PROSPECTUS SUPPLEMENT (to Prospectus dated June 14, 2021)

Up to \$17,000,000 Common Stock



Defining the Future of Aerial Intelligence

Red Cat Holdings, Inc.

We have entered into an ATM Sales Agreement (the "Sales Agreement"), with ThinkEquity LLC ("ThinkEquity" or the "Sales Agreen") acting as sales agent, on August 8, 2023, relating to the sale of shares of our common stock, par value \$0.001 per share, offered by this prospectus supplement and the accompanying prospectus. In accordance with the terms of the Sales Agreement, under this prospectus supplement, we may offer and sell shares of our common stock having an aggregate offering price of up to \$17,000,000 from time to time through ThinkEquity.

Our common stock is listed on The Nasdaq Capital Market under the symbol "RCAT." On August 1, 2023, the last reported sale price of our common stock on The Nasdaq Capital Market was \$1.02 per share.

Sales of our common stock, if any, under this prospectus supplement and the accompanying prospectus may be made at market prices by any method permitted by law that is deemed an "at the market offering" as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended, or the Securities Act. ThinkEquity is not required to sell any specific number or dollar amount of our common stock but will act as sales agent using commercially reasonable efforts, consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of Nasdaq. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

ThinkEquity will be entitled to compensation at a commission rate equal to 2.5% of the gross sales price per share sold under the Sales Agreement. See "Plan of Distribution" beginning on S-7 for additional information regarding ThinkEquity's compensation. In connection with the sale of our common stock on our behalf,ThinkEquity may be deemed to be an "underwriter" within the meaning of the Securities Act and the compensation of ThinkEquity will be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to ThinkEquity with respect to certain liabilities, including liabilities under the Securities Act and the Exchange Act.

As of the date of this prospectus supplement, the aggregate market value of our outstanding common stock held by non-affiliates, or our public float, was approximately \$51,188,551 based on 40,305,946 outstanding shares of common stock held by non-affiliates and a per share price of \$1.27, the closing price of our common stock on July 3, 2023, which is the highest closing sale price of our common stock on The Nasdaq Capital Market within the prior 60 days. We have not sold any securities pursuant to General Instruction I.B.6. of Form S-3 during the prior 12 calendar month period that ends on and includes the date of this prospectus supplement. We are thus currently eligible to offer and sell up to an aggregate of \$17,062,850 of our common stock pursuant to General Instruction I.B.6 of Form S-3.

We are a smaller reporting company under Rule 405 of the Securities Act and, as such, have elected to comply with certain reduced public company reporting requirements for this prospectus, the documents incorporated by reference herein and future filings.

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page S-4 of this prospectus supplement and the documents incorporated by reference into this prospectus supplement for a discussion of information that you should consider in connection with an investment in our common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement is truthful or complete. Any representation to the contrary is a criminal offense.

ThinkEquity

The date of this prospectus supplement is August 8, 2023

TABLE OF CONTENTS

Prospectus Supplement

	Page
About this Prospectus Supplement	i
Where You Can Find More Information	i
Incorporation of Certain Documents By Reference	i
Cautionary Statement Regarding Forward-Looking Statements	ii
Prospectus Supplement Summary	S-1
Summary of the Offering	S-3
Risk Factors	S-4
Use of Proceeds	S-7
Dilution	S-7
Description of Securities Offered	S-7
Plan of Distribution	S-7
Legal Matters	S-8

	Page
About this Prospectus	3
Cautionary Statement Regarding Forward-Looking Statements	3
About Red Cat Holdings, Inc.	3
Risk Factors	5
Use of Proceeds	5
Description of Common Stock	5
Description of Preferred Stock	6
Description of Warrants	7
Description of Units	8
Plan of Distribution	8
Experts	10
Where you can find more information	11
Incorporation of Certain Documents by Reference	11

Prospectus

S-8

Experts

You should rely only on information contained in this prospectus. We have not, and the Sales Agent has not, authorized anyone to provide you with additional information or information different from that contained in this prospectus. Neither the delivery of this prospectus nor the sale of our securities means that the information contained in this prospectus is correct after the date of this prospectus. This prospectus is not an offer to sell or the solicitation of an offer to buy our securities in any circumstances under which the offer or solicitation is unlawful or in any state or other jurisdiction where the offer is not permitted.

For investors outside the United States: Neither we nor the Sales Agent has taken any action that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the securities covered hereby and the distribution of this prospectus outside of the United States.

The information in this prospectus is accurate only as of the date on the front cover of this prospectus. Our business, financial condition, results of operations and prospects may have changed since those dates.

No person is authorized in connection with this prospectus to give any information or to make any representations about us, the securities offered hereby or any matter discussed in this prospectus, other than the information and representations contained in this prospectus. If any other information or representation is given or made, such information or representation may not be relied upon as having been authorized by us.

Neither we nor the Sales Agent have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than the United States. You are required to inform yourself about, and to observe any restrictions relating to, this offering and the distribution of this prospectus.

ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is the prospectus supplement, including the documents incorporated by reference, which describes the specific terms of this offering. The second part, the accompanying prospectus, including the documents incorporated by reference, provides more general information. Generally, when we refer to this prospectus, we are referring to both parts of this document combined. Before you invest, you should carefully read this prospectus supplement, the accompanying prospectus, all information incorporated by reference herein and therein, as well as the additional information described under "Where You Can Find More Information" and "Incorporation of Certain Information by Reference" below. These documents contain information you should consider when making your investment decision. This prospectus supplement may add, update, or change information contained in the accompanying prospectus. To the extent that any statement that we make in this prospectus supplement is incorporated by reference, the statements made in this prospectus supplement will be deemed to modify or supersede those made in the accompanying prospectus and such documents incorporated by reference.

You should rely only on the information contained or incorporated by reference in this prospectus supplement, the accompanying prospectus and in any free writing prospectuses we authorize for use in connection with this offering. Neither we nor the Sales Agent have authorized any other person to provide you with any information that is different. If anyone provides you with different or inconsistent information, you should not rely on it. We are offering to sell, and seeking offers to buy, the securities offered hereby only in jurisdictions where offers and sales are permitted. The distribution of this prospectus supplement and the offering of the securities offered hereby in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus supplement must inform themselves about, and observe any restrictions relating to, the offering of the securities offered hereby and the distribution of this prospectus supplement outside the United States. This prospectus supplement does not constitute, and may not be used in connection with, an offer to sell, or a solicitation.

The information appearing in this prospectus supplement, the accompanying prospectus or any related free writing prospectus that we authorize for use in connection with this offering is accurate only as of the date on the front of the document and any information we have incorporated by reference is accurate only as of the date of such document incorporated by reference, regardless of the time of delivery of this prospectus supplement or any related free writing prospectus, or any sale of a security. Our business, financial condition, results of operations and prospects may have changed since those dates.

This prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein contain summaries of certain provisions contained in some of the documents described herein and therein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus supplement and the accompanying prospectus are a part, and you may obtain copies of those documents as described below under the heading "Where You Can Find More Information."

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our file number with the SEC is 001-40202. Our SEC filings are available to the public over the Internet on the SEC's website at http://www.sec.gov. Our website address is <u>www.redcat.red</u>. Information appearing on our website (other than the documents expressly incorporated by reference as described below) is not incorporated by reference into this prospectus supplement and you should not consider such information a part of this prospectus supplement.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

This prospectus is part of a registration statement filed with the SEC. The SEC allows us to "incorporate by reference" into this prospectus the information that we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. The following documents are incorporated by reference and made a part of this prospectus:

our Annual Report on Form 10-K for the year ended April 30, 2023, filed with the SEC order 27, 2023;

- our Current Reports on Form 8-K filed with the SEC on May 22, 2023, July 14, 2023, July 31, 2023 and August 8, 2023; and
- the description of our common stock contained in our Registration Statement on Form 8-A filed with the SEC on<u>March 11, 2021</u>, including any amendment or report filed for the purpose of updating such description.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement contains forward-looking statements. Such statements include statements regarding our expectations, hopes, beliefs or intentions regarding the future, including but not limited to statements regarding our market, strategy, competition, development plans (including acquisitions and expansion), financing, revenues, operations, and compliance with applicable laws. Forward-looking statements involve certain risks and uncertainties, and actual results may differ materially from those discussed in any such statement. Factors that could cause actual results to differ materially from such forward-looking statements in this document are made as of the date hereof, based on information available to us as of the date hereof, and we assume no obligation to update any forward-looking statement. Market data used throughout this prospectus supplement is based on published third party reports or the good faith estimates of management, which estimates are based upon their review of internal surveys, independent industry publications and other publicly available information.

