experience supply chain disruptions, but for different reasons. In this case it has had a dispute and subsequent legal action with its principal camera contract manufacturer, subsequently affecting product availability and therefore materially reducing revenue to $18.0m and a material net loss at the bottom line (details discussed later). That said, it was nearing the end of the shelf-life period of the previous range of cameras as the next-gen range were to be launched, so although the macro environment was also challenging in most economies and BDT faced its own company-specific issues, the timing of it all may prove to be somewhat fortuitous from this point onwards. It appears the new cameras, which are not affected by supply constraints and new contract manufacturers have been secured, have been launched as macro conditions have begun to improve.

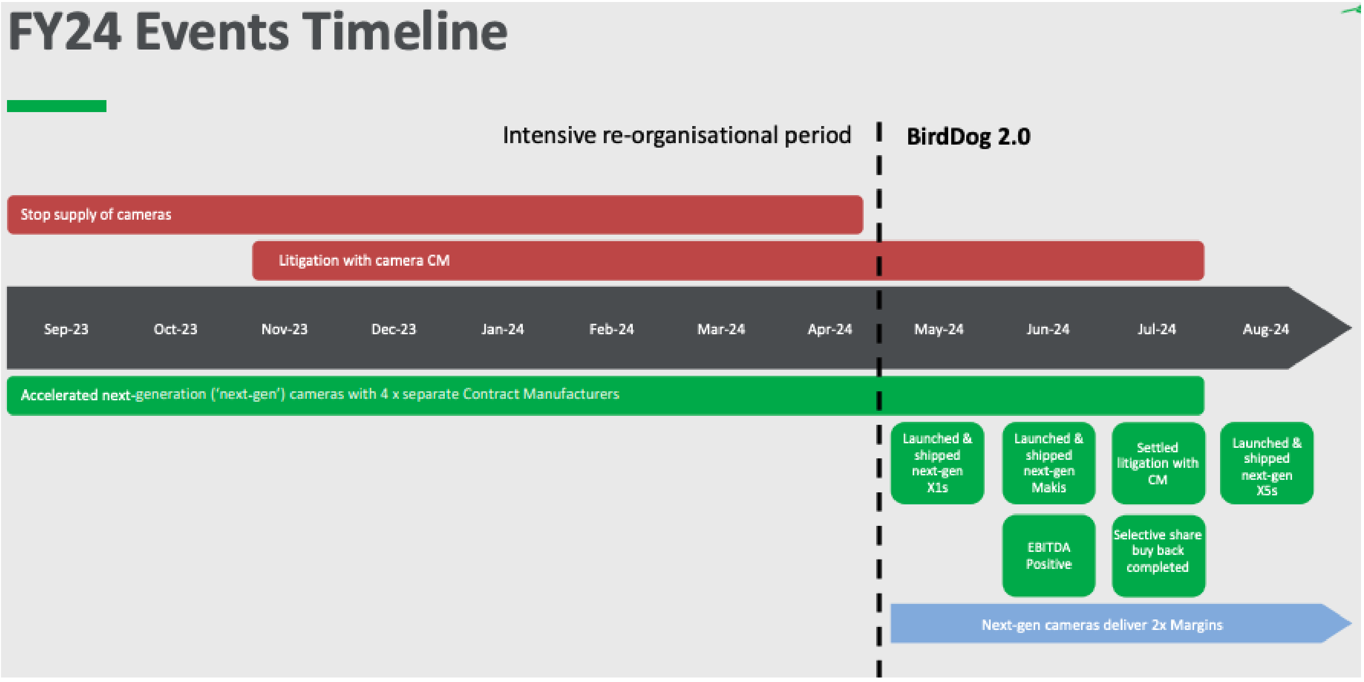
Over the past couple of years, we believe the BDT management team has prudently managed its cash position and undertaken various initiatives to position it to re-enter a strong growth phase. We discuss these in the following section.

## Reinvigoration Of The Company

With the tough macroeconomic and industry-specific backdrop, and the company-specific challenges with supply, we think the Board and senior management have done an impressive job focussing on several key initiatives to ensure the company endured the challenging period and positioned for growth when conditions improved. These have included:

- **Focus on cost controls:** $3m plus reduction in annual overheads over the past 18 months (this equates to ~15% of the pre-cut cost base).
- **Rightsizing of the inventory position:** BDT was caught with a significant amount of inventory ($15.0m as at 30 June 2023), which has now been reduced to a "business as usual" level.
- **Share buyback**: Bought back ~9.9m shares or ~5% of share capital through a traditional buyback process over the past 18 months. This was then complemented by a selective share buyback in July 2024 to acquire the shareholding of a previous company founder who is no longer with the business, representing a further 16.3% of the issued capital.
- **Invest in product development**: We believe this will prove to be key over the next 12 to 18 months. This includes completing the launch of the next-gen range of cameras, stronger software solutions and products, further development of the converter and AV range, cloud for post-production, and development and release of the medical industry targeted solution "Remedi". The benefits of this spend are beginning to bear fruit, as evidenced in June 2024 with it representing the highest revenues since FY22 and producing EBITDA and NPAT profitability. This EBITDA positive trend appears to have continued in the early stages of FY25 and we expect material upside throughout FY25 and into FY26. The R&D and product upgrade process for companies such as BirdDog and its competitors appears to run in a 4 to 5 year cycle. Historically, the period after new product release often results in a material spike in company performance. BDT is currently at that point of the cycle, in our view.
- **Diversify manufacturing and supplier base:** Introduction of 3 new contract manufacturers and moving up the supply chain. This should increase control of design and product availability and at expanded margins.
- **Reposition sales and distribution strategy:** ROI (return on investment) marketing focus around fewer and more structured new product releases. The sales teams have been restructured to fit regional exposures and product development.

Exhibit 6: Timeline




Source: Company presentation

Exhibit 6 above was released as part of the recent BirdDog FY24 results (26 August 2024). It explains the timeline of FY24 challenges, their resolution and the entry point of what the company is terming "BirdDog 2.0". It's worth noting that camera supply was stopped by the previous contract manufacturers in September 2023.

Therefore, we believe it is not unreasonable to think BDT is very well positioned given its strong cash position to fund growth initiatives, clear next-gen product release roadmap and a cost-base that is rightsized for a company that is potentially entering a strong growth phase.

## Growth Strategy

Having stabilised the business and invested in the future, it now comes down to execution of the growth strategy. We discuss the detail at a category level shortly, but more broadly speaking, the company says it will focus on delivering growth in the following key areas:

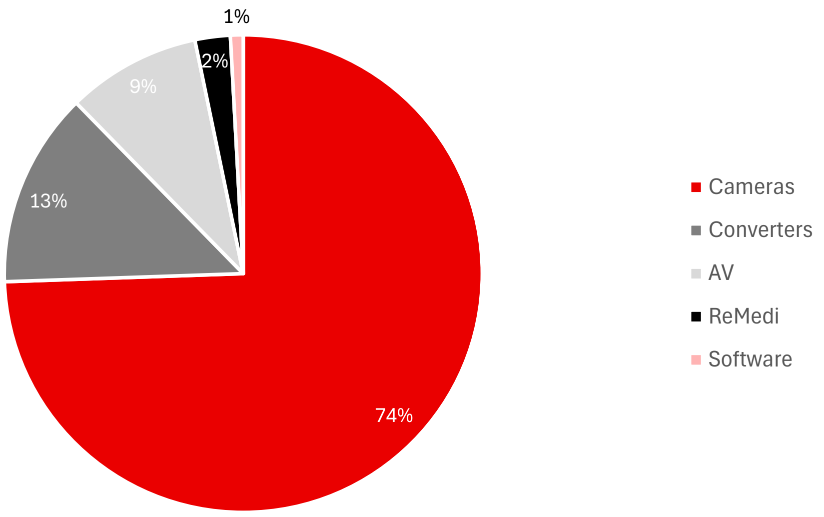
- **Growth in camera sales through the release of the "NextGen" camera range** in late FY24a and throughout FY25f and FY26f. We forecast this will drive revenue from $12.4m in FY24 to $19.8m FY25 in the camera category.
- **Ongoing product releases at higher price points in the Converter range**, the impact of which should be most materially felt in FY26 with RaaS forecasting revenue of $5.9m, materially higher than the $3.5m forecast in FY25.
- **Focus on building traction in the new verticals,** such as the Remedi product. Our forecasts assume steady growth over time rather than aggressive early-stage success.

**We forecast the combination of these to drive material revenue growth and margin expansion** in each of the FY25f and FY26f periods, complemented by operating leverage flowing through in the P&L.

## Product Overview And Earnings Contribution

We believe the best way to truly understand the business is to look at revenue (and gross profit) by product type, rather than by geography. The relative revenue contribution of the 5 main product categories in FY25f is outlined in Exhibit 7:

**Exhibit 7: FY25f Revenue by Product Category**




Source: RaaS forecasts

Before we go into further detail on each category, we discuss some of the key criteria that bring the overall business model together.

- A brief explanation of NDI® and why it has been important to help position BirdDog as a respected brand in its field.
- The manufacturing and supply chain for the product mix.
- The sales approach.

## NDI® Explained

First, it's worth noting that products such as the BirdDog suite of cameras are NDI® enabled and the use of the NDI® protocol is a clear part of the business model, although the cameras are also designed for use outside the NDI® protocol in more traditional video and broadcasting. Products such as converters (coders and decoders) enable non-NDI® enabled hardware to be adapted for the use over NDI® protocol, which is being increasingly used for video transmission.

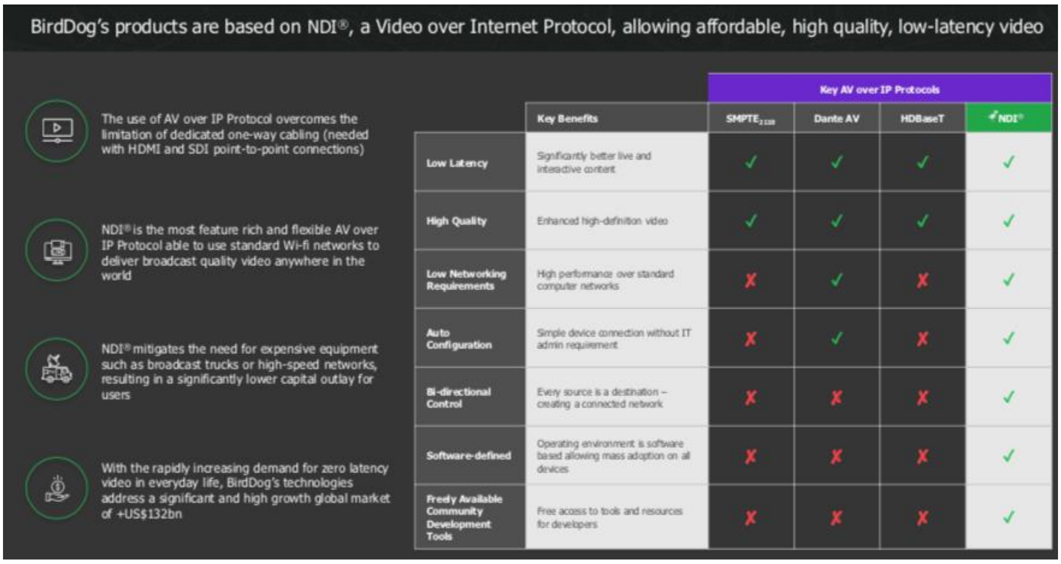
NDI®, which stands for Network Device Interface, is a technology developed by US-based technology company NewTek. It allows video and audio signals to be transmitted over a standard computer network (like Ethernet) in real-time with high quality and low latency. NewTek is a pioneering company in the video production and broadcasting industry, known for its innovative products and technologies that make professional-quality video production more accessible and efficient.

