



# SINTX Technologies, Inc.

*Q4 about inline. We believe biomedical and ceramic armor commercialization ramp in 2023 to be positive for stock. Lowering P/T to \$40.*

## COMPANY UPDATE

### Rating: BUY

Ticker: SINT

Price: \$1.85  
(intraday)

Target: \$40  
(from \$200)

**Q4 about inline:** SINTX recently (on March 29) reported its Q4 2022 (ending December) results. Revenue was \$0.8 million, compared with our and consensus estimates of \$0.4 – 0.6 million. Net loss was \$8.4 million or EPS of \$(18.28), compared with our and consensus estimates of \$(5.20) - (5.49). There was no Q4 guidance though the company preannounced Q4 revenues of \$0.8 million in January.

**Operating expenses:** Operating expenses were \$3.6 million (vs. \$3.1 million in Q3).

**No guidance:** Management again declined to provide forward guidance.

**Adjusting 2023 estimates:** We are maintaining our 2023 revenue estimate of \$3.0 million, but adjusting it for EPS to \$(3.15) from \$(21.39).

**Focused on silicon nitride commercialization:** SINTX is focused on developing silicon nitride products for medical and non-medical products in collaboration with medical/non-medical products manufacturers. The company believes that silicon nitride has a superb combination of properties that make it ideally suited for many medical applications. The company is actively developing products with its OEM partners and have shipped prototype orders.

**Enters ceramic armor market:** In July 2021, SINTX acquired from B4C, LLC the equipment and technical processes required to make ballistic armor plates. The acquisition price was ~\$2.8 million. Separately, SINTX entered into a technology license agreement with Precision Ceramics USA Inc. to manufacture a ceramic composite for defense armor applications. SINTX recently announced that its new SINTX Armor facility in Utah is operational.

**Large market potential:** The company is aiming for wide commercial opportunities across medical and non-medical industries for silicon nitride.

**Key catalysts expected in 2023:** SINTX's goal over the next year is to reach key technology and sales milestones including: 1) support CTL and drive further adoption of silicon nitride spinal fusion devices 2) develop commercial opportunities outside of spine 3) apply its silicon nitride technology platform to other OEM opportunities 4) launch of SINTX Armor.

**Acquisition of TA&T:** In June, the company acquired Technology Assessment and Transfer, Inc., increasing SINTX's capabilities in the aerospace, defense, and biomedical markets. TA&T is an advanced ceramics business that specializes in developing innovative materials for defense, biomedical, and industrial applications. The purchase price was \$760,000.

**Capital raise:** In February (just completed Q1), the company raised \$12 million selling stock (2.2 million shares at \$5.60). We believe the company has enough cash until late-2024.

**Stock split:** In December, the company effected a 1-for-100 reverse stock split.

**Positive high risks versus rewards:** While we expect numerous silicon nitride products to be announced over the next year, there is still a long road to successful product commercialization. However, we believe the ~billion dollars market potentials presents a high reward for the risks.

**Current valuation attractive:** Maintaining our BUY rating, but lowering our 12-month price target to \$40 from \$200. This is based on a NPV analysis, representing significant upside from the current share price. We believe this valuation appropriately balances out the company's high risks with the company's high growth prospects and large upside opportunities.

### Company Description

Based in Salt Lake City, UT, SINTX Technologies is an OEM ceramics company that develops and commercializes silicon nitride for medical and non-medical applications.

United States  
Healthcare

April 4, 2023

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### Stock Data

Exchange:	NasdaqCM
52-week Range:	\$1.81 – 70.80
Shares Outstanding (million):	3.9
Market cap (\$million):	\$7
EV (\$million):	\$2
Debt (\$million):	\$1
Cash (\$million):	\$6
Avg. Daily Trading Vol. (\$million):	\$2
Float (million shares):	1
Short Interest (million shares):	~0
Dividend, annual (yield):	\$0 (NA%)

### Revenues (US\$ million)

	<u>2023E</u> <u>(Cur.)</u>	<u>2023E</u> <u>(Old)</u>	<u>2024E</u> <u>(Cur.)</u>	<u>2024E</u> <u>(Old)</u>
Q1 Mar	0.5E	0.5E	1.0E	
Q2 Jun	0.6E	0.6E	1.2E	
Q3 Sep	0.8E	0.8E	1.3E	
Q4 Dec	<u>1.1E</u>	<u>1.1E</u>	<u>1.5E</u>	
Total	<b>3.0E</b>	<b>3.0E</b>	<b>5.0E</b>	
EV/Revs	0.7x		0.4x	

### Earnings per Share (pro forma)

	<u>2023E</u> <u>(Cur.)</u>	<u>2023E</u> <u>(Old)</u>	<u>2024E</u> <u>(Cur.)</u>	<u>2024E</u> <u>(Old)</u>
Q1 Mar	(1.11)E	(5.35)E	(0.68)E	
Q2 Jun	(0.73)E	(5.47)E	(0.70)E	
Q3 Sep	(0.72)E	(5.36)E	(0.69)E	
Q4 Dec	<u>(0.70)E</u>	<u>(5.20)E</u>	<u>(0.68)E</u>	
Total	<b>(3.15)E</b>	<b>(21.39)E</b>	<b>(2.74)E</b>	
P/E	N/A		N/A	

\*Reflects a 1:100 reverse stock split in December 2022.

### Important Disclosures

Ascendant Capital Markets LLC seeks to do business with companies covered by its research team. Consequently, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making an investment decision.

**For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report, beginning on page 14.**

## Exhibit 1: SINTX Investment Highlights

# SUMMARY

### PORTFOLIO & EXPERTISE

SINTX holds a broad portfolio of advanced ceramics materials, with application across technical, antipathogenic, and medical market sectors. SINTX has unmatched global expertise in the development and application of silicon nitride, the premium portfolio offering.

### EVOLVING

SINTX has fundamentally transformed over the past two years from a specialty materials company into an OEM that can serve many different markets with various product offerings that span significant ranges of quality, value, and economics.

### INVEST

Invest at the inflection point as SINTX begins a new trajectory immediately post two acquisitions which set up the organization for long-term success

## Focus Markets



### Biomedical

- Used in over 40,000 human spine implantations
- Expanding with composites and coatings



### Antipathogenic

- Antibacterial, antifungal, and antiviral applications
- Applications to PPE, filters, surfaces, coatings, wound care, catheters, wound drains, incontinence, and fem care



### Industrial/Armor

- Able to withstand extreme conditions
- Used in aerospace, bearings, and drilling
- Personnel, aerospace, and vehicle protection

Source: Company reports.

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**Exhibit 2: SINTX's Silicon Nitride**

## SINTX Technologies Inc.

SINTX Technologies is a leading manufacturer of silicon nitride.