Industry and Market Data

This prospectus supplement contains estimates made, and other statistical data published, by independent parties and by us relating to market size and growth and other data about our industry. We obtained the industry and market data in this prospectus supplement from our own research as well as from industry and general publications, surveys and studies conducted by third parties. This data involves a number of assumptions and limitations and contains projections and estimates of the future performance of the industries in which we operate that are inherently subject to a high degree of uncertainty and actual events or circumstances may differ materially from events and circumstances reflected in this information. We caution you not to give undue weight to such projections, assumptions and estimates. While we believe that these publications, studies and surveys are reliable, we have not independently verified the data contained in them. In addition, while we believe that the results and estimates have not been verified by any independent source.

ii

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights certain information contained elsewhere in this prospectus supplement. This summary is not intended to be complete and does not contain all of the information that you should consider in making your investment decision. You should carefully read this entire prospectus supplement, including our consolidated financial statements and the related notes and the information set forth under the headings "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained in this prospectus supplement before making an investment decision.

Unless the context otherwise requires, references to "we," "our," "us," or the "Company" in this prospectus supplement are to Red Cat Holdings, Inc., a Nevada corporation, including its wholly owned consolidated subsidiaries, Rotor Riot LLC ("Rotor Riot"), Fat Shark Holdings, Ltd. ("Fat Shark"), Skypersonic, Inc. ("Skypersonic"), Teal Drones, Inc. ("Teal"), and Red Cat Propware, Inc. ("Propware").

Company Background

We are a Nevada corporation, originally incorporated in 1984 under the name Oravest International, Inc. in the state of Colorado and subsequently renamed TimefireVR, Inc. in November 2016 and thereafter renamed Red Cat Holdings, Inc. in July 2019. Our principal corporate office is located at 370 Harbour Drive, Palmas del Mar, Humacao, PR 00791 and our telephone number is (833) 373-3228. On May 15, 2019, we acquired Red Cat Propware, Inc. in a share exchange. On January 23, 2020, we acquired Rad Cat Bropware, Inc. in a share exchange. On January 23, 2020, we acquired Rad Cat Propware, Inc. in Corp. Corp. Corp. Merged with and into Rotor Riot, LLC ("Rotor Riot") with Rotor Riot surviving as our wholly owned subsidiary. On November 2, 2020, we acquired Fat Shark Holdings, Ltd. through a share purchase agreement with our wholly-owned subsidiary FS Acquisition Corp. On May 7, 2021, we acquired Skypersonic, Inc. through Share Purchase and Liquidity Event Agreements with our wholly-owned subsidiary Red Cat Skypersonic, Inc. In August 2021, we acquired Teal Drones ("Teal"), a leader in providing sophisticated and complex unmanned aerial vehicle ("UAV") technology, primarily drones, to government and commercial enterprises, most notably, the military. Teal manufactures drones approved by the U.S. Department of Defense for reconnaissance, public safety, and inspection applications. Our internet address is <u>www.redcat.red</u>. Information on our website is not incorporated into this prospectus supplement.

Recent Developments

During the second half of the fiscal year ending on April 30, 2022, the Company focused on integrating and organizing its acquired businesses. These efforts including refining the establishment of Enterprise and Consumer segments in order to sharpen the Company's focus on the unique opportunities in each sector of the drone industry. The Enterprise segment, consisting of Teal and Skypersonic, is focused on opportunities in the commercial sector and the military. Enterprise's initial strategy was to provide UAV's, primarily drones, to navigate dangerous military environments and confined industrial and commercial interior spaces. The Consumer segment, consisting of Rotor Riot and Fat Shark, is focused on enthusiasts and hobbyists which are expected to increase as drones become more visible and useful in our daily lives. Consumer provides a growing revenue base, strong brand visibility, and is an excellent source of professional pilots.

Following the establishment of the Enterprise and Consumer segments in the first quarter of fiscal 2023, management spent much of fiscal 2023 evaluating and establishing the long-term business strategy of each segment. This resulted in the Enterprise segment narrowing its near term focus on the military and other government agencies. It was determined that Skypersonic's technology would be re-focused, for the next few years, on government applications and that its technology would be consolidated into the operations of Teal Drones.

In the fall of calendar 2022, the Company received inquiries and held discussions regarding the potential acquisition of the Consumer segment, specifically Rotor Riot and Fat Shark. These discussions culminated in the execution of a Stock Purchase Agreement ("SPA") with Unusual Machines, Inc. ("Unusual Machines") in November 2022.

Prior to signing the SPA, the Company completed a comprehensive evaluation of its business segments, including (i) the synergies and challenges of operating two diverse business segments, (ii) the future operating prospects for each segment including revenues, expenses, profits, and cash flows, and (iii) the financial impact of a potential sale of the Consumer segment on the Company. The results of the evaluation indicated a number of significant operating and financial differences between Enterprise and Consumer including (i) Consumer sources a substantial portion of its product from China whereas Enterprise is focused on a "Made in America" policy which is very important to the U.S. government, its primary target customer, (ii) Enterprise is required to meet ITAR export requirements which necessitates that all employees be U.S. persons and undergo a background check whereas Consumer does not have such requirements, (iii) Consumer primarily markets through a social media platform and strategy that focuses on maximizing its public presence whereas Enterprise's marketing efforts in dealing with its government target market are more discrete and (iv) Consumer is focused on reaching profitability whereas Enterprise has been investing in a new manufacturing facility and building strong relationships with government agencies. Collectively, these differences would require the Company to establish separate departments for many common functions including purchasing, human resources, and sales and marketing. Finally, closing of the SPA would strengthen the Company's financial position as it would generate immediate cash and eliminate the funding required to support Consumer until it reached profitability. The Company concluded that the long-term business prospects of the Enterprise segment were significantly greater than those of the Consumer segment, and that a sale of Consumer should be completed.

The closing of the transaction is contingent upon Unusual Machines completing (i) an initial public offering that raises sufficient capital to close the transaction, and (ii) listing on a public stock exchange such as the NYSE or Nasdaq. The deadline for closing the transaction has been subject to voluntary extension by the Company on several occasions, and we can provide no assurance that the transaction with Unusual Machines will in fact close. In the event that the transaction does not close, management intends to continue operating the consumer business segment for the foreseeable future.

S-2

	Summary of the Offering
Common stock offered by us:	Shares of our common stock having an aggregate offering price of up to \$17,000,000.
Shares of common stock outstanding prior to the offering:	55,541,173 shares
Shares of common stock outstanding after the offering:	Up to 72,207,840, assuming sales of 16,666,667 shares of common stock in this offering at a price of \$1.02 per share, which was the closing price of our common stock on the Nasdaq on August 1, 2023. The actual number of shares issued will vary depending on the sales prices under this offering.
Manner of Offering:	"At the market offering" that may be made from time to time through ThinkEquity. See "Plan of Distribution" beginning on page S-7 of this prospectus supplement.
Use of proceeds:	We intend to use the net proceeds from this offering for general corporate purposes, working capital, operating expenses, and capital expenditures. See the "Use of Proceeds" section in this prospectus supplement for a more complete description of the intended use of proceeds from this offering.
Nasdaq symbol:	Our common stock is listed on the Nasdaq Capital Market under the symbol "RCAT"
Risk factors:	Investing in our securities involves a high degree of risk and purchasers of our securities may lose their entire investment. See "Risk Factors" and the other information included and incorporated by reference into this prospectus supplement for a discussion of risk factors you should carefully consider before deciding to invest in our securities.