Here's a simple breakdown of the technology:

- **High-Quality Video**: NDI® allows you to send and receive high-definition video and audio over your existing network infrastructure without the need for specialized video cables.
- **Real-Time Transmission**: It's designed for real-time, low-latency video transmission, which is crucial for live video production, streaming and broadcasting.
- **Interoperability**: NDI® is well adopted in the industry, meaning many different hardware and software products can communicate with each other using NDI®. This includes cameras, mixers and broadcasting software.
- **Cost Effective**: By using standard network cables and existing network infrastructure, NDI® can reduce the cost and complexity of setting up and managing video production environments.

In essence, NDI® simplifies the process of transmitting video and audio within a network, making it easier to create flexible, scalable and high-quality video production systems. Those who want further detail and technical insight on NDI® can find it here and here.

**Exhibit 8: Network Device Interface NDI®**




| | | Key AV over IP Protocols | | | |
|---|---|---|---|---|---|
| | Key Benefits | SMPTE 2110 | Dante AV | HDBaseT | NDI® |
| Low Latency | Significantly better live and interactive content | ✓ | ✓ | ✓ | ✓ |
| High Quality | Enhanced high-definition video | ✓ | ✓ | ✓ | ✓ |
| Low Networking Requirements | High performance over standard computer networks | ✗ | ✓ | ✗ | ✓ |
| Auto Configuration | Simple device connection without IT admin requirement | ✗ | ✓ | ✗ | ✓ |
| Bi-directional Control | Every source is a destination – creating a connected network | ✗ | ✗ | ✗ | ✓ |
| Software-defined | Operating environment is software based allowing mass adoption on all devices | ✗ | ✗ | ✗ | ✓ |
| Freely Available Community Development Tools | Free access to tools and resources for developers | ✗ | ✗ | ✗ | ✓ |

Source: Company presentation

NDI® is now entrenched in the industry and we believe accepted as the most widely-adopted protocol. As previously mentioned, it was developed and continues to be owned, by NewTek. BirdDog has an ongoing relationship with NewTek. The cost of the software licensing agreement, which is a 5-year term with an option, effectively equates to ~4% of BDT sales revenue.

## Manufacturing and Supply Chain

The manufacturing and supply chain has proved to be the cause of various challenges for the team at BirdDog. Most predominantly because it previously had a single camera contract manufacturer in Bolin, which effectively represented ~70% of group sales. In effect, Bolin provided the hardware and robotics, Sony componentry was used for imaging and BirdDog the video software. The cameras in the most part were joint-branded both BirdDog and Bolin. The arrangement served its purpose in the sense that it enabled BirdDog to gain market share and build a strong reputation for video capability, but the relationship has now come to an end.

In simple terms, according to the company, Bolin and BirdDog had a disagreement regarding the supply of cameras, resulting in BirdDog not being able to obtain product. It also had cash deposits and inventory it could not access. After a lengthy legal procedure, the two parties agreed to settle. According to company disclosures, the impact on BDT was:

1. A material amount of legal fees totalling ~A$2.4m.
2. Cash outflow of US$1.6m (to be recognised 1H25).
3. Cost to the P&L of US$3.3m on write-down of cash deposits (recognised in FY24).
4. Receipt of US$1.6m of saleable product from Bolin which can be sold by BDT.

The disagreement with Bolin had by far the single biggest impact on what proved to be a very poor FY24. This appears to be completely resolved and is behind BDT.

Over the past 12 months it has changed its strategy completely and now looks to have mitigated some of the risks that previously existed. The key changes are:

- Ceasing the Bolin relationship.
- Appointing 3 new contract manufacturers out of two Asian regions to drive optionality and control over camera manufacture.
- “Moving up” the supply chain by designing its own product and sourcing componentry where required. This gives BDT control over the hardware, robotics and video software. It continues to use Sony for image sensors. The company says it is currently considering its options around IP protection.

## The Sales Model

The company uses a diverse sales model, depending on channel, region, product and end use. It has offices in Australia (Melbourne) and North America (Michigan), and other points of presence in numerous countries including the UK, Spain and Germany.

As previously stated, the current sales mix by geography is dominated by the US at ~60%, then the UK and Europe at~30% and Rest of World at ~10%. The company has regional representatives as points of contact and relationship managers for a reseller and integrator network (these are 3rd parties), which effectively are the contact point to the end user (buyer).

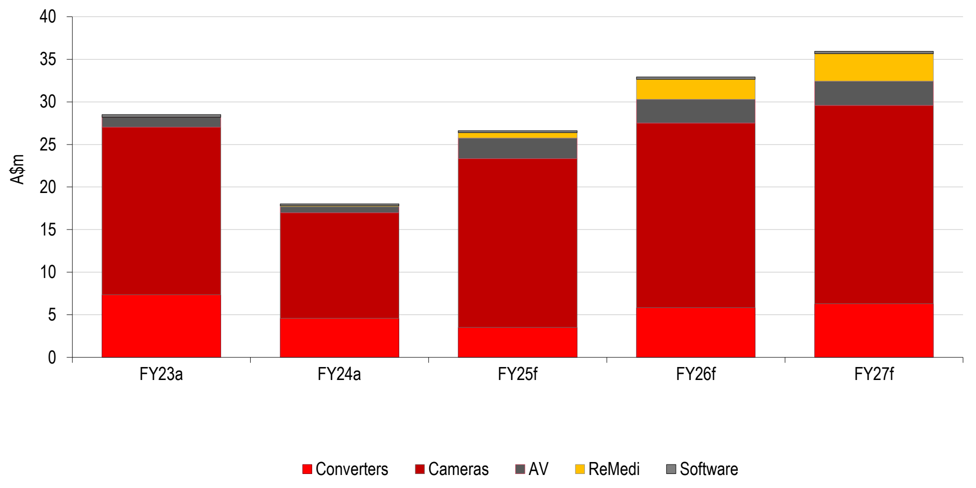
In the case of resellers, they can be bricks and mortar retailers or ecommerce providers. The company estimates around 60% of "reseller" sales are completed online, with the largest contributor being B&H in the US.

Integrators have relationships with larger corporates or organisations. For example, they may have a project for a major international bank for the AV work in boardrooms, meeting rooms and other sites and use BirdDog products as part of the solution.

## Revenue mix and category overview

Exhibit 9 shows company revenue forecasts from the FY23a base and over the forecast period to FY27f.

**Exhibit 9: Revenue forecasts by product category**




Source: Company data and RaaS estimates

From the likely revenue low point in FY24 as the previously discussed issues played out, we forecast revenue CAGR of 25.2% to FY27. This is driven by:

- **Camera sales growth** from $12.4m in FY24a to $23.3m in FY27f. We don't see this as aggressive given the company delivered camera sales of $19.7m in FY23a and a completely new range will have been released, which anecdotally has received positive early reviews and order numbers.
- **Converters to deliver growth** with lower seasonality off the FY25f base with a forecast one-off positive impact of new product releases and pricing increases, materially impacting FY26f.
- **AV to grow** on recent and upcoming new product releases.
- **Remedi to scale up gradually** over the forecast period.

Below we examine each category and discuss the growth strategy and our forecast outcomes.

## Cameras

The camera range allows for a significant boost to overall video production capabilities without the need to invest in more people or expensive physical infrastructure. The ability to operate multiple cameras without the need for in-situ operators enables highly-efficient remote content creation and a material reduction in production costs.

The PTZ camera market experienced rapid expansion in uptake in recent years, across several verticals including online education, corporate events, livestreaming and sporting events.

BirdDog currently manufactures and sells 5 recently-released next-gen models across 3 ranges, or "series". We believe there are at least 2 further to come before calendar year end. Once complete (the whole new range is set to be released by the end of calendar year 2024), it will completely supersede the previous range. The recent releases have enjoyed early success which potentially provides a leading indicator to a strong recovery phase ahead.

The products of the next-gen range that are currently released are listed below. We provide links which include pictures, videos and specifications for each product:

- The X1 series (released May 2024): Containing the X1 Standard and X1 Ultra at price points of US$995 and US$1495 respectively. X1 series product information here.
- The Maki series (released May 2024): Containing the Maki 12" and the Maki 20", both at a price point of US$1,295. Maki series product information here.
- The X5 (released August 2024): At a price point of US$2,995. X5 product information here.

**Exhibit 10: Camera series: The X1, Maki and X5**


Source: Company presentation

We forecast the Cameras category to represent 74% of revenue in FY25, at a GP margin of 69%. In 2021, the year in which BDT undertook its IPO, cameras sales were $25.4m, representing 67% of $38m total group sales. In 2023, cameras sales had dropped to $19.7m, which represented 69% of $28.5m in total group sales. This trend continued through FY24 when sales weakened to $12.4m (again 69% of total revenue) due to a range of issues, but most notably the unavailability of product due to litigation with the company's sole contract manufacturer at that time as discussed previously.