### Silicon nitride...

- Is favorable to human cells and promotes bone fusion
- Discourages bacterial adhesion on its surface
- Inactivates viruses—including the SARS-CoV-2 virus

SINTX has investigated silicon nitride heavily, with over 130 peer-reviewed scientific papers and presentations.



## STX-100

STX-100 silicon nitride has the best combination of mechanical, thermal, and electrical properties of any technical ceramic. Utilized when durability, thermal stability, exceptional strength, and wear resistance are required.



ENERGY



AUTOMOTIVE &  
AEROSPACE BRAKES



AEROSPACE  
MATERIALS



AUTOMOTIVE  
CERAMICS



WELDING

Source: Company reports.

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Exhibit 3: SINTX's Product Market Opportunity

CERVICAL INTERBODY SPINAL FUSION DEVICES

THORACOLUMBAR INTERBODY SPINAL FUSION DEVICES

FEMORAL HEAD FOR TOTAL HIP\*

FEMORAL COMPONENT FOR TOTAL KNEE\*

DENTAL IMPLANT\*

**THE IDEAL BIOMATERIAL**

**Strength and fracture toughness:** Interlocking anisotropic grains deflect and bridge cracks.

**Wear resistance:** High hardness, strength, and fracture toughness prevent wear.

**Material phase stability:** No spontaneous phase transformation or associated weakening.

**Hydrophilicity:** Tunable through modification of surface topography and chemistry, from  $<10^\circ$  up to  $\sim 70^\circ$ .

**Osseointegration:** Nanostructured topography combined with complex surface chemistry optimal for cell adhesion and bone growth.

**Favorable imaging:** Semi-radiolucent density appears bone-like in X-rays and low magnetic susceptibility eliminates distortion in CT and MRI scans.

**Bacterial resistance:** Surface chemistry, nanotexture, and charge inhibit biofilm formation.

\* Product Candidates

Source: Company reports.

## Exhibit 4: SINTX Armor

### ARMOR

There is an ever-increasing demand for lightweight, comfortable ceramic armor with advanced protection against armor piercing rounds. SINTX's ARMOR ceramics offer advanced hardness and extreme light weight.

Transparent ceramic ARMOR provides superior ballistic protection at less than half the weight and thickness over traditional glass laminates.



AEROSPACE  
ARMOR



TRANSPARENT  
CERAMICS



VEHICLE  
ARMOR



BODY  
ARMOR



### SINTX Armor – New in 2021

SINTX has entered the ceramic armor market through the purchase of assets and technology from B4C, LLC and a technology partnership with Precision Ceramics USA. SINTX will develop and manufacture high-performance ceramic armor plates for personnel, aircraft, and armored vehicles.



- **BoroShock:** A 100% Boron Carbide material for ultimate lightweight performance in ballistic applications.
- **DuraShock:** A composite material made of Boron Carbide and Silicon Carbide – licensed from Precision Ceramics USA – for exceptional multi-hit performance against ballistic threats.

## SINTX TECHNOLOGIES ANNOUNCES ITS NEW UTAH ARMOR FACILITY IS FULLY OPERATIONAL

FEBRUARY 14, 2023 9:00AM EST

[Download as PDF](#)

*Facility will produce high-performance ceramic armor products for personnel, aircraft, and vehicles*

SALT LAKE CITY--(BUSINESS WIRE)-- SINTX Technologies, Inc. ([www.sintx.com](http://www.sintx.com)) (NASDAQ: SINT; "SINTX" or the "Company"), an original equipment manufacturer of advanced ceramics, announced today that equipment installation along with key renovations and upgrades to its SINTX Armor facility in Salt Lake City are now complete. This milestone is the result of an intensive effort by the SINTX team to upgrade the facility's infrastructure and install armor manufacturing equipment that was acquired from Ohio-based B4C LLC.

Source: Company reports.



## Exhibit 5: Silicon Nitride Antipathogenic, Biomedical, and Industrial Catalysts for Growth

### BIOMEDICAL

#### METAL COATINGS

Ceramic coatings for metal orthopedic and dental surgical implants and replacements. These coatings are targeted at overcoming the clinical limitations of metallic implants.

#### REGULATORY CLEARANCES FOR SPINAL IMPLANTS

Pursuing FDA clearance for SN-PEEK spinal fusion devices in the U.S. and similar clearances in OUS markets.

#### DENTAL

Working with dental implant companies to potentially supply novel silicon nitride and zirconia-based dental implants.

#### ABLATION TIPS

Quoting two global medical device companies for a significant volume of 3D printed bioceramic surgical ablation tips.

#### FOOT AND ANKLE

Leveraging success in spine market to attract interest from global leaders in this specialty area.

### ANTIPATHOGENIC

#### AP FACE MASKS AND MASK FILTERS

Developing civil use antipathogenic face protection.

#### AUTOMOTIVE CABIN AIR FILTERS

Working with an automotive company on cabin air filters to reduce bacteria and virus.

#### WOUND CARE

Evaluating antipathogenic wound dressings (bandages, surgical care) for reduced bacteria growth.

#### MEDICAL TUBING COATINGS

Developing coatings for catheters and medical tubing aimed at reducing infections.

### TECHNICAL CERAMICS

#### COMMERCIAL JETS

Working with two major companies on commercial jet ignition systems – silicon nitride is enabling.

#### RF ANTENNAS

Working with several companies on RF antennas applications due to the excellent dielectric properties of silicon nitride.

#### ARMOR

The SLC ARMOR plant will start up in the 1<sup>st</sup> quarter 2023 with strong interest from potential customers.

#### WELDING COMPONENTS

In production: components for high-speed welding with an international OEM for automotive applications.

#### CRITICAL APPLICATIONS

Engaged with many companies in evaluations of our materials in critical applications such as energy and defense.

### GOVERNMENT CONTRACTS & GRANTS

#### NAVAL RESEARCH LABORATORY

Ultra hard materials for armor applications that supports power protection and war fighter protection in military generators and vehicles.

#### HIGH EFFICIENCY HEAT EXCHANGERS

Developed for high performance military equipment by the Office of Naval Research and Commercial HVAC systems for the Department of Energy.

#### MISSILE DEFENSE AGENCY

Extended life coatings for electrochemical machining tools.

#### FUTURE GOVERNMENT CONTRACTS

Leverage 40 years and \$40+M in contracts and technical experience for future opportunities and innovations that can address market needs.

#### DEFENSE ADVANCED RESEARCH

PROJECTS AGENCY  
CMC combustor for high heat temps.