(1) The number of shares of our common stock that will be outstanding immediately after this offering is based on 55,541,173 shares of common stock outstanding as of July 24, 2023 and excludes the following:

• 6,944,017 shares of common stock issuable upon exercise of outstanding options under our equity incentive plans at a weighted-average exercise price of \$1.58 per share;

• 1,539,999 shares of common stock issuable upon exercise of outstanding warrants with exercises prices of \$5.625, \$5.00, and \$1.50 per share for 533,333, 200,000, and 806,666 shares, respectively.

• 3,896 shares of common stock issuable upon conversion of outstanding shares of our Series B Preferred Stock;

•695,843 shares of common stock awarded under employment agreements which have not yet been issued.

S-3

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before you decide to invest in our common stock, you should carefully consider the risks and uncertainties described below and in our Annual Report on Form 10-K for the year ended April 30, 2023, together with all other information contained in this prospectus supplement, the accompanying prospectus and in our filings with the Securities and Exchange Commission, or SEC, that we have incorporated by reference into this prospectus supplement and the accompanying prospectus. Our business, financial condition and results of operations could be materially adversely affected by these risks if any of them actually occur. This prospectus supplement also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks we face as described below and elsewhere in this prospectus supplement.

Risks Related To Our Common Stock and this Offering

Our management has voting control of the Company.

Jeffrey Thompson, our Chairman and Chief Executive Officer, owns approximately 23% of our common stock and our current officers and directors currently own approximately 31% of our common stock. In addition, If they act together, they will be able to influence the outcome of all corporate actions requiring approval of our shareholders, including the election of directors and approval of significant corporate transactions which may result in corporate actions that other stockholders do not agree

with. This concentration of ownership may have the effect of delaying or preventing a change in control and may adversely affect the market price of our common stock.

We have never paid dividends and we do not expect to pay dividends for the foreseeable future.

We have reported net losses every year since inception. We intend to retain future earnings, if any, to finance the growth and development of our business. If we ever become profitable, we do not expect to pay cash dividends on shares of our common stock in the foreseeable future. The payment of future cash dividends, if any, depends upon, among other things, conditions then existing including earnings, financial condition and capital requirements, restrictions in financing agreements, business opportunities and other factors. As a result, capital appreciation, if any, of our common stock, will be the sole source of gain for investors for the foreseeable future.

The listing of our securities on Nasdaq subjects us to additional regulations and compliance requirements.

We are required to maintain compliance with the continued listing standards of Nasdaq. These include certain financial and liquidity criteria to maintain such listing. If we fail to meet any of Nasdaq's listing standards, our securities may be delisted. Nasdaq requires that the trading price of its listed stocks remain above one dollar in order for the stock to remain listed. If a listed stock trades below one dollar for more than 30 consecutive trading days, then it is subject to delisting from Nasdaq. At times during May and June 2023, our stock has traded below \$1 per share. While our stock has been trading above \$1 per share in late June, the stock price could trade below \$1 per share again in the future. In addition, we must satisfy minimum financial and other continued listing requirements and standards, including those regarding director and committee independence requirements, minimum stockholders' equity, and certain corporate governance requirements. If we are unable to satisfy these requirements or standards, we could be subject to delisting, which would have a negative effect on the price of our common stock and would impair an investor's ability to sell or purchase our common stock. In the event of a delisting, we would expect to take actions to restore our compliance with the listing requirements, or prevent future non-compliance with the listing requirements. A delisting of our securities from Nasdaq may materially impair our stockholders' ability to buy and sell our securities and could have an adverse effect on the market price of, and the efficiency of the trading market for, our securities.

Our Board of Directors may authorize and issue shares of new classes of stock that could adversely affect current holders of our common stock.

Our Board of Directors has the power to authorize and issue shares of classes of stock, including preferred stock that have voting powers, designations, preferences, limitations and special rights, including preferred distribution rights, conversion rights, redemption rights and liquidation rights without further shareholder approval. These powers could adversely affect the rights of the holders of our common stock. In addition, our board could authorize the issuance of a series of preferred stock that has greater voting power than our common stock or that is convertible into our common stock, which could decrease the relative voting power of our common stock or result in dilution to our existing common stockholders.

S-4

Any of these actions could significantly adversely affect the investment made by holders of our common stock. In addition, holders of our common stock could receive less proceeds in connection with any future sale of the Company, in liquidation or on any other basis.

Our shares will be subordinate to all of our debts and liabilities, which increases the risk that investors could lose their entire investment.

Our shares of common stock are equity interests that will be subordinate to all of our current and future indebtedness with respect to claims on our assets. In any liquidation, all of our debts and liabilities must be paid before any payment is made to our shareholders.

The market price of our shares of common stock is subject to fluctuation.

The market prices of our shares may fluctuate significantly in response to a wide range of factors, many of which are beyond our control, including:

- The announcement and release of new products by our competitors
- Developments in our industry or target markets
- · General market conditions including factors unrelated to our operating performance
- National or international economic or political events which result in a material effect on the stock market

The stock market has, from time to time, experienced extreme price and volume fluctuations. Continued market fluctuations could result in extreme market volatility in the price of our shares of our common stock which could cause a decline in the value of our shares.

The actual number of shares we will issue under the Sales Agreement, at any one time or in total, is uncertain.

Subject to certain limitations in the Sales Agreement and compliance with applicable law, we have the discretion to deliver instruction to the Sales Agreement and compliance with applicable law, we have the discretion to deliver instruction to the Sales Agreement of the Sales Agreement. The number of shares that are sold through the Sales Agreent after our instruction will fluctuate based on a number of factors, including the market price of our common stock during the sales period, the limits we set with the Sales Agreent in any instruction to sell shares, and the demand for our common stock during the sales period. Because the price per share of each share sold will fluctuate during this offering, it is not currently possible to predict the number of shares that will be sold or the gross proceeds to be raised in connection with those sales.

The common stock offered hereby will be sold in "at the market offerings," and investors who buy shares at different times will likely pay different prices.

Investors who purchase shares in this offering at different times will likely pay different prices, and so may experience different levels of dilution, and different outcomes in their investment results. We will have discretion, subject to market demand, to vary the timing, prices, and numbers of shares sold in this offering. Investors may experience a decline in the value of the shares they purchase in this offering as a result of sales made at prices lower than the prices they paid.

Future capital raises may dilute our existing stockholders' ownership and adversely impact the fair value of their investment.

If we raise additional capital by issuing equity securities, our existing stockholders' percentage ownership may decrease, and these stockholders may experience substantial dilution. If we raise additional funds by issuing debt instruments, these debt instruments could impose significant restrictions on our operations including liens on our assets. If we raise additional funds through collaborations and licensing arrangements, we may be required to relinquish some rights to our technologies or products, or to grant licenses on terms that are not favorable to us or could diminish the rights of our stockholders. Any of these developments could adversely impact our stock price.

Our Board of Directors may authorize and issue shares of new classes of stock that could be superior to or adversely affect current holders of our common stock.

Our board of directors has the power to authorize and issue shares of classes of stock, including preferred stock that have voting powers, designations, preferences, limitations and special rights, including preferred distribution rights, conversion rights, redemption rights and liquidation rights without further shareholder approval which could adversely affect the rights of the holders of our common stock. In addition, our board could authorize the issuance of a series of preferred stock that has greater voting power than our common stock or that is convertible into our common stock, which could decrease the relative voting power of our common stock or result in dilution to our existing

Any of these actions could significantly adversely affect the investment made by holders of our common stock. Holders of common stock could potentially not receive dividends that they might otherwise have received. In addition, holders of our common stock could receive less proceeds in connection with any future sale of the Company, in liquidation or on any other basis.

Our shares will be subordinate to all of our debts and liabilities, which increases the risk that you could lose your entire investment.