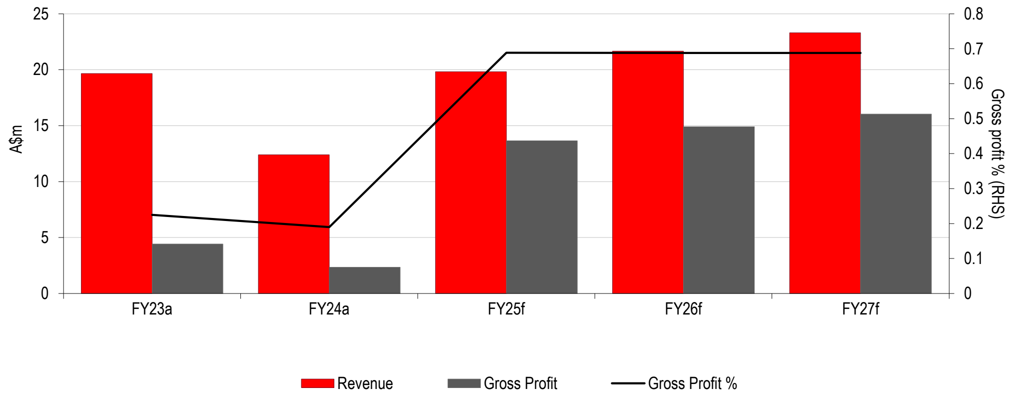
We believe it very likely that the recently released FY24 result represents the low point in camera sales, and will in fact mark the starting point for a **material** turnaround, for the following reasons:

- **New product releases** – The release of the NextGen range is showing strong early traction. The new cameras have been favourably reviewed by the industry and appear to be well regarded, as evidenced by traction in early orders. Generally, a new range has a likely product lifespan of ~4+ years.
- **Secured diverse supply chain** – BDT has addressed and resolved its supply issues. It has "moved up" the supply chain and no longer inserts its IP and software into a third-party OEM camera product range (as it did with previous contract manufacturer Bolin). It now designs the complete camera and has it manufactured to specification using chosen componentry where required (for example Sony for image quality and image hardware). It has terminated its agreement with its previous contract

manufacturer and has appointed three new contract manufacturers across two geographies. This should mitigate supply and distribution risk and deliver a material uplift in commercial terms.

- **Margin expansion** – We believe the control of the design and diversity of manufacture base has materially improved the commercial terms of the new supply agreements whereby we forecast gross margins to double – management has stated this has been delivered in the next-gen sales to date. This, combined with the fact that the previous inventory overhang from the last generation series of cameras has now been worked through (other than the recent Bolin settlement product), results in RaaS forecast gross profit margin to strengthen to 69%. Management says it believes this can be maintained going forward.

**Exhibit 11: Camera revenue and gross profit forecasts**




Source: Company data and RaaS forecasts

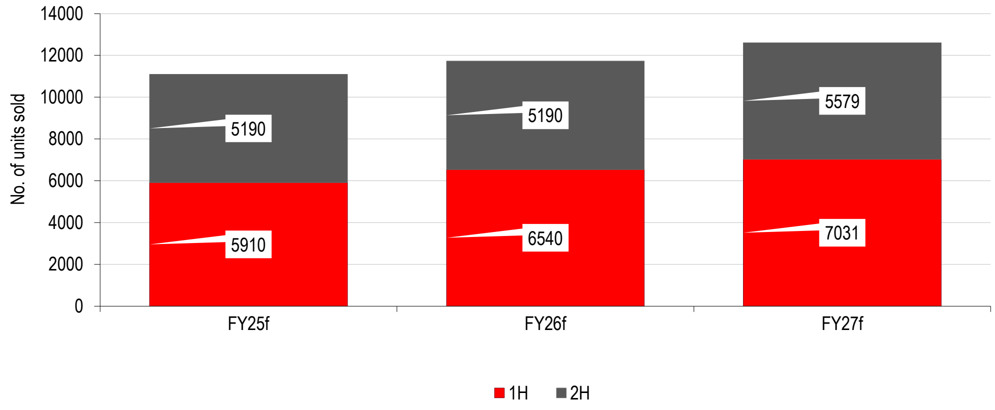
Exhibit 11 above shows RaaS estimates for revenue and gross profit margin in the Camera category. Key points of interest are:

- **Revenue growth** – FY25f sees a step-change in revenue and growing again into FY26f on a full year contribution from the new range. We assume the last 2 NextGen cameras begin to contribute revenue in the December 2024 quarter. For FY27f we expect modest growth of 7-8% going forward. We assume no price increases in the camera range off the FY25f base.

- **Gross profit margin expansion** – The new contract manufacturers and manufacturing terms have had an immediate impact, with gross profit margins doubling over the past 3 months on the cameras released to date.

Camera sales have historically experienced seasonality, with a ~55/45 H1/H2 split with 1H being the 6 months to December. We show our assumptions on the assumed camera sales over the forecast period in Exhibit 12 below.

**Exhibit 12: Camera unit sales assumptions**




Source: RaaS forecasts

We assume the average sale price across the complete range at US$1,160 to US$1,400 over the forecast period. We forecast the geographical split at 60% US, 30% UK & Europe and 10% Rest of World. For context, prior to the issues of the recent past, BDT was selling ~10,000 to 12,000 units per annum, broadly in line with our assumptions around the success of the next-gen range.

## Converters

Converters are where BirdDog was born when its CEO and Founder developed and sold the first product in 2017. They are generally used to bridge the gap between old traditional baseband video to NDI® or an alternate new protocol. Converters are either retrofitted or plugged into non-NDI® enabled cameras and computers to deliver NDI® functionality. Here's a simple breakdown:

- **Input**: The converter takes video from traditional sources like cameras, HDMI or SDI connections.
- **Conversion**: It converts this video into NDI® (Network Device Interface) format.
- **Output**: The NDI® video can then be sent over a regular computer network (Ethernet) to other devices, computers or screens.

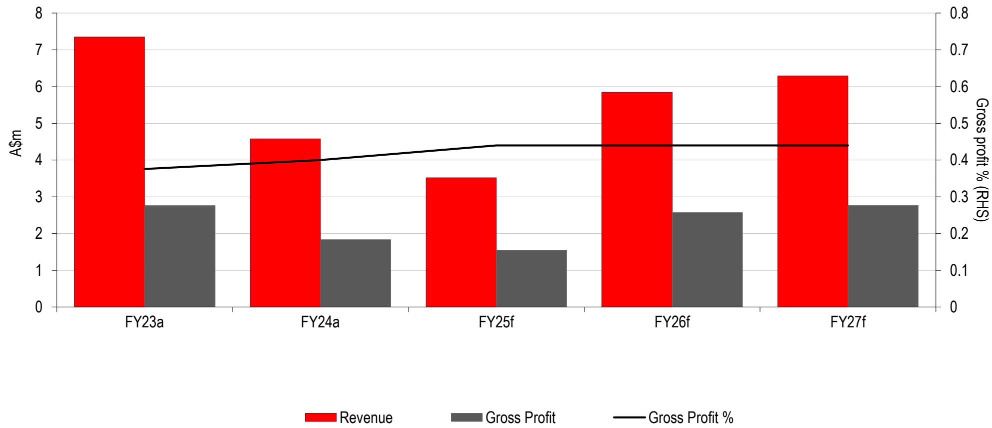
Converters offer a soft entry and controlled investment spend for organisations easing into next-generation production systems, easily integrating existing equipment into the rapidly expanding ecosystem across livestreaming, sporting events, broadcast, corporate AV, education & lecture capture, and film production.

BDT currently carries a range of 8 converter products ranging in sale price from US$395 to US$2,495. Current annual sales volumes are ~3,200 prior to new product releases and an increase in price point towards the middle of CY25.

**Exhibit 13: Converters range**


Source: Company website

**Exhibit 14: Converters revenue and gross profit forecasts**



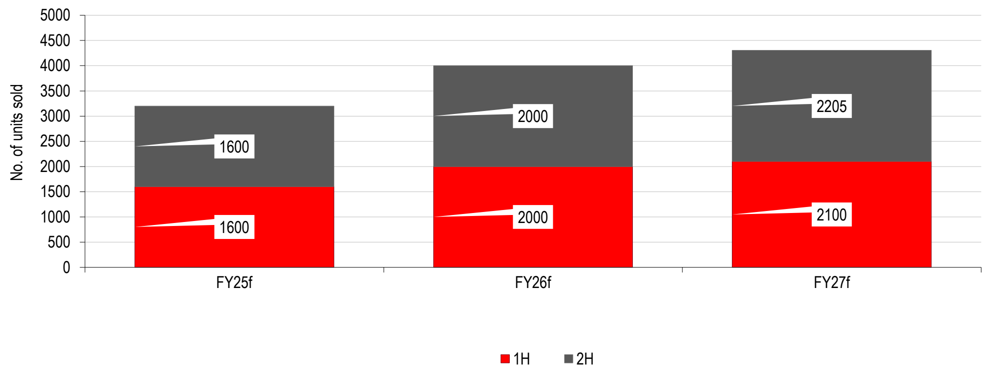

Source: Company data for historicals, RaaS forecasts

Exhibit 14 shows RaaS estimates for revenue and gross profit margin in the Convertors category. Key points of interest are:

- **Revenue**: We expect FY25f to deliver a slight decline in volumes when compared to FY24a until some product updates are released and begin to drive growth into late FY25f. We then forecast revenue to grow strongly in FY26f on a full year contribution from the new range, resulting in a step-change in revenue growth to $5.9m, a 66% increase over FY25f. We believe this will be driven by both volume and price. We then expect volume-based growth of ~10% in FY27f.
- **Gross profit margin**: Historically the converter range has delivered an average gross profit margin of 35-50%. We don't see a material margin expansion story in the converter range (as opposed to cameras), but rather a revenue growth story. In FY25f converters are expected to contribute 13% of

revenue and 9% of gross profit (mostly due to outsized growth of cameras in FY25f), before reverting to historical contribution levels in FY26f of 18% of revenue and 12% of gross profit.

**Exhibit 15: Converters unit sales assumptions**



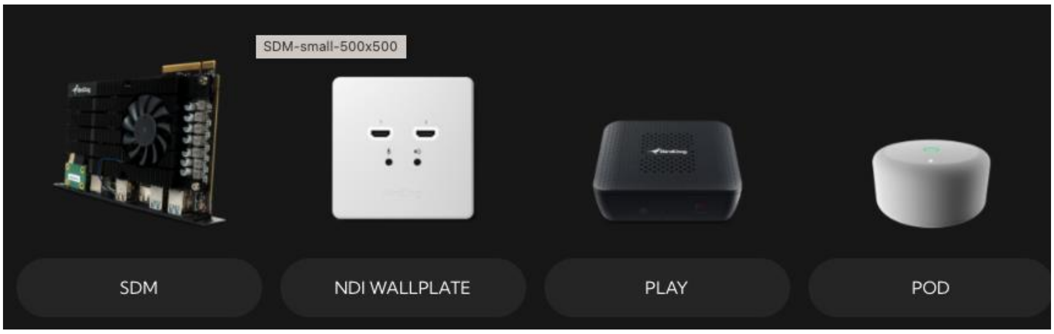

Source: RaaS forecasts

We assume the average sale price across the complete range is US$750 (in line with recent historicals) over 3,200 units in FY25f, before new products are released at a new retail price point of ~US$1,000 in FY26f, also driving an increase in sales to ~4,000 p.a. We again forecast the geographical split at 60% US, 30% UK and Europe and 10% Rest of World.

## Audio Visual (AV)

The group of Audio Visual products are illustrated in Exhibit 16 and range in price from US$149 for the "Play" product up to US$1,295 for the "SDM". These are stand-alone products and accessories targeted at areas such as the display market for retail and hospitality, offices, airports, broadcast and education. The product information and specifications are available through these links SDM, NDI Wallplate, Play, and the recently released Pod.