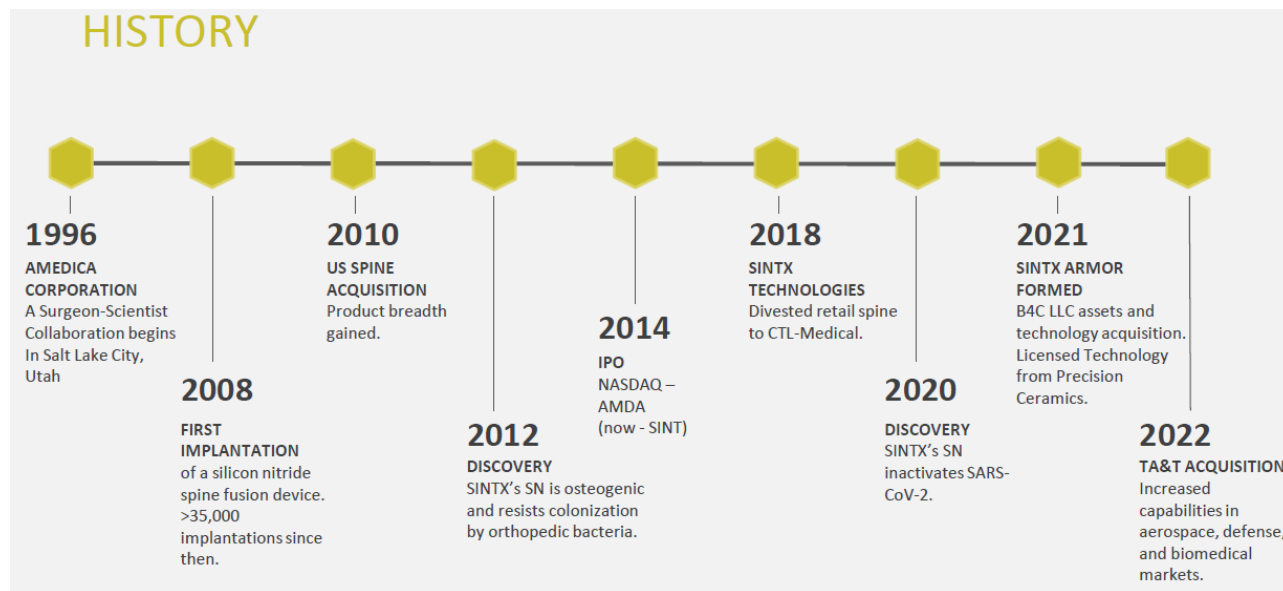
#### GRANTS

In the last year, awarded three phase 1 grants from NIH totaling \$900K for 3D printed composite devices: spine implants, craniomaxillofacial implants, and trauma plates.

SINTX

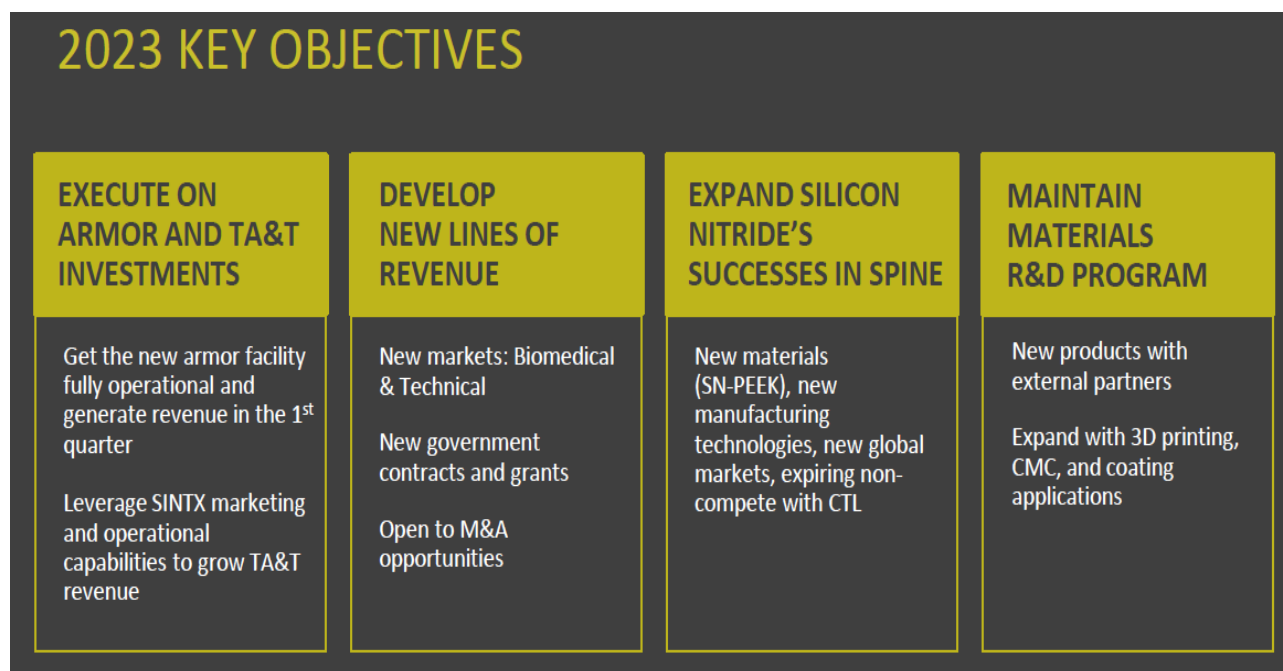
Source: Company report.