Our shares of common stock are equity interests that will be subordinate to all of our current and future indebtedness with respect to claims on our assets. In any liquidation, all of our debts and liabilities must be paid before any payment is made to our shareholders.

If securities or industry analysts do not publish research or reports about our business, or if they adversely change their recommendations regarding our Shares, the market price for our Shares and trading volume could decline.

The trading market for our common stock will be influenced by research or reports that industry or securities analysts publish about our business. If one or more analysts who cover us downgrade our common stock, the market price for our common stock would likely decline. If one or more of these analysts cease to cover us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause the market price or trading volume for our common stock to decline.

Negative publicity may harm our brand and reputation and have a material adverse effect on our business.

Negative publicity about us, including our services, management, business model and practices, compliance with applicablerules, regulations and policies, or our network partners may materially and adversely harm our brand and reputation and have a material adverse effect on our business. We cannot assure you that we will be able to defuse any such negative publicity within a reasonable period of time, or at all. Additionally, allegations, directly or indirectly against us, may be posted on the internet by anyone on a named or anonymous basis, and can be quickly and widely disseminated. Information posted may be inaccurate, misleading and adverse to us, and it may harm our reputation, business or prospects. The harm may be immediate without affording us an opportunity for redress or correction. Our reputation may be negatively affected as a result of the public dissemination of negative and potentially inaccurate or misleading information about our business and operations, which in turn may materially adversely affect our relationships with our customers, employees or business partners, and adversely affect the price of our common stock.

Our management will have significant discretion over our use of the net proceeds from this offering and we may use these proceeds in ways with which you may not agree.

Our management's intended used of the net proceeds of this offering is as set forth below under "Use of Proceeds." The Use of Proceeds disclosed in this prospectus supplement describes the broad categories of management's planned use of funds and does not represent a detailed budget or a legally binding commitment to any specific expenditure. Our management will have considerable discretion in deciding how to apply these proceeds. You will not have the opportunity to assess whether the proceeds are being used appropriately before you make your investment decision. You must rely on the judgment of our management regarding the application of the net proceeds of this offering. We cannot assure you that the net proceeds will be used in a manner that would improve our results of operations or increase our Share price.

If you purchase shares of common stock in this offering, you will suffer immediate dilution of your investment.

The shares sold in this offering, if any, will be sold from time to time at various prices. However, the expected offering price of our common stock will be substantially higher than the as-adjusted net tangible book value per share of our common stock. Therefore, if you purchase shares of our common stock in this offering, you will pay a price per share that substantially exceeds our as adjusted net tangible book value per share after this offering. Assuming that an aggregate of 16,666,667 shares of our common stock are sold at a price of \$1.02 per share pursuant to this prospectus supplement, which was the last reported sale price of our common stock on the Nasdag on August 1, 2023, for aggregate gross proceeds of \$17,000,000, after deducting commissions and estimated aggregate offering expenses payable by us, you will experience immediate dilution of \$0.41 per share, representing the difference between our as adjusted net tangible book value per share after giving effect to this offering and the assumed offering price of \$1.02 per share. To the extent outstanding options are exercised or restricted stock unit awards or performance stock unit awards vest, you will incur further dilution. For additional information on the dilution that you will experience immediately after this offering, see the section titled "Dilution."

S-6

USE OF PROCEEDS

We estimate that the net proceeds from this offering will be approximately \$16,477,500 after deducting estimated underwriting discounts and estimated offering expenses payable by us. We intend to use the net proceeds of this offering for general corporate purposes and working capital and capital expenditures.

As of the date of this prospectus supplement, we cannot specify with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering. The amounts and timing of our actual expenditures will depend on numerous factors, including the status of our product development efforts, sales and marketing activities, technological advances, the amount of cash generated or used by our operations and competition. Accordingly, our management will have broad discretion in the application of the net proceeds and investors will be relying on the judgment of our management regarding the application of the proceeds of this offering.

Pending our use of the net proceeds from this offering, we intend to invest the net proceeds in a variety of capital preservation investments, including short-term, investmentgrade, interest-bearing instruments and U.S. government securities.

DILUTION

If you invest in our common stock in this offering, your interest will be diluted to the extent of the difference between the public offering price per share of common stock and the as adjusted net tangible book value per share of common stock immediately after this offering.

Our net tangible book value is the amount of our total tangible assets less our total tangible liabilities. Our net tangible book value as of April 30, 2023 was \$30,301,476, or \$0.56 per share of common stock. Net tangible book value per share represents the amount of total tangible assets, minus the amount of total tangible liabilities, divided by the total number of shares of common stock outstanding. Pro forma net tangible book value per share is calculated after giving effect to the conversion of all of our outstanding preferred shares. Dilution is determined by subtracting pro forma net tangible book value per share from the public offering price per share.

Without taking into account any other changes in such net tangible book value after April 30, 2023, other than to give effect to our issuance and sale of 16,666,667 shares of common stock in this offering at an assumed public offering price of US\$1.02 per share, the last price for our common stock on August 1, 2023, and after deduction of underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of April 30, 2023 would have been US\$0.61 per outstanding share of common stock. This represents an immediate increase in net tangible book value of US\$0.06 per share to existing shareholders and an immediate dilution in net tangible book value of US\$0.41 per share to purchasers of common stock in this offering.

PLAN OF DISTRIBUTION

We have entered into an ATM Sales Agreement (the "Sales Agreement) with ThinkEquity, LLC ("ThinkEquity") under which we may issue and sell shares of our common stock from time to time through ThinkEquity, acting as sales agent, subject to certain limitations, having an aggregate gross sales price of up to 17,000,000. Sales of shares of our common stock, if any, under this prospectus supplement and the accompanying prospectus may be made by any method that is deemed to be an "at the market offering" as defined in Rule 415(a)(4) promulgated under the Securities Act, including sales made directly on or through the Nasdaq or on any other existing trading market for our common stock.

Each time we wish to issue and sell any shares of our common stock under the Sales Agreement, we will notify ThinkEquity of the aggregate number of shares to be sold, the dates on which such sales are requested to be made, any limitation on the number of shares to be sold in any one day, any minimum price below which sales may not be made,

and other sales parameters as we deem appropriate. Once we have so instructed ThinkEquity, unless ThinkEquity declines to accept the terms of such notice, ThinkEquity has agreed to use its commercially reasonable efforts consistent with its normal trading and sales practices to sell such shares of common stock up to the amount specified on such terms. The obligations of ThinkEquity under the Sales Agreement to sell shares of our common stock are subject to a number of conditions that we must meet.

The settlement for sales of common stock between us and ThinkEquity is generally anticipated to occur on the second trading day following the date on which the sale was made. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

S-7

We have agreed to pay ThinkEquity a commission equal to 2.5% of the aggregate gross proceeds we receive from each sale of our common stock sold through ThinkEquity pursuant to the Sales Agreement. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, ThinkEquity's commissions and the proceeds to us, if any, are not determinable at this time. We have also agreed to reimburse ThinkEquity for certain reasonable and documented expenses, including fees and disbursements of its counsel, up to the amount of \$75,000. We estimate that the total expenses of the offering payable by us, excluding any commissions and the reimbursement payable to ThinkEquity the terms of the Sales Agreement, will be approximately \$107,500. The remaining sale proceeds, after deducting any other transaction fees, will equal the net proceeds from the sale of such common stock.

ThinkEquity will provide written confirmation to us before the open on the Nasdaq on the day following each day on which our shares of common stock are sold under the Sales Agreement. Each confirmation will include the number of shares sold on that day, the aggregate gross proceeds of such sales and the net proceeds.

In connection with the sale of common stock on our behalf, ThinkEquity will be deemed to be an "underwriter" within the meaning of the Securities Act, and the compensation of ThinkEquity will be deemed to be underwriting commissions or discounts. We have agreed to provide indemnification and contribution to ThinkEquity against certain liabilities, including liabilities under the Securities Act.