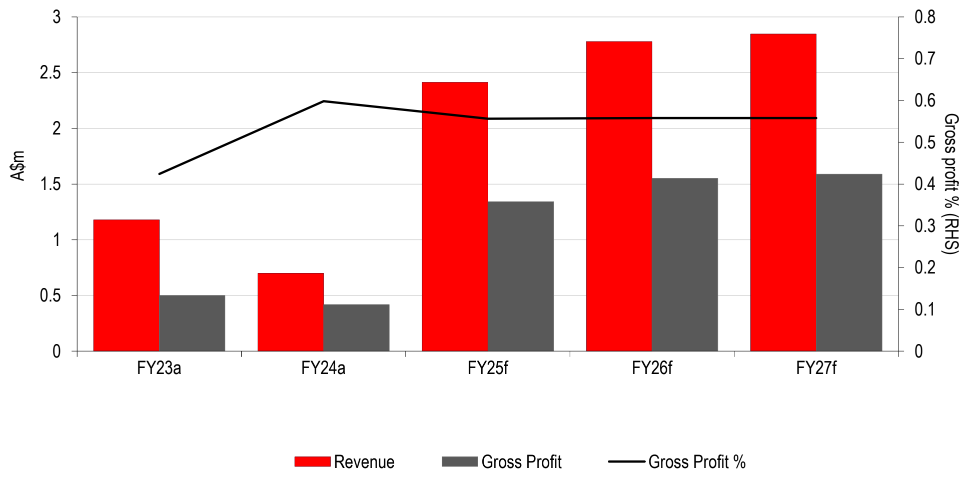
**Exhibit 16: Audio Visual range**




Source: Company website

The Audio Visual category is a solid, but not yet material, contributor representing 4% of group revenue in both FY23a and FY24a.

**Exhibit 17: Audio Visual revenue and gross profit forecasts**




Source: Company data for historicals, RaaS forecasts

Exhibit 17 above shows RaaS estimates for revenue and gross profit margin in the AV category. Key points of interest are:

- **Revenue**: We forecast revenue to grow in FY25, again driven by a new product release, in this case the Pod which is priced at US$199 and facilitates simple NDI® to USB webcam to connect to Zoom, Teams, Meet or any other conferencing or software application that supports a USB Webcam input. This simplifies the connectivity of the product and greatly reduces the technical knowledge requirement of the user, **potentially opening up a new market for BirdDog**. The product was released in July and we forecast a strong revenue contribution resulting in an uplift for FY25 of ~240% to $2.4m.

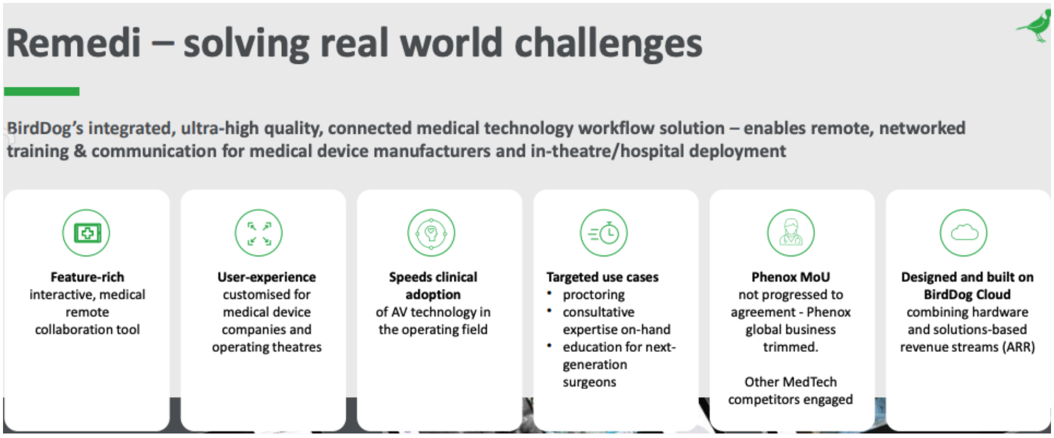
- **Gross profit:** We assume gross profit margins are maintained in the range 50-60%.

## Remedi

The Remedi product is the first tailored and packaged solution for a specific industry – in this case the medical industry. It has been developed over the past 18 months and is described by the company as a cutting-edge medical collaboration solution designed to enhance surgical outcomes through real-time, remote interaction. It leverages BirdDog's cameras and low-latency, secure cloud infrastructure to provide crystal-clear video and audio communication between healthcare professionals worldwide.

Remedi allows surgeons to connect with remote experts, mentors or device representatives during surgeries, enabling live case observation, two-way communication and control of video feeds. This improves surgical training, knowledge sharing and support without the need for a physical presence. It's a powerful tool for minimizing logistical barriers, offering support 24/7 and accelerating innovation in medical procedures.

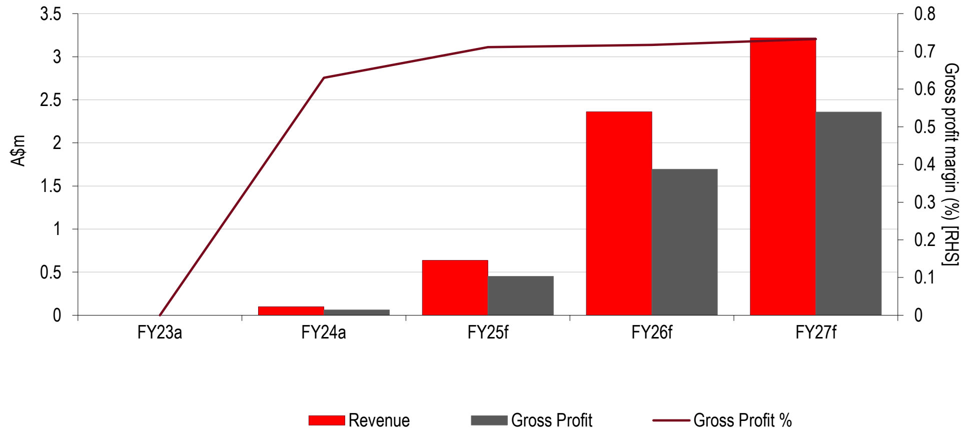
**Exhibit 18: The Remedi medical solution**




Source: Company presentation

Remedi is sold as a packaged solution with the kit generally comprising two BirdDog cameras (X1 standard and X1 Ultra), one converter (4K HDMI), ancillary products (iPad, trolley, etc.) and a Remedi software package. The commercialisation of the product is now being ramped-up, with our forecast revenue and gross profit illustrated in Exhibit 19 below.

**Exhibit 19: Remedi revenue and gross profit forecasts**

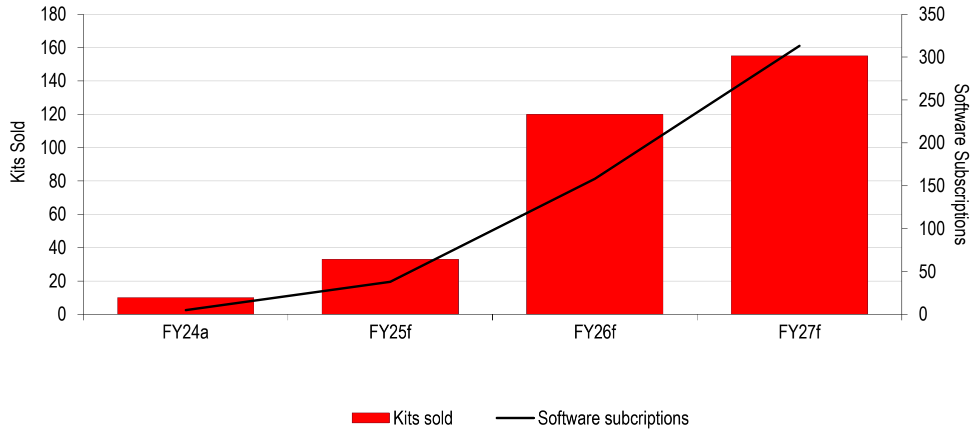



Source: Company data for historicals, RaaS forecasts

- **Revenue**: The total sale price of a kit averages $10,000, comprising hardware sales plus a software subscription component, based on the selected package, ranging from a perpetual license to an annual monthly software-as-a-service. We currently assume BDT builds traction incrementally through a relatively direct sales model, but we believe there is certainly potential for more material partnerships to be formed to scale the product much more quickly. As not yet proven, we have chosen not to include any material partnerships in our forecasts.
- **Gross profit:** The gross profit margin of the kit sits around 70% at the time of sale. However approximately 10% of the revenue is derived from a software subscription, equating to $1,000 per kit per annum. Therefore, provided the product gains traction that annuity revenue stream grows (at almost 100% gross profit margin), resulting in  gross profit margin expansion to ~74% at the end of our forecast period.

The RaaS forecasts for the number of kits sold is shown below. We also include the cumulative number of software subscriptions which equate to 313 by June 2027f.

**Exhibit 20: Remedi kits and software subscriptions**




Source: RaaS forecasts

## Software

The BDT suite of software products and solutions are of key importance to the functionality and useability of the products and the overall business model, but to this point have largely been provided as a “freemium” software strategy so do not materially contribute to group revenue in their own right. The company believes this will evolve over time, but at this stage we have adopted a conservative position and our forecast sits at ~1% of group revenue annually.

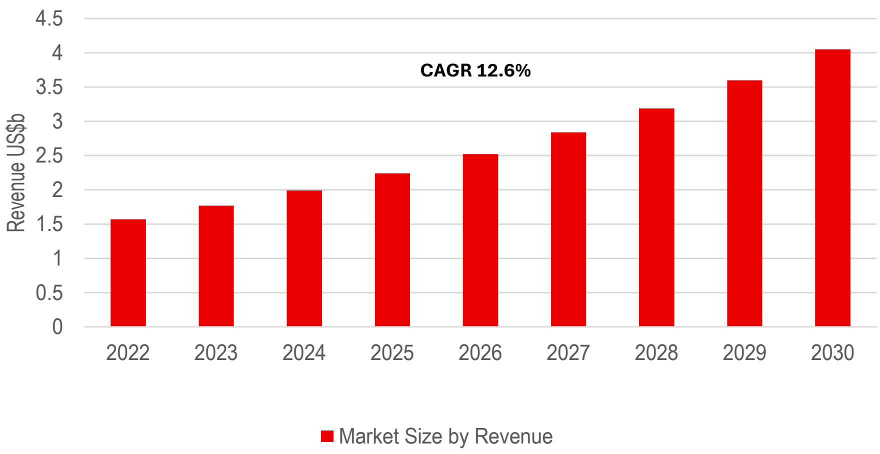
## Key Industry Considerations

BDT operates in a sub-sector of the broader Unified Communications & Collaboration (UC&C) market. Recent research studies [by EMR/Claight and Mordor Intelligence indicate the UC&C market and the PTZ camera sub-segment (in which the majority of BDT’s revenue is derived) are of substantial size and forecast to continue to grow at double-digit compound rates in the coming years

**Growth in the sector:** According to recent research studies done by EMR/Claight and Mordor Intelligence in the US, the broader UC&C market is forecast to see strong growth in the coming years with a forecast 24-27% CAGR from 2024 to reach ~US$500bn by 2032. That figure encompasses many industry verticals, most of which BDT does not operate in.