**Exhibit 6: SINTX Timeline**



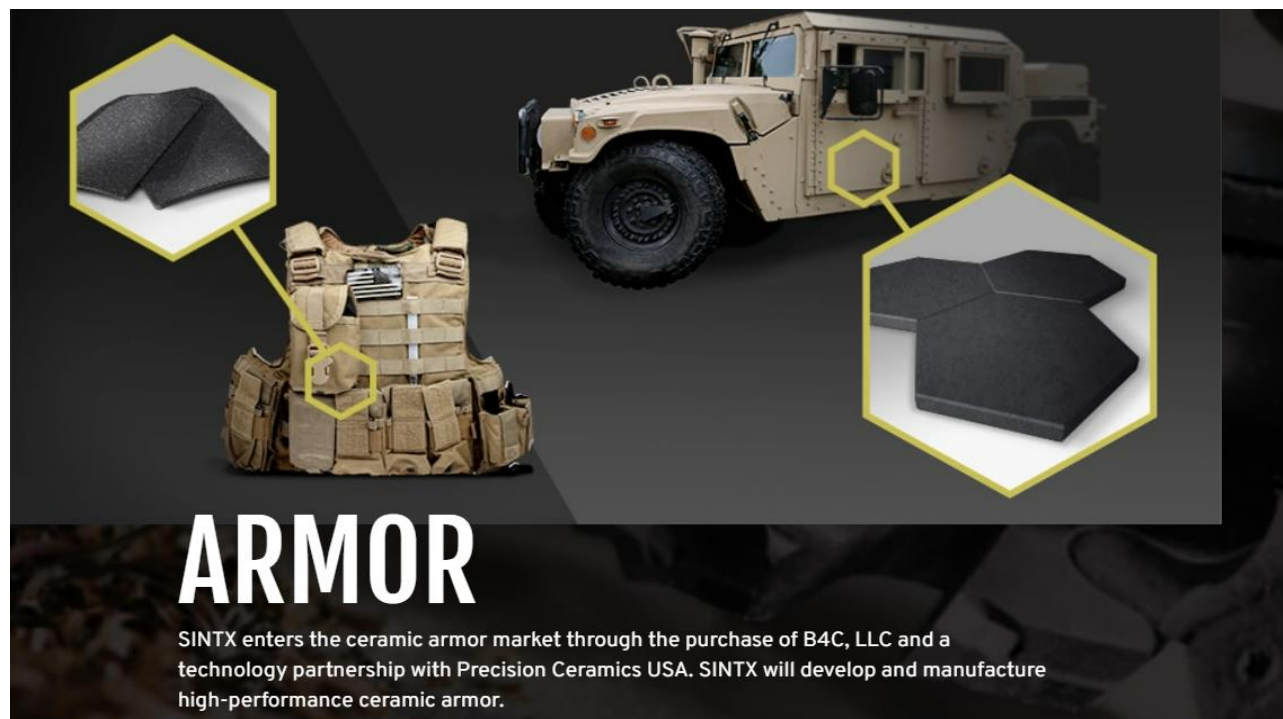
Source: Company report.

**Exhibit 7: SINTX Planned 2023 Goals**



Source: Company reports.

## Exhibit 8: SINTX Enters Ceramic Armor Market (July 2021)



## SINTX ENTERS CERAMIC ARMOR MARKET THROUGH PURCHASE OF ASSETS FROM B4C, LLC AND TECHNOLOGY LICENSE FROM PRECISION CERAMICS USA INC.

JULY 22, 2021 9:00AM EDT

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SALT LAKE CITY, UT, July 22, 2021 (GLOBE NEWSWIRE) -- SINTX Technologies, Inc. (NASDAQ: SINT) ("SINTX" or the "Company") ([www.sintx.com](http://www.sintx.com)), an original equipment manufacturer (OEM) of silicon nitride ceramic for medical and non-medical applications, announced today that it has entered an asset purchase agreement with B4C, LLC of Dayton, Ohio, to acquire the equipment and technical processes required to make ballistic armor plates. Separately, SINTX also entered into a technology license agreement with Precision Ceramics USA Inc. ([precision-ceramics.com](http://precision-ceramics.com)) to manufacture a ceramic composite for defense armor applications.

Ceramic materials are an integral part of modern armor systems because of their light weight and resistance to high velocity projectiles. Governments worldwide are investing in novel ceramic armor solutions to protect law enforcement and military personnel as well as vehicles, aircraft, and ships against high-intensity threats. B4C, LLC is a specialty producer of Boron Carbide, a ceramic material used in the manufacture of protective body armor plates. Precision Ceramics USA Inc. is an international expert in technical ceramic component solutions.

Through its newly-created and wholly-owned subsidiary called **SINTX Armor**, the Company plans to utilize a two-pronged strategy. The assets acquired from B4C will be used to manufacture and market pure Boron Carbide - the highest strength ceramic armor available. These are designed to protect soldiers against hardened, high-velocity projectiles, against which other materials are not as effective. Additionally, SINTX will jointly develop and manufacture a special, lower cost composite of Boron Carbide and Silicon Carbide, under an exclusive license from Precision Ceramics USA Inc. The composite material is targeted at the law enforcement and civilian armor markets.

Source: Company report.



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Exhibit 9: SINTX Acquisition of Technology Assessment and Transfer, Inc. (in July 2022)

July 6, 2022



## SINTX Technologies Acquires Technology Assessment and Transfer, Inc.

*The Acquisition Broadens Opportunities for SINTX in Aerospace, Defense, and Biomedical Markets*

SALT LAKE CITY--(BUSINESS WIRE)-- SINTX Technologies, Inc. ([www.sintx.com](http://www.sintx.com)) (NASDAQ: SINT) ("SINTX" or the "Company"), an original equipment manufacturer of advanced ceramics, announced the acquisition of Technology Assessment and Transfer, Inc. (TA&T; <https://www.techassess.com/>), significantly increasing SINTX's capabilities in the aerospace, defense, and biomedical markets.

"We are excited to acquire TA&T and take another step towards diversifying and strengthening SINTX," said Dr. Sonny Bal, President and CEO of SINTX. "TA&T will expand our use of advanced manufacturing technologies and introduce new ceramic material platforms to the SINTX portfolio. We expect the acquisition to bring immediate revenue to SINTX via TA&T's well-established relationships with commercial partners and the U.S. government."

TA&T, based in Maryland, is a nearly 40-year-old advanced ceramics business that specializes in developing and commercializing a broad array of innovative materials for defense, biomedical, and industrial applications. The company's technologies and products include 3D printing of ceramic medical devices and heat exchangers, chemical vapor infiltration and deposition of complex fiber-reinforced ceramic-matrix composites, and hot pressing of transparent armor and other technical ceramics. TA&T has a long track record of successfully winning research contracts and grants from the U.S. government and commercializing its innovative technologies.