The offering of our common stock pursuant to the Sales Agreement will terminate upon the earlier of (i) the issuance and sale of all shares of our common stock subject to the Sales Agreement or (ii) the termination of the Sales Agreement as permitted therein. We or ThinkEquity may suspend the offering of common stock under the Sales Agreement upon proper notice to the other party and subject to other conditions.

This summary of the material provisions of the Sales Agreement does not purport to be a complete statement of its terms and conditions. A copy of the Sales Agreement is filed as an exhibit to a current report on Form 8-K filed under the Exchange Act and is incorporated by reference in this prospectus supplement. ThinkEquity and its affiliates may in the future provide various investment banking and other financial services for us and our affiliates, for which services they may in the future receive customary fees. To the extent required by Regulation M, ThinkEquity will not engage in any market making activities involving our common stock while the offering is ongoing under this prospectus supplement.

A prospectus supplement and the accompanying prospectus in electronic format may be made available on a website maintained by ThinkEquity, and ThinkEquity may distribute the prospectus supplement and the accompanying prospectus electronically.

LEGAL MATTERS

The Crone Law Group, P.C. has opined on the validity of the shares being offered hereby. Loeb & Loeb LLP is acting as counsel for the Sales Agent in connection with this offering.

EXPERTS

The consolidated financial statements of the Company as of April 30, 2023 and 2022, and for the years then ended, incorporated by reference to this Prospectus Supplement, have been so included in reliance on the report of BF Borgers, CPA, PC an independent registered public accounting firm, which includes an explanatory paragraph about the Company's ability to continue as a going concern, given on the authority of said firm as experts in auditing and accounting.

S-8

PROSPECTUS

REJ V CAT

Defining the Future of Aerial Intelligence

Red Cat Holdings, Inc.

\$100,000,000 Common Stock Preferred Stock Warrants Units

We may from time to time, in one or more offerings at prices and on terms that we will determine at the time of each offering, sell common stock, preferred stock, warrants, or a combination of these securities, or units, for an aggregate initial offering price of up to \$100,000,000. This prospectus describes the general manner in which our securities may be offered using this prospectus. Each time we offer and sell securities, we will provide you with a prospectus supplement that will contain specific information about the terms of that offering. Any prospectus supplement may also add, update, or change information contained in this prospectus. You should carefully read this prospectus and the applicable prospectus supplement as well as the documents incorporated or deemed to be incorporated by reference in this prospectus before you purchase any of the securities offered hereby.

This prospectus may not be used to offer and sell securities unless accompanied by a prospectus supplement.

Our common stock is currently listed on the Nasdaq Capital Market under the symbol "RCAT." On May 14, 2021, the last reported sales price for our common stock was \$3.17 per share.

The securities offered by this prospectus involve a high degree of risk. See "Risk Factors" beginning on page 2, in addition to Risk Factors contained in the applicable prospectus supplement.

Neither the Securities and Exchange Commission nor any State securities commission has approved or disapproved of these securities or determined if this prospectus

is truthful or complete. Any representation to the contrary is a criminal offense.

We may offer the securities directly or through agents or to or through underwriters or dealers. If any agents or underwriters are involved in the sale of the securities their names, and any applicable purchase price, fee, commission or discount arrangement between or among them, will be set forth, or will be calculable from the information set forth, in an accompanying prospectus supplement. We can sell the securities through agents, underwriters or dealers only with delivery of a prospectus supplement describing the method and terms of the offering of such securities. See "Plan of Distribution."

The aggregate market value of our outstanding voting and non-voting common equity held by non-affiliates, or our public float, was approximately \$39,059,894 as of June 9, 2021. Pursuant to General Instruction I.B.6, in no event will we sell our common stock in a public primary offering with a value exceeding one-third of our public float in any 12-month period unless our public float subsequently rises to \$75.0 million or more. We have not sold any securities pursuant to General Instruction I.B.6 in the 12 months immediately prior to the date of this Prospectus.

The date of this prospectus is June 11, 2021.

TABLE OF CONTENTS

	Page
About this Prospectus	3
Cautionary Statement Regarding Forward-Looking Statements	3
About Red Cat Holdings, Inc.	3
Risk Factors	5
Use of Proceeds	5
Description of Common Stock	5
Description of Preferred Stock	6
Description of Warrants	7
Description of Units	8
Plan of Distribution	8
Experts	10
Where you can find more information	11
Incorporation of Certain Documents by Reference	11

You should rely only on information contained in this prospectus. We have not, and the underwriter has not, authorized anyone to provide you with additional information or information different from that contained in this prospectus. Neither the delivery of this prospectus nor the sale of our securities means that the information contained in this prospectus is correct after the date of this prospectus. This prospectus is not an offer to sell or the solicitation of an offer to buy our securities in any circumstances under which the offer or solicitation is unlawful or in any state or other jurisdiction where the offer is not permitted.

2

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, using a "shelf" registration process. Under this shelf registration process, we may sell any combination of the securities described in this prospectus in one of more offerings up to a total dollar amount of proceeds of \$100,000,000. This prospectus describes the general manner in which our securities may be offered by this prospectus. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus or in documents incorporated by reference in this prospectus. The prospectus supplement that contains specific information about the terms of that consequences and any risk factors or other special considerations applicable to those securities. To the extent that any statement that we make in a prospectus supplement. You should carefully read both this prospectus and any prospectus supplement together with the additional information described under "Where You Can Find More Information" before buying any securities in this offering.

The terms "Red Cat," "Red Cat Holdings," the "Company," "we," "our" or "us" in this prospectus refer to Red Cat Holdings, Inc., unless the context suggests otherwise.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. Such statements include statements regarding our expectations, hopes, beliefs or intentions regarding the future, including but not limited to statements regarding our market, strategy, competition, development plans (including acquisitions and expansion), financing, revenues, operations, and compliance with applicable laws. Forward-looking statements involve certain risks and uncertainties, and actual results may differ materially from those discussed in any such statement. Factors that could cause actual results to differ materially from such forward-looking statements include the risks described in greater detail in the following paragraphs. All forward-looking statements in this document are made as of the date hereof, based on information available to us as of the date hereof, and we assume no obligation to update any forward-looking statement. Market data used throughout this prospectus is based on published third party reports or the good faith estimates of management, which estimates are based upon their review of internal surveys, independent industry publications and other publicly available information.

ABOUT RED CAT HOLDINGS, INC.

The Company's business is to provide products, services and solutions to the drone industry. We design, develop, market, and sell drone software and products. Our business emphasis focusses on drones piloted with wearable display devices. These are head mounted displays ("HMDs") for pilots. HMDs give pilots "first person view" ("FPV") perspective to control their drone in flight. This is a unique experience where the pilot is interacting with an aircraft through visual immersion. In this augmented virtual reality, the pilot sees only what the drone sees, as if sitting in the pilot seat. This experience is accomplished by live streaming footage from a camera mounted on the nose of the drone directly into specially-designed gogles worn by the pilot. The image is transmitted via radio (traditionally analog but increasingly digital) to the pilot. The drone remote control unit, the drone device, and the FPV goggles are all inter-connected via radio. This effect requires sophisticated electronics that transmits visual information with sufficient speed and reliability to allow pilot control over the drone in real-time. Pilots routinely achieve speeds of over 90 mph in racing and other mission critical applications. An FPV pilot must experience a near complete transfer of their visual consciousness into the body of their piloted device.

There are three common categories of FPV flight – freestyle flight, racing and aerial photography. In freestyle the pilot navigates around obstacles, focused on acrobatics and exploring the environment around the aircraft through the HMD. This type of flight includes remote utility and crop inspection with onboard navigation and special equipment, such as moisture or heat sensors, and package delivery. FPV racing describes a growing spectator sport where pilots fly their drones in competitions through a series of obstacles, flags, and gates in a racetrack. Aerial photography is the process of viewing and recording a subject matter from the air from the viewpoint of the pilot.