The PTZ camera market is directly relevant to BirdDog, a 2022 study completed by Zion Market Research indicates its market size by revenue at US$1.6bn in FY22 and forecast to grow at a CAGR of 12.6% to reach US$4.0bn by 2030.

Exhibit 21: PTZ camera market forecast growth




Source: Zion Market Research and RaaS

Some of the key drivers of the growth as outlined in the research studies that are relevant to BirdDog are:

- Increased demand for AV conferencing and video in the corporate sector.
- Growth of use in the live sports and entertainment industry.
- Accelerating use of online classes in Education, particularly tertiary.
- Fragmentation in the broadcast sector.
- Growth in remote production.
- Expansion of the professional and semi-professional content creation industry.
- Wider use of technology in the "house of worship' vertical.
- Continued adoption in the medical industry.

As illustrated in Exhibit 22, according to Mordor Intelligence (Mordor) the strongest growth by geographical region is forecast to be North America.

**Exhibit 22: UC&C market forecast growth**


Source: : Mordor Intelligence "Unified Communications and Collaboration Market: Market CAGR 2024-2029 (%), by Region, Global"

**The competitive environment:** The broader UC&C market is immense and has many participants. The Top 5 market leaders are listed by Mordor as Avaya Inc, Cisco Systems, RingCentral, Verizon Communications and Mitel Networks.

The PTZ market is more difficult to identify specific information by market share, particularly when trying to focus on the areas in which BirdDog concentrate their efforts. We estimate security and surveillance to be the largest industry vertical representing 45-50% of the industry but isn't an area of focus for BDT and is often populated with cameras that are lower quality, lower price point and have different specifications to the BDT range. The next two largest sectors are very much targeted by BDT in Broadcasting and Media, and Corporate & Education, which we estimate represent 25-30% and 15-20% respectively.

BirdDog has stated that it sits in the top 3 participants by market share in its chosen verticals, with the other two being Panasonic and Canon, with Sony as the fourth. There appears to be a long tail of lower quality and less expensive cameras from other manufacturers which often contain no owned IP. Anecdotally, it seems these brands are generally not successfully penetrating the verticals which are being dominated by the Top 4 as questions of quality have arisen over the past 3 to 4 years.

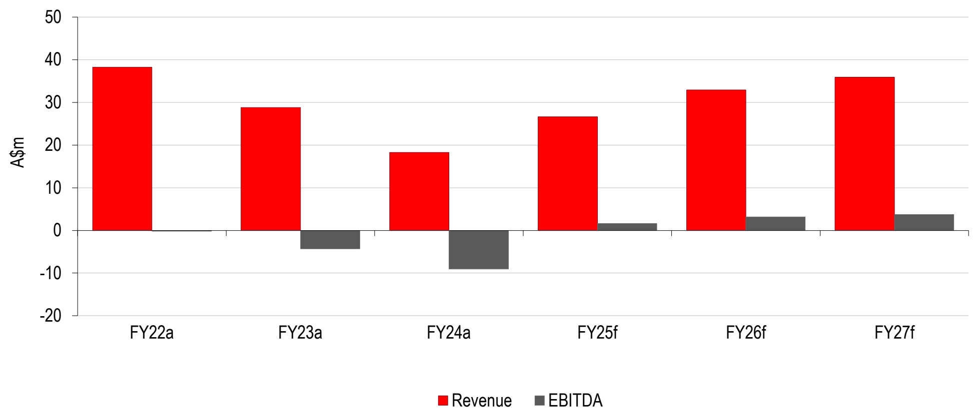
**Inputs and supply issues**: One of biggest risks for the PTZ Camera market , like many tech-driven industries, is the reliance on key componentry, most notably semiconductor chips for key functionalities such as video processing, image sensors, connectivity and AI. The risks come in the form of supply chain disruptions, costs increases, production delays, over-reliance on key contract manufacturers, competitor impacts and quality control issues. This also applies to other inputs. Obviously pandemics and geopolitical incidents provide examples of the impact these challenges can have. The industry is trying to mitigate these risks by diversifying the supply concentration that exists with the industry, but that takes time so the risk should not be ignored.

## Financials And Forecasts

### Historical performance

The business listed in FY22. Exhibit 23 shows the Revenue and EBITDA performance in all periods since listing.

**Exhibit 23: BDT historical and forecast revenue and EBITDA performance**




Source: Company data, LSEG data, RaaS forecasts

We have some confidence that the FY24 result will prove to be considered the low point when looking back in a couple of years. In short:

- FY22 was a solid year but fell short of expectation due to the post-Covid slowdown.
- FY23 saw weaker demand in key regions such as North America and Europe resulting in lower-than-expected revenue. This was exacerbated at the margin due to inventory build resulting in lower-margin sales.
- FY24 was a combination of factors but most notably some company-specific events already discussed.

### Forecasts

The company has not released any forward guidance for FY25 or into the medium term.

### P&L forecasts

RaaS earnings and P&L forecasts are shown in Exhibit 24 below.

**Exhibit 24: P&L forecasts and earnings (in A$m unless otherwise stated)**

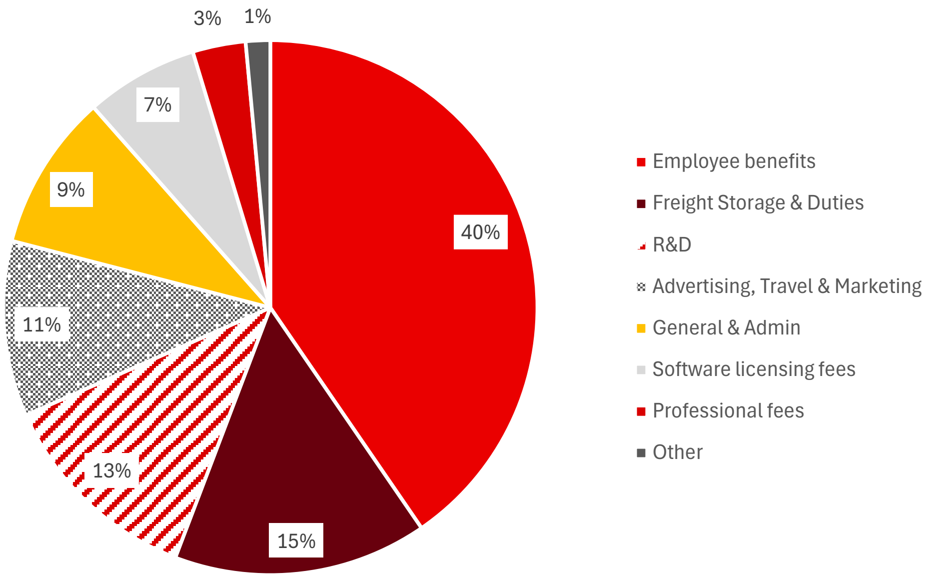
| Year ending 30 June | FY23a | FY24a | FY25f | FY26f | FY27f |
|---|---|---|---|---|---|
| **Revenue** | **28.8** | **18.3** | **26.6** | **32.9** | **35.9** |
| Gross Profit | 7.8 | 4.9 | 17.2 | 21.0 | 23.0 |
| **EBITDA (Adj)** | **(4.3)** | **(9.0)** | **1.6** | **3.1** | **3.7** |
| EBIT (Adj) | (4.7) | (9.6) | 1.3 | 2.8 | 3.4 |
| NPAT (Rep) | (5.5) | (17.7) | 1.4 | 2.5 | 2.9 |
| Abnormals (One-off items) | 0.0 | (7.7) | 0.0 | 0.0 | 0.0 |
| **NPAT (Adj)** | **(5.5)** | **(10.0)** | **1.4** | **2.5** | **2.9** |
| **EPS (Adj) cps** | **(2.7)** | **(5.0)** | **0.9** | **1.5** | **1.8** |

Source: Company data for actual, RaaS forecasts

The key elements to consider in our P&L forecasts are:

- **Revenue growth**: CAGR of 25.2% over the forecast period from the FY24a base to FY27f. This is somewhat overstated versus "normal" organic growth due to the underperformance in FY24a resulting in a "low base" starting point. That said, growth in FY25f and FY26f is accelerated due to new product releases in cameras, converters and AV before we revert to what we consider maintainable organic growth in FY27f. We assume no acquisitive growth in our forecasts.
- **Gross profit margin expansion**: The gross profit can be defined in one of two ways. In the case of RaaS, we model gross profit to the product level. All freight, storage and duties costs, which equate to ~4% of revenue, are included in operating costs which sits between gross profit and EBITDA. The breakdown of group operating costs is shown in Exhibit 25 equating to a total of $15.6m in FY25f. BDT sometimes refers to gross profit at group level including freight, but at the category level excluding freight. Either way, margins over the past 3 months have effectively doubled on either treatment. We see the materially improved gross profit margin of ~64% (ex-freight), and ~55% (incl freight) as maintainable. It's also worth noting that, admirably, all R&D spend to date has been expensed rather than capitalised, unlike many comparable businesses.
- **EBITDA growth:** Top-line growth and gross profit margin expansion drives growth in EBITDA from a material loss-making position in FY24a to $1.6m positive EBITDA in FY25f, at an EBITDA margin of 7.0%. We forecast the EBITDA margin to expand to 9.4% in FY26 as a full year contribution of the discussed product releases flows through. In FY27 we forecast it to expand slightly further as some benefits of operating leverage emerge.
- **EPS growth:** We forecast BDT to return to bottom line profitability in the current year FY25 and accelerate in line with metrics mentioned above. The previously discussed buy-backs drive earnings accretion, most notably an uptick in FY25f, ~16% of shares on issue were acquired in July 2024.