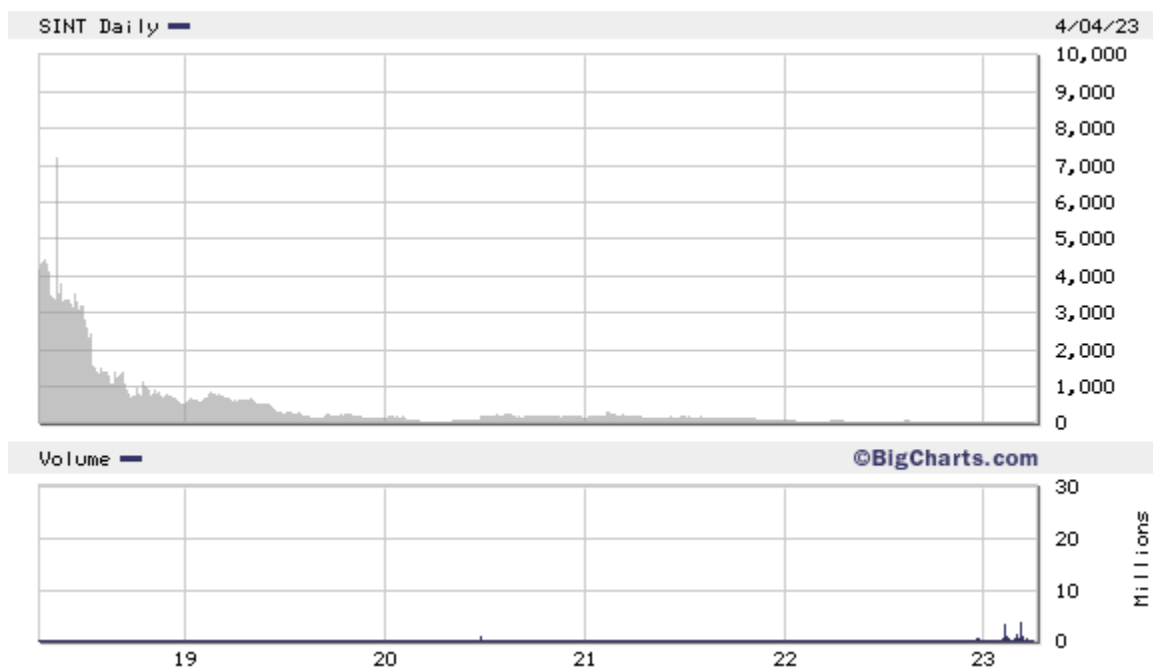
As an example of TA&T's innovation, ceramic heater bodies developed, designed, and manufactured by TA&T are a part of the Sample Analysis on Mars (SAM) instrument suite on board the Curiosity Rover (<https://mars.nasa.gov/msl/home/>). These oven heater bodies were manufactured by TA&T using Ceramic Stereolithography, a form of 3D printing and additive manufacturing, and can withstand the extreme temperatures of more than 1,500°F that are required to heat soil samples on Mars in hopes of detecting signs of life. TA&T was selected by NASA to make these parts because of the prohibitive cost of traditional manufacturing techniques.

"Technology Assessment and Transfer is excited about the opportunity that the SINTX acquisition provides for product growth in commercial, aerospace, and medical applications," said Dr. Larry Fehrenbacher, Co-Founder and President of TA&T. "The blend of federally-funded innovative technologies and SINTX's business acumen is a compelling synergistic formula for future success."

Source: Company report.

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**Exhibit 10: SINTX Technologies, Inc. Stock Price (5-year)**



\*Reflects a 1:100 reverse stock split in December 2022.

Source: <https://bigcharts.marketwatch.com/>

**Exhibit 11: Consensus Expectations (as of March 29, 2023)**

	Revenue (mil)			EPS	
	2022E	2023E		2022E	2023E
Q1 Mar	\$0.1A	\$0.6E	Q1 Mar	\$(11.51)A	\$(5.07)E
Q2 Jun	\$0.2A		Q2 Jun	\$(10.16)A	
Q3 Sep	\$0.4A		Q3 Sep	\$(11.02)A	
Q4 Dec	\$0.6E		Q4 Dec	\$(5.46)E	
<b>Total</b>	<b>\$1.4E</b>	<b>\$2.7E</b>	<b>Total</b>	<b>\$(35.12)E</b>	<b>\$(16.42)E</b>

\*Quarterly estimates may not add to annual estimates due to variations in contributing estimates and rounding.

\*Reflects a 1:100 reverse stock split in December 2022.