3

We sell flight design cameras, video transmitters, goggles, as well as the mounts, airframes and accessories to build or operate drone aircraft. We design, develop, assemble and sell each of these FPV components individually and in packages. We believe that our products have become favorites in FPV racing and we sponsor several racing teams and pilots. We purchase and resell drones and components from leading manufacturers, including the industry leader Da Jiang Innovations ("DJI") and custom design and build our own line of branded products. Approximately 50% of our revenue has historically been generated as a reseller and the balance from sale of branded products prior to our recent acquisition of Fat Shark Holdings, Ltd. ("Fat Shark"). In addition, we are developing a blockchain-based black box to enhance reliability and reporting of drone performance and operations as software as a service ("SaaS"). Red Cat's Dronebox software and platform enable an easy-to-use flight log system that keeps clients compliant with regulators and helps track and collect critical drone data and feed the data to various applications. The software and platform use a patent-pending blockchain-based cloud architecture. To keep the data secure, we hash each log file on our private block chain, proving that the data is immutable and reliable. Reliable data is mandatory for regulators and insurance companies and is essential for analyzing drone flights and effective drone fleet management. Through our blockchain-based block box for drones, we can offer one easy to use system for analytics and services. By applying machine learning to the log files, we can prevent drone flight problems before they happen through artificial intelligence. We charge a monthly recurring fee for each drone in the customer's drone fleet. We store all flight logs, photos, and videos from the black box service, which allows detailed flight replay.

The target market for drone services in the commercial and civil markets is focused on the need to inspect and/or survey equipment, structures, insurance claims, land areas, jobsites and emergencies.

Inspection and survey drone services for the industry is estimated to be a \$21 billion market. We market through social media and attract buyers to our ecommerce platforms. We maintain a robust presence on Facebook and YouTube where we sponsor competitions and provide education. Sports networks, and sponsors such as NBC, Sky, Liberty Media, Fox Sports, MGM, Hearst, Twitter, ProSieben, Groupe AB and Weibo broadcast and sponsor global events where professional pilots and amateurs compete for prizes and sponsorships. Drone racing is a global sport with chapters, leagues, and pilots and established guidelines, rules and regulations for participation adopted by organizations such as MultiGP, Drone Racing League ("DRL"), IUDRO, DR1 Racing, Rotomatch League, FPVR, and Freespace Drone Racing. Pilots specially design their custom-built aircraft, selecting and customizing frames, motors, propellors and controllers for speed and maneuverability from Rotor Riot Riot sponsors alike experience real-time flight through their own HMD. In 2015 Fat Shark sponsored the first annual US National Drone Racing Championships held at the California State Fair with a prize of \$25,000. Subsequent events featured prizes of up to \$1 million. Rotor Riot Riot Riot Riot over 215,000 youtube subscribers, 68,000 instagram followers. This gives us quick access to a large number of commercial pilots for beta testing, product enhancements, and remote drone piloting.

On November 2, 2020 we acquired Fat Shark Holdings, Ltd., a Cayman Islands Exempted Company. The Company believes Fat Shark and its subsidiaries are leaders in the design, development, marketing and sale of HMDs for pilots.

The operations of Fat Shark are expected to constitute a significant majority of our revenue and results of operations and will position us to become a fully-integrated drone business with a strong supply chain while we continue to develop and promote industry standards through our blockchain-based distributed network that provides secure data storage, operational analytics, reporting, and SaaS solutions for the drone industry. We are also developing the means to accurately track, report and review flight data, which we believe will be the mainstay of future regulatory specifications and insurability. We maintain a commitment to deliver unparalleled innovation to make drones, pilots, and products accountable and the sky a safer place.

On February 11, 2021, we signed a definitive agreement to acquire Skypersonic, Inc., a provider of drone products and software solutions that enable drone inspection flights that can be executed by pilots anywhere in the world. Skypersonic powers drones to "Fly Anywhere" and "Inspect the Impossible". Its patented software and hardware solutions allow for inspection services in restricted spaces where GPS is not allowed or available. Skycopter is a miniature drone fitted into a cage to avoid damage to inspected areas and the drone. Skyloc is a stand-alone, real time, software system which enables the drone to record and transmit inspection data while being operated from thousands of miles away. Skypersonic's intellectual property portfolio includes eight US and European patents. We closed the Skypersonic transaction on or before May 7, 2021.

Our internet address is www.redcat.red. Information on our website is not incorporated into this prospectus.

4

RISK FACTORS

Any investment in our securities involves a high degree of risk. Investors should carefully consider the risks described below and all of the information contained in this prospectus before deciding whether to purchase our securities. Our business, financial condition and results of operations could be materially adversely affected by these risks if any of them actually occur. This prospectus also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks we face as described below and elsewhere in this prospectus.

Investing in our securities involves a high degree of risk. Before making an investment decision, you should consider carefully the risks, uncertainties and other factors described in our most recent Annual Report on Form 10-K, as supplemented and updated by subsequent quarterly reports on Form 10-Q and current reports on Form 8-K that we have filed or will file with the SEC, which are incorporated by reference into this prospectus.

Our business, affairs, prospects, assets, financial condition, results of operations and cash flows could be materially and adversely affected by these risks. For more information about our SEC filings, please see "Where You Can Find More Information".

USE OF PROCEEDS

Unless otherwise indicated in a prospectus supplement, we intend to use the net proceeds from the sale of the securities under this prospectus for general corporate purposes, including working capital.

DESCRIPTION OF COMMON STOCK

Our authorized capital stock consists of 500,000,000 shares of common stock, par value \$0.001 per share, and 10,000,000 shares of preferred stock, par value \$0.001 per share, of which 2,200,000 shares have been designated Series A Preferred Stock and 4,300,000 shares have been designated Series B Preferred Stock. As of March 26, 2021, there were (i) 28,991,093 shares of common stock outstanding, (ii) 158,704 shares of Series A Preferred Stock outstanding that are convertible into 1,322,004 shares of common stock, and (iii) 2,366,882 shares of Series B Preferred Stock outstanding that are convertible into 1,972,402 shares of common stock.

This description is intended as a summary and is qualified in its entirety by reference to our amended and restated articles of incorporation and amended and restated by-laws, which are filed, or incorporated by reference, as exhibits to the registration statement of which this prospectus forms a part.

The holders of our common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders and do not have cumulative voting rights. Accordingly, holders of a majority of the shares of common stock and preferred stock entitled to vote in any election of directors may elect all of the directors standing for election. Subject to preferences that may be applicable to any outstanding shares of preferred stock, the holders of common stock are entitled to receive ratably such dividends as may be declared by the board of directors out of funds legally available therefor. Upon the liquidation, dissolution or winding up of the Company,

holders of our common stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preferences of any outstanding shares of preferred stock. Holders of common stock have no preemptive rights and no right to convert their common stock into any other securities. Our common stock has no redemption or sinking fund provisions. All outstanding shares of common stock are fully paid and non-assessable.

5

DESCRIPTION OF PREFERRED STOCK

Pursuant to our articles of incorporation, our board of directors has the authority, without further action by the stockholders, to issue up to 10,000,000 shares of preferred stock, in one or more series. Our articles of incorporation, as amended, provide that our Board of Directors has the authority, without further action by the shareholders, to issue shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions granted to or imposed upon the preferred stock. Preferred stock may be designated and issued without authorization of shareholders unless such authorization is required by applicable law, the rules of the principal market or other securities exchange on which our stock is then listed or admitted to trading.

Our Board of Directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes could, under some circumstances, have the effect of delaying, deferring or preventing a change in control of the Company.

The description of preferred stock in this prospectus and the description of the terms of a particular series of preferred stock in any applicable prospectus supplement are not complete. You should refer to any applicable certificate of designation for complete information.

All shares of preferred stock offered hereby will, when issued, be fully paid and nonassessable, including shares of preferred stock issued upon the exercise of preferred stock warrants or subscription rights, if any.