**Exhibit 25: Breakdown of FY25f operating costs**

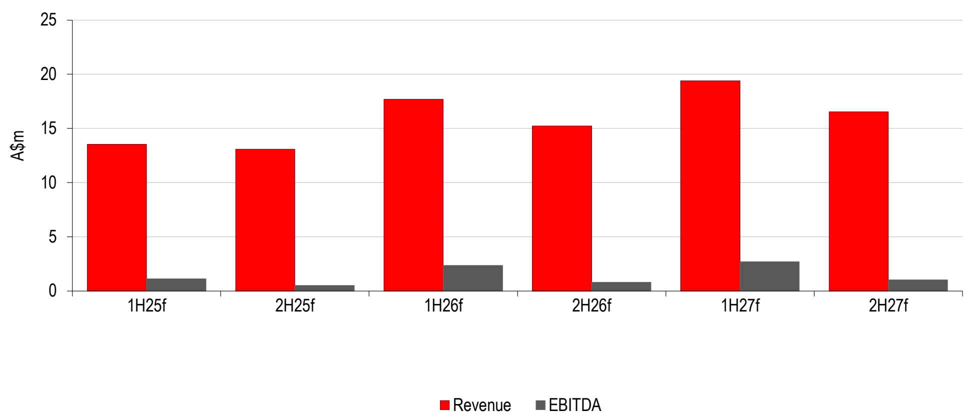



Source: RaaS Estimates

## Seasonality

The industry in which BDT operates has historically shown seasonality with a 1H/2H skew of ~55/45. We forecast this to continue, which should be evident for both EBITDA and cashflow in quarterly and half year releases. This smooths over the full-year period. Exhibit 26 illustrates the contribution by half over the forecast period.

**Exhibit 26: Revenue and EBITDA seasonality**




Source: RaaS Forecasts

## Balance sheet

**Exhibit 27: Balance sheet forecasts (in A$m unless otherwise stated)**

| Year ending June 30 | FY23a | FY24f | FY25f | FY26f | FY27f |
|---|---|---|---|---|---|
| Cash | 22.6 | 16.5 | 13.5 | 14.5 | 16.6 |
| Accounts receivable | 1.9 | 2.3 | 2.3 | 2.7 | 2.9 |
| Inventory | 15.0 | 6.0 | 8.5 | 9.9 | 10.7 |
| Other current assets | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| Total current assets | 39.9 | 25.2 | 24.7 | 27.6 | 30.7 |
| PPE | 0.6 | 0.4 | 0.5 | 0.6 | 0.6 |
| Intangibles and Goodwill | 0.4 | - | 0.0 | 0.0 | 0.0 |
| Other non-current assets | 2.3 | 1.5 | 1.4 | 1.4 | 1.4 |
| Total non current assets | 3.3 | 1.9 | 1.9 | 1.9 | 2.0 |
| **Total Assets** | **43.2** | **27.1** | **26.6** | **29.5** | **32.7** |
| Accounts payable | 0.8 | 2.6 | 2.2 | 2.6 | 2.8 |
| Short term debt | - | - | - | - | - |
| Other current liabilities (incl lease & contract) | 1.1 | 0.9 | 0.9 | 0.9 | 0.9 |
| Total current liabilities | 1.9 | 3.6 | 3.2 | 3.5 | 3.7 |
| Long term debt | - | - | - | - | - |
| Other non current liabs | 1.5 | 1.3 | 1.3 | 1.4 | 1.5 |
| Total long term liabilities | 1.5 | 1.3 | 1.3 | 1.4 | 1.5 |
| Total Liabilities | 3.4 | 4.9 | 4.5 | 4.9 | 5.2 |
| **Net Assets** | **39.8** | **22.2** | **22.1** | **24.6** | **27.5** |
| | | | | | |
| Share capital | 46.1 | 45.4 | 43.9 | 43.9 | 43.9 |
| Accumulated profits/losses | (7.5) | (24.2) | (22.8) | (20.3) | (17.3) |
| Reserves | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 |
| Minorities | - | - | - | - | - |
| **Total Shareholder funds** | **39.8** | **22.2** | **22.1** | **24.6** | **27.5** |

Source: Company data for actual, RaaS estimates

Key balance sheet considerations include:

- **Cash position**: BDT remains in a strong cash position with a balance of $16.5m as at 30 June 2024. The company remains debt free. We will discuss the cash generation in our "Cashflow" section shortly, but in short, Q1 of FY25 is forecast to represent the low-point in cash, largely due to the Bolin settlement (cash outflow on settlement of US$1.6m) and the selective share buy-back (cash cost of ~$1.6m), both to impact the September quarter 2024 (1QFY25f). Note, BDT received US$1.6m in inventory from Bolin in the settlement so will redeem a portion of cash through its sale (not in our forecasts as the true market value is unknown, in our opinion). The company remains comfortably funded with significant headroom for other growth initiatives outside those in our forecasts, in our view.

- **Clean and simple balance sheet**: The only balance sheet items of note (outside the cash balance) are the working capital items of receivables, inventories and payables. We assume inventory builds with revenue and we forecast it to sit at ~65% of revenue over the forecast period. To date, all R&D on product development has been expensed.

- **Cash backing and NTA per share:** Although BDT is a sales business (rather than an asset focussed business), the balance sheet, in our view, is another illustration of the fundamental value opportunity that exists. The cash balance alone represents 8.3cps in value at the cash low point at 30 June 2025f. The NTA of the business is 13.6cps at 30 June 2025f.

## Cash flow

**Exhibit 28: Cash flow reported and forecasts (in US$m unless otherwise stated)**

| Year ending December 31 | FY23a | FY24a | FY25f | FY26f | FY27f |
|---|---|---|---|---|---|
| EBITDA | (4.3) | (9.0) | 1.6 | 3.1 | 3.7 |
| Interest | 0.3 | 0.8 | 0.7 | 0.7 | 0.8 |
| Tax | 0 | 0 | (0.6) | (1.1) | (1.3) |
| Other | 3.4 | 3.0 | (3.0) | (1.4) | (0.8) |
| Operating cash flow | (0.6) | (5.2) | (1.2) | 1.4 | 2.4 |
| Mtce capex | (0.2) | (0.1) | (0.1) | (0.1) | (0.1) |
| Free cash flow | (0.7) | (5.3) | (1.4) | 1.3 | 2.3 |
| Acquisitions/Disposals | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cash flow pre financing | (0.7) | (5.3) | (1.4) | 1.3 | 2.3 |
| Equity | (0.9) | (0.7) | (1.6) | 0.0 | 0.0 |
| Debt | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Dividends paid | - | - | - | - | - |
| Net cash flow for year | (1.7) | (6.0) | (2.9) | 1.3 | 2.3 |

Source: Company data for actual, RaaS estimates

Key cash-flow considerations include:

- **Cash conversion:** As the business transitions to profitability we see cash conversion steadily improving, as evidenced in our forward forecasts.
- **One-off cashflow impacts in FY25f**: As previously discussed, there are two exceptional items in the current year which impact the cash outflow (Bolin and buyback). Without those two items BDT would be marginally cashflow positive in FY25f on our current estimates.
- **Capital light business:** As discussed in the “Balance sheet” section and illustrated in the cash flow, this is a very clean and capital light business.
- **Cash flow will be seasonal:** Similarly to the P&L, we believe BDT will continue to experience seasonality in cashflow over the quarterly periods, with sales skewed to the first half of each period with the December quarter being the strongest. This smooths over the full year to be cash generative from FY26f onwards.

## SWOT Analysis

Exhibit 29 contains our SWOT analysis.

**Exhibit 29: Strengths, Weaknesses, Opportunities, Threats**

| Strengths | Opportunities |
|---|---|
| Proven reputation in industry niche | Gain traction with a series of next-gen product releases |
| High level of recent investment spend provides growth runway for coming periods | Leverage ongoing spend in the AV sector across multiple verticals |
| Growth optionality with strong balance sheet | Use the BDT balance sheet for growth optionality |
| | Leverage recent R&D spend and enjoy revenue growth |
| **Weaknesses** | **Threats** |
| Relatively small when compared to direct competitors in chosen industry niche | Supply risk through componentry or geopolitical risks |
| Weak track record over the past 24 months impacts credibility from an investment perspective | Lack of traction in the US on political and or/approval challenges |

Source: RaaS analysis

## Key Risks And Sensitivities

The key risks as we see them are:

- **Execution risk**: A significant part of the current strategy relies on successful traction of the next-gen camera range. Early signs are without doubt positive, but risks remain in the release of further products and the maintenance of sales over full cycles over the coming periods.
- **Competition:** A strong response, or new product releases, from an entrenched or emerging competitor. We believe BDT's technology and reputation remains strong, but it completes with large industry participants including Panasonic, Canon and Sony (to an extent).
- **Key personnel:** A key driver of the growth story is the current senior management team and the knowledge, experience and network that it brings. They are also the group's largest shareholders, which in itself is a likely mitigant, albeit key person risk remains.
- **Economic conditions:** A general deterioration in economic conditions could materially impact demand, either on a global or specific region.
- **Distribution and partnership network risk:** BDT relies heavily on its third-party sales distribution network in the form of channel-based resellers, integrators and retailers across various regions including North America, the UK, Europe and Asia Pacific. It also has a 5 year agreement with NewTek. Any dislocation in the network can materially impact sales.
- **Manufacturing and supply chain risk:** As experienced with its previous contract manufacturer, availability of parts or services can severely impact financial performance. BDT now has 3 separate manufacturers and has further reduced its risks by effectively moving up the supply chain. Geopolitical risk can also impact the supply and distribution of products or services.
- **Foreign exchange risk:** BDT manufacturers and sells predominantly in USD, so there is generally a natural hedge for more than 80% of the cost base to revenue. That said, extreme volatility can result in timing differences. Further, the company is headquartered in Australia, has a fixed cost base in Australia and reports its earnings in A$ so there is actual currency risk and risk of translation on reported earnings.