Source: Company report, Refinitiv, and Ascendant Capital Markets estimates

## FINANCIAL MODEL

### SINTX Technologies, Inc.

Income Statement (\$ mils)	Mar-21	Jun-21	Sep-21	Dec-21	2021	Mar-22	Jun-22	Sep-22	Dec-22	2022	Mar-23	Jun-23	Sep-23	Dec-23	2023	Mar-24	Jun-24	Sep-24	Dec-24	2024
Fiscal Year End: December 31	Q1A	Q2A	Q3A	Q4A	FY-A	Q1A	Q2A	Q3A	Q4A	FY-A	Q1E	Q2E	Q3E	Q4E	FY-E	Q1E	Q2E	Q3E	Q4E	FY-E
<b>Total Revenue</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.2</b>	<b>0.6</b>	<b>0.1</b>	<b>0.2</b>	<b>0.4</b>	<b>0.8</b>	<b>1.6</b>	<b>0.5</b>	<b>0.6</b>	<b>0.8</b>	<b>1.1</b>	<b>3.0</b>	<b>1.0</b>	<b>1.2</b>	<b>1.3</b>	<b>1.5</b>	<b>5.0</b>
Cost of Revenues	0.1	0.1	0.2	0.1	0.4	0.1	0.1	0.1	0.0	0.3	0.4	0.5	0.6	0.8	2.3	0.8	0.9	1.0	1.1	3.8
Gross Profit	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.3	0.7	1.3	0.1	0.2	0.2	0.3	0.8	0.3	0.3	0.3	0.4	1.3
Research and development	1.6	1.2	1.6	1.5	5.9	1.7	1.5	1.5	1.8	6.5	1.5	1.5	1.5	1.5	6.0	1.5	1.5	1.5	1.5	6.0
Sales and marketing	0.3	0.3	0.3	0.3	1.3	0.4	0.3	0.3	0.3	1.3	0.4	0.4	0.4	0.4	1.6	0.4	0.4	0.4	0.4	1.6
General and administrative	1.0	0.9	0.9	0.8	3.6	0.9	1.0	1.1	1.1	4.0	1.1	1.1	1.1	1.1	4.4	1.1	1.1	1.1	1.1	4.4
Grant and contract expenses					0.0	0.0	0.2	0.2	0.4	0.9					0.0					0.0
Restructuring and other					0.0					0.0					0.0					0.0
Total operating expenses	2.9	2.4	2.9	2.6	10.8	2.9	3.0	3.1	3.6	12.6	3.0	3.0	3.0	3.0	12.0	3.0	3.0	3.0	3.0	12.0
<b>Operating income (loss)</b>	<b>(2.8)</b>	<b>(2.4)</b>	<b>(2.8)</b>	<b>(2.6)</b>	<b>(10.6)</b>	<b>(2.9)</b>	<b>(2.8)</b>	<b>(2.8)</b>	<b>(2.9)</b>	<b>(11.3)</b>	<b>(2.9)</b>	<b>(2.9)</b>	<b>(2.8)</b>	<b>(2.7)</b>	<b>(11.3)</b>	<b>(2.8)</b>	<b>(2.7)</b>	<b>(2.7)</b>	<b>(2.6)</b>	<b>(10.8)</b>
Interest income (expense)	0.0	0.0	0.0	0.0	0.1	(0.0)	0.0	0.0	0.0	0.0	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Other income (expense)	0.2	0.1	0.5	1.0	1.7	0.0	0.3	0.1	(5.5)	(5.2)	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1
Income before income taxes	(2.6)	(2.2)	(2.3)	(1.6)	(8.8)	(2.8)	(2.5)	(2.7)	(8.4)	(16.5)	(2.8)	(2.9)	(2.8)	(2.7)	(11.2)	(2.7)	(2.7)	(2.7)	(2.6)	(10.7)
Income taxes					0.0					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net income (loss)	(2.6)	(2.2)	(2.3)	(1.6)	(8.8)	(2.8)	(2.5)	(2.7)	(8.4)	(16.5)	(2.8)	(2.9)	(2.8)	(2.7)	(11.2)	(2.7)	(2.7)	(2.7)	(2.6)	(10.7)
Nonrecurring/noncash adjustments			(0.5)		(0.5)					0.0					0.0					0.0
<b>Net income (pro forma)</b>	<b>(2.6)</b>	<b>(2.2)</b>	<b>(2.8)</b>	<b>(1.6)</b>	<b>(9.3)</b>	<b>(2.8)</b>	<b>(2.5)</b>	<b>(2.7)</b>	<b>(8.4)</b>	<b>(16.5)</b>	<b>(2.8)</b>	<b>(2.9)</b>	<b>(2.8)</b>	<b>(2.7)</b>	<b>(11.2)</b>	<b>(2.7)</b>	<b>(2.7)</b>	<b>(2.7)</b>	<b>(2.6)</b>	<b>(10.7)</b>
EBITDA																				
Shares, Basic	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.3	2.5	3.9	3.9	3.9	3.6	3.9	3.9	3.9	3.9	3.9
Shares, Diluted	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.5	0.3	2.5	3.9	3.9	3.9	3.6	3.9	3.9	3.9	3.9	3.9
EPS Basic (pro forma)	(\$10.67)	(\$8.91)	(\$11.43)	(\$6.48)	(\$37.48)	(\$11.51)	(\$10.16)	(\$11.02)	(\$18.28)	(\$54.67)	(\$1.11)	(\$0.73)	(\$0.72)	(\$0.70)	(\$3.15)	(\$0.68)	(\$0.70)	(\$0.69)	(\$0.68)	(\$2.74)
EPS Diluted (pro forma)	(\$10.67)	(\$8.91)	(\$11.26)	(\$6.20)	(\$36.92)	(\$11.51)	(\$10.02)	(\$10.86)	(\$18.28)	(\$51.96)	(\$1.11)	(\$0.73)	(\$0.72)	(\$0.70)	(\$3.15)	(\$0.68)	(\$0.70)	(\$0.69)	(\$0.68)	(\$2.74)
<b>Margins</b>																				
Gross margin	40%	28%	21%	24%	26%	38%	73%	79%	96%	83%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Research and development	1579%	1192%	671%	899%	971%	1281%	615%	358%	235%	413%	300%	250%	188%	136%	200%	150%	125%	115%	100%	120%
Sales and marketing	283%	326%	141%	203%	213%	305%	141%	68%	41%	86%	80%	67%	50%	36%	53%	40%	33%	31%	27%	32%
General and administrative	990%	850%	390%	492%	595%	664%	414%	251%	140%	256%	220%	183%	138%	100%	147%	110%	92%	85%	73%	88%
Operating margin	-2813%	-2340%	-1182%	-1570%	-1752%	-2233%	-1160%	-656%	-376%	-726%	-575%	-475%	-350%	-248%	-375%	-275%	-225%	-206%	-175%	-215%
Tax rate, GAAP	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Net margin	-2607%	-2177%	-980%	-970%	-1448%	-2205%	-1047%	-639%	-1098%	-1056%	-57%	-47%	-35%	-24%	-37%	-26%	-22%	-20%	-17%	-21%
<b>Y/Y % change</b>																				
Total Revenue	-51%	-50%	262%	41%	2%	28%	138%	78%	364%	158%	288%	150%	88%	44%	92%	100%	100%	63%	36%	67%
Gross margin	-2%	-32%	277%	67%	32%	23%	521%	588%	1740%	725%	155%	-14%	-41%	-63%	-42%	100%	100%	63%	36%	67%
Research and development	60%	13%	12%	13%	22%	4%	23%	-5%	21%	10%	-9%	2%	-2%	-17%	-7%	0%	0%	0%	0%	0%
Sales and marketing	109%	151%	86%	44%	89%	38%	3%	-14%	-7%	4%	2%	18%	37%	28%	20%	0%	0%	0%	0%	0%
General and administrative	31%	4%	13%	14%	15%	-14%	16%	15%	32%	11%	29%	11%	3%	3%	10%	0%	0%	0%	0%	0%
Operating income (loss)	53%	19%	16%	16%	25%	1%	18%	-1%	11%	7%	0%	2%	0%	-5%	-1%	-4%	-5%	-4%	-4%	-4%
Net income (loss)	-68%	-48%	-7%	-8%	-47%	8%	14%	16%	426%	88%	-2%	14%	3%	-67%	-32%	-4%	-5%	-4%	-4%	-4%
EPS Diluted (pro forma)	-91%	-75%	2%	-12%	-64%	8%	12%	-4%	195%	41%	-90%	-93%	-93%	-96%	-94%	-39%	-5%	-4%	-4%	-13%

Source: Company reports and Ascendant Capital Markets estimates.