Series A Convertible Preferred Stock

On May 15, 2019, we closed a Share Exchange Agreement (the "Exchange Agreement") with Red Cat Propware, Inc., a Nevada corporation ("Red Cat Propware") and its then current shareholders (the "Acquisition") pursuant to which we acquired all of the issued and outstanding capital stock of Red Cat Propware in exchange for our issuance of our common stock and Series A Preferred Stock ("Series A Stock") to the Red Cat Propware shareholders which constituted approximately 83.33% of our issued an outstanding share capital on a fully-diluted basis at such time. With the exception of shares held by our current Chief Executive Officer, Jeffrey Thompson, the convertibility of shares of Series A Stock is limited such that a holder of Series A Stock may not convert Series A Stock to our common stock to the extent that the number of shares of Common Stock to be issued pursuant to such conversion, when aggregated with all other shares of common stock owned by the holder at such time, would result in the holder beneficially owning more than 4.99% of all of our outstanding common stock.

On May 15, 2019 we filed with the Secretary of State of the State of Nevada a Certificate of Designation of Series A Preferred Stock (the "Series A Certificate of Designation"). Pursuant to the Series A Certificate of Designation, the Company designated 2,200,000 shares of its blank check preferred stock as Series A Preferred Stock. Each share of Series A Preferred Stock has no stated value. In the event of a liquidation, dissolution or winding up of the Company, each share of Series A Preferred Stock will not be entitled to a per share preferential payment but will be entitled to participate in any distribution out of the assets of the Company on an equal basis per share with the holders of Common Stock, as if all shares of Series A Preferred Stock had been converted to Common Stock immediately prior to the distribution. Each share of Series A Preferred Stock is convertible at the option of the holder into 8.33 shares of common stock for every one share of Series A Preferred Stock held (the "A Conversion Rate"). The conversion ratio is subject to adjustment in the event of stock splits, stock dividends, combination of shares and similar recapitalization transactions. The Company is prohibited from effecting the conversion of the Series A Preferred Stock to the extent that, as a result of such conversion, the holder beneficially owns more than 4.99%, in the aggregate, which beneficial ownership limitation may be increased by the holder up to, but not exceeding, 9.99% of the issued and outstanding shares of the Company's Common Stock calculated immediately after giving effect to the issuance of shares of Common Stock upon the conversion of the Series A Preferred Stock (the "Beneficial Ownership Limit"). The Beneficial Ownership Limit is inapplicable to a shareholder who, in advance issuance of Series A Preferred Stock, specifically waives such limitations and our Chief Executive Officer, Jeffrey Thompson, waived such limitations prior to the Red Cat Propware acquisition. Under the Series A Certificate of Designa

6

Series B Convertible Preferred Stock

On May 13, 2019 we filed with the Secretary of State of the State of Nevada a Certificate of Designation of Series B Preferred Stock (the "Series B Certificate of Designation"). Pursuant to the Series B Certificate of Designation, the Company designated 4,300,000 shares of its blank check preferred stock as Series B Preferred Stock. Each share of Series B Preferred Stock has no stated value. In the event of a liquidation, dissolution or winding up of the Company, each share of Series B Preferred Stock will not be entitled to a per share preferential payment but will be entitled to participate in any distribution out of the assets of the Company on an equal basis per share with the holders of Common Stock, as if all shares of Series B Preferred Stock had been converted to Common Stock immediately prior to the distribution. Each share of Series B Preferred Stock is convertible at the option of the holder into 0.83 shares of common stock for every one share of Series B Preferred Stock held (the "B Conversion Rate"). The conversion ratio is subject to adjustment in the event of stock splits, stock dividends, combination of shares and similar recapitalization transactions. The Company is prohibited from effecting the conversion of the Series B Preferred Stock to the extent that, as a result of such conversion, the holder beneficially owns more than 4.99%, in the aggregate, which beneficial ownership limitation may be increased by the holder up to, but not exceeding, 9.99% of the issued and outstanding shares of the Company's Common Stock calculated immediately after giving effect to the issuance of shares of Common Stock upon the conversion of the Series A Preferred Stock (the "Beneficial Ownership Limit"). Under the Series B Certificate of Designation, no consideration (including any modification of this Certificate of Designation or related transaction document) shall be offered or paid to any person or entity to amend or consent to a waiver or modification of any provision of this Certificate of Designation or re

DESCRIPTION OF WARRANTS

We may issue warrants for the purchase of preferred stock or common stock. Warrants may be issued independently or together with any preferred stock or common stock, and may be attached to or separate from any offered securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between a warrant agent specified in the agreement and us. The warrant agent will act solely as our agent in connection with the warrants of that series and will not assume any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants. This summary of some provisions of the warrants is not complete. You should refer to the warrant agreement, including the forms of warrant certificate representing the warrants, relating to the specific warrants being offered for the complete terms of the warrant agreement and the warrants. The warrant agreement, together with the terms of the warrant certificate and warrants, will be filed with the SEC in connection with the offering of the specific warrants.

The applicable prospectus supplement will describe the following terms, where applicable, of the warrants in respect of which this prospectus is being delivered:

- the aggregate number of the warrants;
- the price or prices at which the warrants will be issued;
- the designation, amount and terms of the offered securities purchasable upon exercise of the warrants;
- · if applicable, the date on and after which the warrants and the offered securities purchasable upon exercise of the warrants will be separately transferable;
- · the terms of the securities purchasable upon exercise of such warrants and the procedures and conditions relating to the exercise of such warrants;
- · any provisions for adjustment of the number or amount of securities receivable upon exercise of the warrants or the exercise price of the warrants;
- · the price or prices at which and currency or currencies in which the offered securities purchasable upon exercise of the warrants may be purchased;
- the date on which the right to exercise the warrants shall commence and the date on which the right shall expire;

7

- the minimum or maximum amount of the warrants that may be exercised at any one time;
- · information with respect to book-entry procedures, if any;
- · if appropriate, a discussion of Federal income tax consequences; and
- · any other material terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

Warrants for the purchase of common stock or preferred stock will be offered and exercisable for U.S. dollars only. Warrants will be issued in registered form only.

Upon receipt of payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will, as soon as practicable, forward the purchased securities. If less than all of the warrants represented by the warrant certificate are exercised, a new warrant certificate will be issued for the remaining warrants.

Prior to the exercise of any warrants to purchase preferred stock or common stock, holders of the warrants will not have any of the rights of holders of the common stock or preferred stock purchasable upon exercise, including in the case of warrants for the purchase of common stock or preferred stock, the right to vote or to receive any payments of dividends on the preferred stock or common stock purchasable upon exercise.

DESCRIPTION OF UNITS

As specified in the applicable prospectus supplement, we may issue units consisting of shares of common stock, shares of preferred stock or warrants or any combination of such securities.

The applicable prospectus supplement will specify the following terms of any units in respect of which this prospectus is being delivered:

- the terms of the units and of any of the common stock, preferred stock and warrants comprising the units, including whether and under what circumstances the securities comprising the units may be traded separately;
- · a description of the terms of any unit agreement governing the units; and
- · a description of the provisions for the payment, settlement, transfer or exchange of the units.

PLAN OF DISTRIBUTION

We may sell the securities offered through this prospectus (i) to or through underwriters or dealers, (ii) directly to purchasers, including our affiliates, (iii) through agents, or (iv) through a combination of any these methods. The securities may be distributed at a fixed price or prices, which may be changed, market prices prevailing at the time of sale, prices related to the prevailing market prices, or negotiated prices. The prospectus supplement will include the following information:

- · the terms of the offering;
- · the names of any underwriters or agents;
- · the name or names of any managing underwriter or underwriters;
- · the purchase price of the securities;
- · any over-allotment options under which underwriters may purchase additional securities from us;
- the net proceeds from the sale of the securities;

8

- · any delayed delivery arrangements;
- · any underwriting discounts, commissions and other items constituting underwriters' compensation;
- · any initial public offering price;

- · any discounts or concessions allowed or reallowed or paid to dealers;
- · any commissions paid to agents; and
- · any securities exchange or market on which the securities may be listed.

Sale Through Underwriters or Dealers

Only underwriters named in the prospectus supplement are underwriters of the securities offered by the prospectus supplement.