## Board And Management

**Exhibit 30: Board of Directors and Key Management**

| Name | Position | Background |
|---|---|---|
| John Dixon | Chairman | John has more than 35 years' experience as a CEO, executive and non-executive director in large public and private companies predominantly within the logistics, engineering and services sectors. John's previous experience includes Executive Director/COO at Linfox, Executive Director/COO at Skilled Engineering, Managing Director at Westgate Logistics, Managing Director at Silk Logistics Group, and Executive Director at Patrick Corporation. John is currently a non-executive director of Australian Super, Frontier Advisors, AMTBio and Australian Industry Group. John is a graduate of the Australian Institute of Company Directors and the Australian Institute of Superannuation Trustees. |
| Dan Miall | CEO and Managing Director (Co-Founder) | Dan has 20+ years in broadcast television production and global vendor management roles. Whilst working in London for 4 years for a NASDAQ-listed global business, Avid Technology, Dan held the Pre-sales Management role for EMEA (Europe, Middle East & Africa), with responsibility for budgeting, outcomes, performance and compliance. Dan's last task in 2010 as the National Professional Product Sales Manager for a large Australian business was to project manage Oprah Winfrey's December 2010 Australian tour, that included all video networking and IT requirements for 200+ crew. Over more than two years from 2016, Dan designed and ultimately brought to market the world's 1st hardware-based NDI EMR/Claight and Mordor Intelligence® Encoder, a category defining product globally. Dan currently serves as Managing Director and Chief Executive Officer for the Group, with a focus on delivering complex video solutions for the broadcast and AV markets through the deployment of cutting-edge technology solutions: hardware - cameras & converters - and software. |
| Alan Sparks | Non-Executive Director | Alan is a highly accomplished and qualified director with extensive experience in board governance, business development and organisational growth. Alan is a Chartered Accountant and a Graduate of the Australian Institute of Company Directors. Alan has a proven track record in both global multi-national, medium-sized and small businesses, as well as current ASX-listed expertise as chair of an online IT and consumer electronics retailer. With a deep understanding of IT, global manufacturing, logistics businesses, governance and emerging technologies, Alan has deep connections throughout the Asia Pacific. Alan has served on multiple boards and is armed with high-calibre commercial acumen, providing valuable insights into the trends shaping the information technology markets. |
| Barry Calnon | Chief Financial Officer (Co-Founder) | Barry has had 25+ years in large professional service firms across the UK, Europe, Singapore and Australia, with extensive experience across various financial roles and developing and navigating exits of technology businesses. |
| Jamie Ambrose | Chief Revenue Officer | Jamie has had 20+ years in the media industry, including senior management roles at Avid, Deluxe and as Head of Broadcast and Media Services and Member of the Board of Directors at Red Bee Media. |

Source: Company annual report

## Shareholders

**Exhibit 31: Substantial shareholders**

| Shareholder | # Of shares (Million) | % Shareholding |
|---|---|---|
| Dan Miall | 44.7 | 27.7% |
| Barry Calnon | 19.0 | 11.8% |
| One Fund Services | 10.1 | 6.3% |
| OC Funds Management | 9.7 | 6.0% |
| Gregory Thomson | 9.3 | 5.7% |
| Sandhurst Trustees | 8.8 | 5.4% |

Source: IRESS as at 12 September 2024

The founders in Dan Miall and Barry Calnon remain the largest shareholders, with a collective holding 39.5%. One high net worth investor and three institutional investors form the balance of the substantial shareholders with a collective holding of 24%. Therefore, the top 6 shareholders represent 62.9% of the shares on issue. BDT has no material options or performance shares on issue.

## Peer Comparison

This analysis is not used in our formal valuation, but rather as a comparative reference point.

Actual like-for-like comparisons in the Australian listed space are difficult to find other than Atomos (AMS). We have therefore used listed companies with technology hardware and targeting various end-users such as consumers, prosumers, corporate and government. The peer group table is shown in Exhibit 32.

**Exhibit 32: Relative peer comparison**

| Company | Code | Business model | Mkt Cap ($m) | EV ($m) | EV/Revenue (x) | EV/EBITDA (x) |
|---|---|---|---|---|---|---|
| Atomos | AMS | Manufacture and sale of video equipment | 35.2 | 32.4 | 0.8 | n/a |
| Acusensus | ACE | Traffic camera technology internationally | 98.7 | 79.4 | 1.4 | 16.5 |
| Ambertech | AMO | Technology equipment distribution | 15.7 | 18.7 | 0.2 | 4.0 |
| Audinate | AD8 | Digital AV networking solutions | 781.4 | 671.4 | 7.7 | 35.9 |
| Catapult | CAT | Sports science hardware and software | 588.4 | 588.4 | 5.3 | 23.8 |
| Codan | CDA | Hardware and comms technology solutions | 2,651.4 | 2,726.4 | 4.4 | 15.6 |
| **Mean** | | | **695.1** | **686.1** | **3.3** | **19.2** |
| | | | | | | |
| **BirdDog** | **BDT** | | **10.0** | **(3.5)** | **n/a** | **n/a** |

Source: Various sources including LSEG, company presentations, consensus data (prices as at 10 September)

Key takeaways:

- The average market cap is much larger in this universe at $695m, so the profile and scale of the majority of these businesses is more established than BDT. On average, this would attract higher multiples at both the revenue and EBITDA lines.
- BirdDog currently has a negative Enterprise Value (EV). That is, when we include the cash balance the market is valuing the actual business at -$3.5m (FY25f), so revenue and EBITDA multiples technically can't be calculated.
- If we apply the peer group multiples to BDT then its equivalent value would be:
    - EV/Revenue @ 3.3x (FY25f) = EV $88m, Mkt Cap $101m, or $0.63 per share
    - EV/EBITDA @ 19.2x (FY25f) = EV $31m, Mkt Cap $45m, or $0.28 per share
- The EV/EBITDA multiple is high, but BDT is also in a turnaround phase and we forecast EBITDA to double in FY26f, which passes the common sense test from a valuation perspective.
- We think the most comparable business is Atomos (AMS). AMS has recently been recapitalised and relisted. In FY24 it delivered revenue of $35.7m and a normalised EBITDA loss of $11.8m ($17.3m reported). It has faced similar headwinds to BDT (but with different company specific challenges). It has net $2.8m in cash, with a current market cap of $35.2m, equating to more than 3.5 times that of BirdDog (the valuation disparity is higher if net cash is taken into account).

## DCF Valuation

We derive our DCF-based valuation of $0.27 on the following metrics.

**Exhibit 33: Base Case DCF valuation (A$m, unless otherwise stated)**

| Parameters | Outcome |
|---|---|
| Discount rate / WACC | 13.0% |
| Beta | 1.5 |
| Terminal growth rate assumption | 3.0% |
| Sum of Present Value (PV) | 10.1 |
| PV of terminal value | 17.1 |
| PV of enterprise | 27.2 |
| Net cash at 30 June 2024 | 16.5 |
| Net value – shareholder | 43.7 |
| No of shares on issue (m) | 161.5 |
| **NPV per share** | **A$0.27** |

Source: RaaS estimates

Our model incorporates both an upside and downside case to reflect higher/lower growth forecasts. In the case of BirdDog, we have adjusted it around assumptions specific to revenue growth and gross margin delivery. The three scenarios are:

**Base Case:** As per the forecasts in this report

**Downside Case:** Revenue growth 50% below our base case and gross profit margin expansion 50% below our base case.

**Upside case:** Revenue growth 50% higher than our base case with gross profit margins in-line with the base case.

**Exhibit 34: DCF scenario valuations**

| Scenario | Base | Downside | Upside |
|---|---|---|---|
| **DCF valuation/share** | **$0.27** | **$0.13** | **$0.41** |
| Premium to current share price | 335% | 110% | 561% |

Source: RaaS analysis

## Exhibit 35: Financial Summary

| BirdDog (BDT) | | | | | |
|---|---|---|---|---|---|
| **Profit and Loss (A$m)** | | | | | |
| **Y/E 30 June** | **FY23A** | **FY24A** | **FY25F** | **FY26F** | **FY27F** |
| Revenue | 28.8 | 18.3 | 26.6 | 32.9 | 35.9 |
| Gross Profit | 7.8 | 4.9 | 17.2 | 21.0 | 23.0 |
| EBITDA underlying | (4.3) | (9.0) | 1.6 | 3.1 | 3.7 |
| Depn | (0.2) | (0.3) | (0.1) | (0.1) | (0.1) |
| Amort | (0.3) | (0.3) | (0.2) | (0.2) | (0.2) |
| EBIT underlying | (4.7) | (9.6) | 1.3 | 2.8 | 3.4 |
| Interest | (0.1) | (0.1) | 0.7 | 0.7 | 0.8 |
| Tax | (0.8) | (0.6) | (0.6) | (1.1) | (1.3) |
| NPAT (Rep) | (5.5) | (17.7) | 1.4 | 2.5 | 2.9 |
| Significant & non-cash items | 0.0 | (7.7) | 0.0 | 0.0 | 0.0 |
| **NPAT (adj)** | **(5.5)** | **(10.0)** | **1.4** | **2.5** | **2.9** |
| **Cash flow (A$m)** | | | | | |
| **Y/E 30 June** | **FY23A** | **FY24A** | **FY25F** | **FY26F** | **FY27F** |
| EBITDA | (4.3) | (9.0) | 1.6 | 3.1 | 3.7 |
| Interest | 0.3 | 0.8 | 0.7 | 0.7 | 0.8 |
| Tax | 0.0 | (0.0) | (0.6) | (1.1) | (1.3) |
| Other | 3.4 | 3.0 | (3.0) | (1.4) | (0.8) |
| Operating cash flow | (0.6) | (5.2) | (1.2) | 1.4 | 2.4 |
| Mtce capex | (0.2) | (0.1) | (0.1) | (0.1) | (0.1) |
| Free cash flow | (0.7) | (5.3) | (1.4) | 1.3 | 2.3 |
| Acquisitions/Disposals | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cash flow pre financing | (0.7) | (5.3) | (1.4) | 1.3 | 2.3 |
| Equity | (0.9) | (0.7) | (1.6) | 0.0 | 0.0 |
| Debt | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Dividends paid | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Net cash flow for year | (1.7) | (6.0) | (2.9) | 1.3 | 2.3 |
| **Balance sheet (A$m)** | | | | | |
| **Y/E 30 June** | **FY23A** | **FY24A** | **FY25F** | **FY26F** | **FY27F** |
| Cash | 22.6 | 16.5 | 13.5 | 14.5 | 16.6 |
| Accounts receivable | 1.9 | 2.3 | 2.3 | 2.7 | 2.9 |
| Inventory | 15.0 | 6.0 | 8.5 | 9.9 | 10.7 |
| Other current assets | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| *Total current assets* | *25.2* | *25.2* | *24.7* | *27.6* | *30.7* |
| PPE | 0.6 | 0.4 | 0.5 | 0.6 | 0.6 |
| Intangibles and Goodwill | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Investments | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Deferred tax asset | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other non current assets | 0.2 | 1.5 | 1.3 | 1.3 | 1.3 |
| *Total non current assets* | *3.3* | *1.9* | *1.9* | *1.9* | *2.0* |
| **Total Assets** | 43.2 | 27.1 | 26.6 | 29.5 | 32.7 |
| Accounts payable | 0.8 | 2.6 | 2.2 | 2.6 | 2.8 |
| Short term debt | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Tax payable | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other current liabilities | 1.1 | 0.9 | 0.9 | 0.9 | 0.9 |
| *Total current liabilities* | *1.9* | *3.6* | *3.2* | *3.5* | *3.7* |
| Long term debt | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other non current liabs | 1.5 | 1.3 | 1.3 | 1.4 | 1.5 |
| *Total non-current liabilities* | *1.5* | *1.3* | *1.3* | *1.4* | *1.5* |
| **Total Liabilities** | 3.4 | 4.9 | 4.5 | 4.9 | 5.2 |
| **Net Assets** | **39.8** | **22.2** | **22.1** | **24.6** | **27.5** |
| Share capital | 46.1 | 45.4 | 43.9 | 43.9 | 43.9 |
| Accumulated profits/losses | (7.5) | (24.2) | (22.8) | (20.3) | (17.3) |
| Reserves | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 |
| Minorities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Total Shareholder funds** | **39.8** | **22.2** | **22.1** | **24.6** | **27.5** |