Reflects a 1:100 reverse stock split in December 2022

**SINTX Technologies, Inc.**

Balance Sheet (\$ mils)	Mar-21	Jun-21	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24
Fiscal Year End: December 31	Q1A	Q2A	Q3A	Q4A	Q1A	Q2A	Q3A	Q4A	Q1E	Q2E	Q3E	Q4E	Q1E	Q2E	Q3E	Q4E
<b>Assets</b>																
Cash and cash equivalents	23.5	22.2	17.2	14.3	10.9	7.7	4.8	6.2	16.2	13.5	11.1	9.4	5.2	3.1	0.7	(1.6)
Short term investments									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Accounts receivable, net	0.1	0.0	0.2	0.1	0.1	0.3	0.2	0.3	0.5	0.6	0.8	1.1	1.0	1.2	1.3	1.6
Inventory	0.1	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.4	0.5	0.5	0.6	0.6	0.7
Deferred income taxes									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Short-term note receivable	1.3								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prepaid expenses and other	0.8	0.7	0.4	0.4	0.7	0.9	0.7	0.4	0.7	0.8	1.1	1.5	1.4	1.7	1.8	2.1
Total current assets	25.8	23.2	18.1	15.0	12.0	9.2	6.0	7.2	17.6	15.3	13.5	12.6	8.1	6.6	4.4	2.8
Property and equipment, net	0.6	1.0	3.8	4.0	4.2	5.1	5.5	5.7	5.8	6.1	6.5	6.7	8.0	8.1	8.4	8.8
Intangibles, net	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deferred income tax									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long-term note receivable									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long-term inventory and other	2.3	2.1	2.9	2.8	2.7	3.2	3.0	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
<b>Total assets</b>	<b>28.7</b>	<b>26.4</b>	<b>24.9</b>	<b>21.8</b>	<b>18.9</b>	<b>17.5</b>	<b>14.6</b>	<b>15.8</b>	<b>26.3</b>	<b>24.2</b>	<b>22.8</b>	<b>22.2</b>	<b>19.0</b>	<b>17.7</b>	<b>15.7</b>	<b>14.5</b>
<b>Liabilities and stockholders' equity</b>																
Accounts payable	0.4	0.2	0.2	0.2	0.5	0.4	0.3	0.4	0.9	1.1	1.4	1.9	1.8	2.1	2.3	2.7
Accrued expenses	1.1	1.3	1.6	1.2	0.8	1.6	1.6	1.6	2.4	2.9	3.9	5.4	4.9	5.8	6.3	7.3
Derivative liabilities	1.3	1.3	0.8	0.3	0.3	0.2	0.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Deferred revenue									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deferred income tax									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.4	0.4	0.5	0.5	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Short term debt	0.0	0.0	0.1		0.5	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<b>Total current liabilities</b>	<b>3.2</b>	<b>3.2</b>	<b>3.2</b>	<b>2.2</b>	<b>2.7</b>	<b>3.0</b>	<b>2.9</b>	<b>8.1</b>	<b>9.3</b>	<b>10.0</b>	<b>11.3</b>	<b>13.3</b>	<b>12.7</b>	<b>14.0</b>	<b>14.7</b>	<b>16.0</b>
Deferred income taxes									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Warrant liabilities									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other long term liabilities	1.4	1.3	2.0	1.9	1.8	2.0	1.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Long term debt	0.5	0.5	0.5			0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
<b>Total other liabilities</b>	<b>1.9</b>	<b>1.7</b>	<b>2.5</b>	<b>1.9</b>	<b>1.8</b>	<b>2.5</b>	<b>2.3</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>
Preferred stock																
Common stock	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.1	0.2	0.3	0.4	0.5	0.5	0.6	0.7
Additional paid-in capital	267.1	267.2	267.3	267.4	267.5	267.6	267.7	268.2	268.2	268.2	268.2	268.2	268.2	268.2	268.2	268.2
Retained earnings	(243.7)	(245.9)	(248.3)	(249.9)	(253.3)	(255.8)	(258.5)	(262.5)	(265.2)	(268.1)	(270.9)	(273.6)	(276.3)	(279.0)	(281.7)	(284.3)
Accumulated other comprehensive income																
Other									12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
<b>Total stockholders' equity</b>	<b>23.6</b>	<b>21.5</b>	<b>19.2</b>	<b>17.7</b>	<b>14.5</b>	<b>12.0</b>	<b>9.4</b>	<b>5.7</b>	<b>15.0</b>	<b>12.2</b>	<b>9.5</b>	<b>6.9</b>	<b>4.3</b>	<b>1.7</b>	<b>(0.9)</b>	<b>(3.5)</b>
<b>Total stockholders' equity and liabil</b>	<b>28.7</b>	<b>26.4</b>	<b>24.9</b>	<b>21.8</b>	<b>18.9</b>	<b>17.5</b>	<b>14.6</b>	<b>15.8</b>	<b>26.3</b>	<b>24.2</b>	<b>22.8</b>	<b>22.2</b>	<b>19.0</b>	<b>17.7</b>	<b>15.7</b>	<b>14.5</b>

**Balance Sheet Drivers**

	Mar-21	Jun-21	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24
	Q1A	Q2A	Q3A	Q4A	Q1A	Q2A	Q3A	Q4A	Q1E	Q2E	Q3E	Q4E	Q1E	Q2E	Q3E	Q4E
Prepaid as % of total rev	790%	645%	160%	212%	559%	361%	167%	46%	140%	140%	140%	140%	140%	140%	140%	140%
Accounts payable as % of total rev	393%	152%	71%	132%	380%	155%	68%	57%	177%	177%	177%	177%	177%	177%	177%	177%
Inventories as % of cost of rev	177%	485%	210%	242%	374%	524%	366%	947%	64%	64%	64%	64%	64%	64%	64%	64%
Accrued expenses as % of total rev	1075%	1256%	672%	697%	646%	647%	365%	211%	487%	487%	487%	487%	487%	487%	487%	487%
<b>Activity Ratios</b>																
A/R Days Sales Outstanding	60	26	69	56	74	101	49	39	93	93	93	93	93	93	93	93
Inventory Turnover	2.3x	0.8x	1.9x	1.7x	1.1x	0.8x	1.1x	0.4x	6.3x	6.3x	6.3x	6.3x	6.3x	6.3x	6.3x	6.3x
A/P Days Payable	586	190	80	156	551	507	292	1302	212	212	212	212	212	212	212	212
<b>Book &amp; Cash Value (per share)</b>																
Book Value per Share (diluted)	95.66	87.00	76.75	68.71	58.48	48.04	37.53	12.40	6.00	3.14	2.44	1.76	1.10	0.43	(0.24)	(0.89)
Cash per Share (diluted)	95.15	89.82	68.54	55.32	43.96	30.89	19.05	13.58	6.48	3.47	2.85	2.41	1.32	0.81	0.17	(0.40)
Net cash per Share (diluted)	93.06	87.76	66.51	55.32	41.84	28.31	16.53	12.43	6.27	3.33	2.72	2.28	1.19	0.67	0.03	(0.54)