If underwriters are used in the sale, the underwriters will acquire the securities for their own account, including through underwriting, purchase, security lending or repurchase agreements with us. The underwriters may resell the securities from time to time in one or more transactions, including negotiated transactions. Underwriters may sell the securities in order to facilitate transactions in any of our other securities (described in this prospectus or otherwise), including other public or private transactions and short sales. Underwriters may offer securities to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. Unless otherwise indicated in the prospectus supplement, the obligations of the underwriters to purchase the securities will be subject to certain conditions, and the underwriters will be obligated to purchase all the offered securities if they purchase any of them. The underwriters may change from time to time any initial public offering price and any discounts or concessions allowed or reallowed or paid to dealers.

If dealers are used in the sale of securities offered through this prospectus, we will sell the securities to them as principals. They may then resell those securities to the public at varying prices determined by the dealers at the time of resale. The prospectus supplement will include the names of the dealers and the terms of the transaction.

Direct Sales and Sales Through Agents

We may sell the securities offered through this prospectus directly. In this case, no underwriters or agents would be involved. Such securities may also be sold through agents designated from time to time. The prospectus supplement will name any agent involved in the offer or sale of the offered securities and will describe any commissions payable to the agent. Unless otherwise indicated in the prospectus supplement, any agent will agree to use its reasonable best efforts to solicit purchases for the period of its appointment.

We may sell the securities directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any sale of those securities. The terms of any such sales will be described in the prospectus supplement.

Delayed Delivery Contracts

If the prospectus supplement indicates, we may authorize agents, underwriters or dealers to solicit offers from certain types of institutions to purchase securities at the public offering price under delayed delivery contracts. These contracts would provide for payment and delivery on a specified date in the future. The contracts would be subject only to those conditions described in the prospectus supplement. The applicable prospectus supplement will describe the commission payable for solicitation of those contracts.

9

Continuous Offering Program

Without limiting the generality of the foregoing, we may enter into a continuous offering program equity distribution agreement with a broker-dealer, under which we may offer and sell shares of our common stock from time to time through a broker-dealer as our sales agent. If we enter into such a program, sales of the shares of common stock, if any, will be made by means of ordinary brokers' transactions on the Nasdaq Capital Market or other market on which are shares may then trade at market prices, block transactions and such other transactions as agreed upon by us and the broker-dealer. Under the terms of such a program, we also may sell shares of common stock to the broker-dealer, as principal for its own account at a price agreed upon at the time of sale. If we sell shares of common stock to such broker-dealer as principal, we will enter into a separate terms agreement with such broker-dealer, and we will describe this agreement in a separate prospectus supplement or pricing supplement.

Market Making, Stabilization and Other Transactions

Unless the applicable prospectus supplement states otherwise, other than our common stock, all securities we offer under this prospectus will be a new issue and will have no established trading market. We may elect to list offered securities on an exchange or in the over-the-counter market. Any underwriters that we use in the sale of offered securities may make a market in such securities, but may discontinue such market making at any time without notice. Therefore, we cannot assure you that the securities will have a liquid trading market.

Any underwriter may also engage in stabilizing transactions, syndicate covering transactions and penalty bids in accordance with Rule 104 under the Securities Exchange Act. Stabilizing transactions involve bids to purchase the underlying security in the open market for the purpose of pegging, fixing or maintaining the price of the securities. Syndicate covering transactions involve purchases of the securities in the open market after the distribution has been completed in order to cover syndicate short positions.

Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when the securities originally sold by the syndicate member are purchased in a syndicate covering transaction to cover syndicate short positions. Stabilizing transactions, syndicate covering transactions and penalty bids may cause the price of the securities to be higher than it would be in the absence of the transactions. The underwriters may, if they commence these transactions, discontinue them at any time.

General Information

Agents, underwriters, and dealers may be entitled, under agreements entered into with us, to indemnification by us against certain liabilities, including liabilities under the Securities Act. Our agents, underwriters, and dealers, or their affiliates, may be customers of, engage in transactions with or perform services for us, in the ordinary course of business.

LEGAL MATTERS

The Crone Law Group, P.C. has opined on the validity of the securities being offered hereby.

EXPERTS

The consolidated financial statements of the Company as of April 30, 2020 and 2019, and for the years then ended included in this prospectus have been so included in reliance on the report of BF Borgers, CPA, PC an independent registered public accounting firm, which includes an explanatory paragraph about the Company's ability to continue as a going concern, given on the authority of said firm as experts in auditing and accounting.

The consolidated financial statements of the acquired company Fat Shark Holdings, Ltd. as of December 31, 2019 and 2018, and for the years then ended included in this prospectus have been so included in reliance on the report of BF Borgers, CPA, PC an independent registered public accounting firm.

The consolidated financial statements of the acquired company Rotor Riot, LLC as of December 31, 2019 and 2018, and for the years then ended included in this prospectus have been so included in reliance on the report of BF Borgers, CPA, PC an independent registered public accounting firm.

10

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and special reports, along with other information with the SEC. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at http://www.sec.gov.

This prospectus is part of a registration statement on Form S-3 that we filed with the SEC to register the securities offered hereby under the Securities Act of 1933, as amended. This prospectus does not contain all of the information included in the registration statement, including certain exhibits and schedules. You may obtain the registration statement and exhibits to the registration statement from the SEC's internet site.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

This prospectus is part of a registration statement filed with the SEC. The SEC allows us to "incorporate by reference" into this prospectus the information that we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. The following documents are incorporated by reference and made a part of this prospectus:

- our Annual Report on Form 10-K for the year ended April 30, 2020 filed with the SEC onAugust 13, 2020;
- our Quarterly Report on Form 10-Q for the quarterly period ended July 31, 2020 filed with the SEC or September 21, 2020;
- our Quarterly Report on Form 10-Q for the quarterly period ended January 31, 2021 filed with the SEC on March 22, 2021;
- our Quarterly Report on Form 10-Q for the quarterly period ended October 31, 2020 filed with the SEC orDecember 21, 2020;
- our Current Reports on Form 8-K filed with the SEC on<u>October 5, 2020; October 9, 2020; November 6, 2020; November 12, 2020; December 4, 2020; January 13, 2021; January 22, 2021; January 28, 2021; February 17, 2021; February 19, 2021; March 24, 2021; April 6, 2021; April 13, 2021; April 30, 2021; May 4, 2021; May 5, 2021; and May 13, 2021; and
 </u>
- the description of our common stock contained in our Registration Statement on Form 8-A filed with the SEC on<u>March 11, 2021</u>, including any amendment or report filed for the purpose of updating such description.

All documents that we file with the SEC pursuant to Sections 13(a), 13(c), 14, and 15(d) of the Exchange Act subsequent to the date of this registration statement and prior to the filing of a post-effective amendment to this registration statement that indicates that all securities offered under this prospectus have been sold, or that deregisters all securities then remaining unsold, will be deemed to be incorporated in this registration statement by reference and to be a part hereof from the date of filing of such documents. Nothing in this prospectus shall be deemed to incorporate information furnished but not filed with the SEC (including without limitation, information furnished under Item 2.02 or Item 7.01 of Form 8-K, and any exhibits relating to such information).

Any statement contained in this prospectus or in a document incorporated or deemed to be incorporated by reference in this prospectus shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained herein or in the applicable prospectus supplement or in any other subsequently filed document which also is or is deemed to be incorporated by reference modifies or supersedes the statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

The information about us contained in this prospectus should be read together with the information in the documents incorporated by reference. You may request a copy of any or all of these filings, at no cost, by writing or telephoning us at: Red Cat Holdings, Inc., 370 Harbour Drive, Palmas del Mar, Humacao, PR, 00791. (833) 373-3228.

11

Up to \$17,000,000

Common Stock



Defining the Future of Aerial Intelligence

Red Cat Holdings, Inc.

PROSPECTUS SUPPLEMENT

ThinkEquity

August 8, 2023