| Share price (13 September 2024) | | | | | | | A$ | 0.062 |
|---|---|---|---|---|---|---|---|---|
| **Interim (A$m)** | | **1H24A** | **2H24A** | **1H25A** | **2H25A** | **1H26A** | **2H26A** | |
| Revenue | | 10.7 | 7.6 | 13.5 | 13.1 | 17.7 | 15.2 | |
| EBITDA | | (4.6) | (4.4) | 1.1 | 0.5 | 2.4 | 0.8 | |
| NPAT (reported) | | (0.9) | (3.9) | (5.8) | (11.9) | 0.9 | 0.5 | |
| Minorities and adjustments | | - | - | - | - | - | - | |
| NPAT (normalised) | | (5.8) | (4.2) | 0.9 | 0.5 | 1.8 | 0.7 | |
| EPS (normalised) | | (2.8) | (2.2) | 0.6 | 0.3 | 1.1 | 0.4 | |
| Dividend (cps) | | - | - | - | - | - | - | |
| **Divisions/Categories** | | | **FY23A** | **FY24A** | **FY25F** | **FY26F** | **FY27F** | |
| **Revenue** | | | | | | | | |
| Converters | | | 7.4 | 4.6 | 3.5 | 5.8 | 6.3 | |
| Cameras | | | 19.7 | 12.4 | 19.8 | 21.7 | 23.3 | |
| AV | | | 1.2 | 0.7 | 2.4 | 2.8 | 2.8 | |
| ReMedi | | | 0.0 | 0.1 | 0.6 | 2.4 | 3.2 | |
| Software | | | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 | |
| **Sales revenue** | | | **28.5** | **18.0** | **26.6** | **32.9** | **35.9** | |
| **Gross Profit** | | | **7.8** | **4.9** | **17.2** | **21.0** | **23.0** | |
| **% of Gross Profit** | | | | | | | | |
| Converters | | | 35% | 38% | 9% | 12% | 12% | |
| Cameras | | | 56% | 48% | 79% | 71% | 70% | |
| AV | | | 6% | 9% | 8% | 7% | 7% | |
| ReMedi | | | 0% | 1% | 3% | 8% | 10% | |
| Software | | | 3% | 4% | 1% | 1% | 1% | |
| Margins, Leverage, Returns | | | **FY23A** | **FY24A** | **FY25F** | **FY26F** | **FY27F** | |
| EBITDA | | | (14.9%) | (49.4%) | 6.1% | 9.6% | 10.4% | |
| EBIT | | | (16.3%) | (52.3%) | 4.9% | 8.6% | 9.4% | |
| NPAT pre significant items | | | (19.2%) | (96.7%) | 5.4% | 7.6% | 8.1% | |
| Net (Debt)/ Cash | | | 22.6 | 16.5 | 13.5 | 14.5 | 16.6 | |
| ROA | | | (10.1%) | (27.2%) | 4.9% | 10.1% | 10.9% | |
| ROE | | | (12.9%) | (32.3%) | 6.5% | 10.7% | 11.2% | |
| ROIC | | | (7.2%) | (34.2%) | 6.4% | 11.8% | 12.5% | |
| **Working capital** | | | 16.1 | 5.6 | 8.6 | 10.0 | 10.8 | |
| **WC/Sales (%)** | | | 55.9% | 30.6% | 32.2% | 30.3% | 30.1% | |
| **Revenue growth** | | | (24.7%) | (36.5%) | 45.4% | 23.7% | 9.1% | |
| **Pricing** | | | **FY23A** | **FY24A** | **FY25F** | **FY26F** | **FY27F** | |
| No of shares (y/e) | (m) | | 198 | 193 | 161 | 161 | 161 | |
| Weighted Av Dil Shares | (m) | | 204 | 195 | 161 | 161 | 161 | |
| EPS Reported | cps | | (2.8) | (9.0) | 0.9 | 1.5 | 1.8 | |
| EPS Normalised/Diluted | cps | | (2.7) | (5.0) | 0.9 | 1.5 | 1.8 | |
| EPS growth (norm/dil) | | | n/a | n/a | nm | 73% | 17% | |
| DPS | cps | | - | - | - | - | - | |
| DPS Growth | | | n/a | n/a | n/a | n/a | n/a | |
| Dividend yield | | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | |
| PE (x) | | | n/a | n/a | 7.0 | 4.0 | 3.4 | |
| EV/EBITDA | | | n/a | n/a | (2.1) | (1.4) | (2.2) | |
| NTA/Share | cps | | 18.4 | 11.5 | 13.6 | 15.1 | 17.0 | |
| FCF/Share | cps | | (0.4) | (2.7) | (0.8) | 0.8 | 1.4 | |
| Price/FCF share | | | (17.1) | (2.3) | (7.4) | 7.9 | 4.4 | |
| Free Cash flow Yield | | | (5.8%) | (44.1%) | (13.5%) | 12.7% | 22.9% | |

Source: RaaS estimates, company data for actuals

# FINANCIAL SERVICES GUIDE

# RaaS Research Group Pty Ltd

## ABN 99 614 783 363

## Corporate Authorised Representative, number 1248415, of

### BR SECURITIES AUSTRALIA PTY LTD; ABN 92 168 734 530; AFSL 456663

### Effective Date: 26th March 2024

**About Us**

BR Securities Australia Pty Ltd (BR) is the holder of Australian Financial Services License ("AFSL") number 456663. RaaS Research Group Pty Ltd (RaaS) is an Authorised Representative (number 1248415) of BR. This Financial Service Guide (FSG) is designed to assist you in deciding whether to use RaaS's services and includes such things as who we are, our services, how we transact with you, how we are paid, and complaint processes

Contact Details, BR and RaaS

BR Head Office: Level 1, 160 Edward Street, Brisbane, QLD, 4000 www.brsecuritiesaustralia.com.au

RaaS:. c/- Rhodes Docherty & Co Pty Ltd, Suite 1, Level 1, 828 Pacific Highway, Gordon, NSW, 2072.

P: +61 414 354712

E: finola.burke@raasgroup.com

RaaS is the entity providing the authorised AFSL services to you as a retail or wholesale client.

**What Financial Services are we authorised to provide?** RaaS is authorised to

- provide general advice to retail and wholesale clients in relation to
    - Securities

The distribution of this FSG by RaaS is authorized by BR.

**Our general advice service**

Please note that any advice given by RaaS is general advice, as the information or advice given will not take into account your particular objectives, financial situation or needs. You should, before acting on the advice, consider the appropriateness of the advice, having regard to your objectives, financial situation and needs. If our advice relates to the acquisition, or possible acquisition, of a particular financial product you should read any relevant Prospectus, Product Disclosure Statement or like instrument. As we only provide general advice we will not be providing a Statement of Advice. We will provide you with recommendations on securities.

**How are we paid?**

RaaS earns fees for producing research reports about companies we like, and/or producing a financial model as well. When the fee is derived from a company, this is clearly highlighted on the front page of the report and in the disclaimers and disclosures section of the report. Sometimes we write reports using our own initiative.

**Associations and Relationships**

BR, RaaS, its directors and related parties have no associations or relationships with any product issuers other than when advising retail clients to invest in managed funds when the managers of these funds may also be clients of BR. RaaS's representatives may from time to time deal in or otherwise have a financial interest in financial products recommended to you but any material ownership will be disclosed to you when relevant advice is provided.

**Complaints**

If you have a complaint about our service, you should contact your representative and tell them about your complaint. The representative will follow BR's internal dispute resolution policy, which includes sending you a copy of the policy when required to. If you aren't satisfied with an outcome, you may contact AFCA, see below. BR is a member of the Australian Financial Complaints Authority (AFCA). AFCA provide fair and independent financial services complaint resolution that is free to consumers.

Website: www.afca.org.au; Email: info@afca.org.au; Telephone: 1800931678 (free call)

In writing to: Australian Financial Complaints Authority, GPO Box 3, Melbourne, VIC, 3001.

**Professional Indemnity Insurance**

BR has in place Professional Indemnity Insurance which satisfies the requirements for compensation under s912B of the Corporations Act and that covers our authorized representatives.

**DISCLAIMERS and DISCLOSURES**

This report has been prepared and issued by RaaS Research Group Pty Ltd on behalf of BirdDog Technology Ltd. RaaS Research Group has been paid a fee, in the form of a monthly retainer, by BirdDog Technology to prepare this report. RaaS Research Group does not engage in capital raisings, nor does it engage in share broking or provide investor relations services. RaaS Research Group's only source of income is the fees it is paid for its research services.. RaaS Research Group's principals, employees and associates may hold shares in companies that are covered and, if so, this will be clearly stated on the front page of each report. This research is issued in Australia by RaaS Research Group and any access to it should be read in conjunction with the Financial Services Guide on the preceding two pages. All information used in the publication of this report has been compiled from publicly available sources that are believed to be reliable. Opinions contained in this report represent those of the principals of RaaS Research Group at the time of publication. RaaS Research Group provides this financial advice as an honest and reasonable opinion held at a point in time about an investment's risk profile and merit and the information is provided by the RaaS Research Group in good faith. The views of the adviser(s) do not necessarily reflect the views of the AFS Licensee. RaaS Research Group has no obligation to update the opinion unless RaaS Research Group is currently contracted to provide such an updated opinion. RaaS Research Group does not warrant the accuracy of any information it sources from others. All statements as to future matters are not guaranteed to be accurate and any statements as to past performance do not represent future performance.

Assessment of risk can be subjective. Portfolios of equity investments need to be well diversified and the risk appropriate for the investor. Equity investments in listed or unlisted companies yet to achieve a profit or with an equity value less than $50 million should collectively be a small component of a balanced portfolio, with smaller individual investment sizes than otherwise.

The science of climate change is common knowledge and its impacts may damage the global economy. Mitigating climate change may also disrupt the global economy. Investors need to make their own assessments and we disclaim any liability for the impact of either climate change or mitigating strategies on any investment we recommend.

Investors are responsible for their own investment decisions, unless a contract stipulates otherwise. RaaS Research Group does not stand behind the capital value or performance of any investment. Subject to any terms implied by law and which cannot be excluded, RaaS Research Group shall not be liable for any errors, omissions, defects or misrepresentations in the information (including by reasons of negligence, negligent misstatement or otherwise) or for any loss or damage (whether direct or indirect) suffered by persons who use or rely on the information. If any law prohibits the exclusion of such liability, RaaS Research Group limits its liability to the re-supply of the Information, provided that such limitation is permitted by law and is fair and reasonable.