Source: Company reports and Ascendant Capital Markets estimates

**SINTX Technologies, Inc.**

Cash Flow Statement (\$ mils)	Mar-21	Jun-21	Sep-21	Dec-21	2021	Mar-22	Jun-22	Sep-22	Dec-22	2022	Mar-23	Jun-23	Sep-23	Dec-23	2023	Mar-24	Jun-24	Sep-24	Dec-24	2024
Fiscal Year End: December 31	Q1A	Q2A	Q3A	Q4A	FY-A	Q1A	Q2A	Q3A	Q4A	FY-A	Q1E	Q2E	Q3E	Q4E	FY-E	Q1E	Q2E	Q3E	Q4E	FY-E
<b>Cash flow from operating activities</b>																				
Net income	(2.6)	(2.2)	(2.3)	(1.6)	(8.8)	(2.8)	(2.5)	(2.7)	(4.0)	(12.0)	(2.8)	(2.9)	(2.8)	(2.7)	(11.2)	(2.7)	(2.7)	(2.7)	(2.6)	(10.7)
Depreciation	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.4
Amortization	0.1	0.1	0.1	0.1	0.5	0.1	0.1	0.2	0.2	0.6					0.0					0.0
Debt related amortization expen	(0.0)	(0.0)			(0.1)					0.0					0.0					0.0
Stock comp	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.4
Bad debt expense								(0.0)	(0.0)	(0.0)					0.0					0.0
Inventory reserve										0.0					0.0					0.0
Deferred income taxes				0.0	0.0					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Change in fair value of warrant l	0.2	0.0	(0.5)	(0.5)	(0.7)	(0.0)	(0.1)	(0.1)	1.3	1.1					0.0	0.0	0.0	0.0	0.0	0.0
Writedowns and impairments					0.0					0.0					0.0					0.0
Other gains/losses	(0.4)	(0.1)	0.0	(0.5)	(1.0)		(0.0)	0.0		0.0				0.0					0.0	0.0
Other					0.0					0.0					0.0					0.0
<b>Changes in operating assets and liabilities:</b>																				
Accounts receivable	(0.0)	0.0	(0.2)	0.1	(0.1)	(0.0)	0.0	0.0	(0.1)	(0.0)	(0.2)	(0.1)	(0.2)	(0.3)	(0.8)	0.1	(0.2)	(0.1)	(0.2)	(0.4)
Inventory	(0.0)	(0.2)	0.1	0.1	(0.1)	(0.0)	(0.2)	0.0	0.0	(0.1)	0.0	(0.0)	(0.1)	(0.1)	(0.2)	0.0	(0.1)	(0.0)	(0.1)	(0.2)
Prepaid expenses & other curre	(0.6)	0.1	0.2	0.0	(0.1)	(0.4)	(0.1)	0.2	0.4	0.0	(0.3)	(0.1)	(0.3)	(0.4)	(1.2)	0.1	(0.3)	(0.1)	(0.3)	(0.6)
Income tax					0.0					0.0					0.0					0.0
Other assets					0.0					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Accounts payable	0.4	(0.1)	0.1	(0.2)	0.3	(0.1)	0.1	(0.1)	0.2	0.2	0.5	0.2	0.4	0.5	1.5	(0.2)	0.4	0.2	0.4	0.7
Accrued expenses	(0.0)	0.0	0.0	0.0	0.0	(0.1)	(0.1)	(0.2)	0.3	(0.1)	0.8	0.5	1.0	1.5	3.7	(0.5)	1.0	0.5	1.0	1.9
Deferred revenue					0.0					0.0					0.0					0.0
Other liabilities	(0.1)	(0.1)	(0.1)	(0.1)	(0.4)	0.0	(0.0)	(0.0)	(0.6)	(0.6)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Net cash (used in) provided by</b>	<b>(3.0)</b>	<b>(2.3)</b>	<b>(2.4)</b>	<b>(2.4)</b>	<b>(10.1)</b>	<b>(3.2)</b>	<b>(2.5)</b>	<b>(2.5)</b>	<b>(2.1)</b>	<b>(10.3)</b>	<b>(1.8)</b>	<b>(2.3)</b>	<b>(1.9)</b>	<b>(1.4)</b>	<b>(7.4)</b>	<b>(2.8)</b>	<b>(1.8)</b>	<b>(2.1)</b>	<b>(1.7)</b>	<b>(8.5)</b>
<b>Cash flow from investing activities</b>																				
Purchases of property and equi	(0.2)	(0.4)	(2.6)	(0.5)	(3.7)	(0.2)	(0.4)	(0.5)	(0.3)	(1.4)	(0.2)	(0.4)	(0.5)	(0.3)	(1.4)	(1.4)	(0.2)	(0.4)	(0.5)	(2.5)
Purchases of short-term investments		1.9			1.9					0.0					0.0					0.0
Acquisitions					0.0		0.3			0.3					0.0					0.0
Other	0.6	(0.5)			0.1		0.0			0.0					0.0					0.0
<b>Net cash used in investing activ</b>	<b>0.4</b>	<b>1.1</b>	<b>(2.6)</b>	<b>(0.5)</b>	<b>(1.7)</b>	<b>(0.2)</b>	<b>(0.1)</b>	<b>(0.5)</b>	<b>(0.3)</b>	<b>(1.1)</b>	<b>(0.2)</b>	<b>(0.4)</b>	<b>(0.5)</b>	<b>(0.3)</b>	<b>(1.4)</b>	<b>(1.4)</b>	<b>(0.2)</b>	<b>(0.4)</b>	<b>(0.5)</b>	<b>(2.5)</b>
<b>Cash flow from financing activities</b>																				
Issuance of debt	0.5			(0.0)	0.5				3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Repayment of debt		(0.0)		0.0	0.0		(0.5)			(0.5)					0.0					0.0
Issuance of stock				0.0	0.0					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Proceeds from stock option exe	0.2				0.2					0.0					0.0					0.0
Other					0.0					0.0	12.0				12.0					0.0
Dividends and distributions					0.0					0.0					0.0					0.0
<b>Cash provided by (used in) fina</b>	<b>0.7</b>	<b>(0.0)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.7</b>	<b>0.0</b>	<b>(0.5)</b>	<b>0.0</b>	<b>3.8</b>	<b>3.3</b>	<b>12.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>12.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Effect of exchange rate on cash					0.0					0.0					0.0					0.0
<b>Net increase (decrease) in cash</b>	<b>(1.9)</b>	<b>(1.3)</b>	<b>(5.0)</b>	<b>(2.9)</b>	<b>(11.1)</b>	<b>(3.4)</b>	<b>(3.1)</b>	<b>(3.0)</b>	<b>1.5</b>	<b>(8.0)</b>	<b>9.9</b>	<b>(2.7)</b>	<b>(2.4)</b>	<b>(1.7)</b>	<b>3.2</b>	<b>(4.3)</b>	<b>(2.0)</b>	<b>(2.5)</b>	<b>(2.2)</b>	<b>(11.0)</b>
<b>Beginning cash and equivalents:</b>	<b>25.4</b>	<b>23.5</b>	<b>22.2</b>	<b>17.2</b>	<b>25.4</b>	<b>14.3</b>	<b>10.9</b>	<b>7.7</b>	<b>4.8</b>	<b>14.3</b>	<b>6.2</b>	<b>16.2</b>	<b>13.5</b>	<b>11.1</b>	<b>6.2</b>	<b>9.4</b>	<b>5.2</b>	<b>3.1</b>	<b>0.7</b>	<b>9.4</b>
<b>Ending cash and equivalents</b>	<b>23.5</b>	<b>22.2</b>	<b>17.2</b>	<b>14.3</b>	<b>14.3</b>	<b>10.9</b>	<b>7.7</b>	<b>4.8</b>	<b>6.2</b>	<b>6.2</b>	<b>16.2</b>	<b>13.5</b>	<b>11.1</b>	<b>9.4</b>	<b>9.4</b>	<b>5.2</b>	<b>3.1</b>	<b>0.7</b>	<b>(1.6)</b>	<b>(1.6)</b>

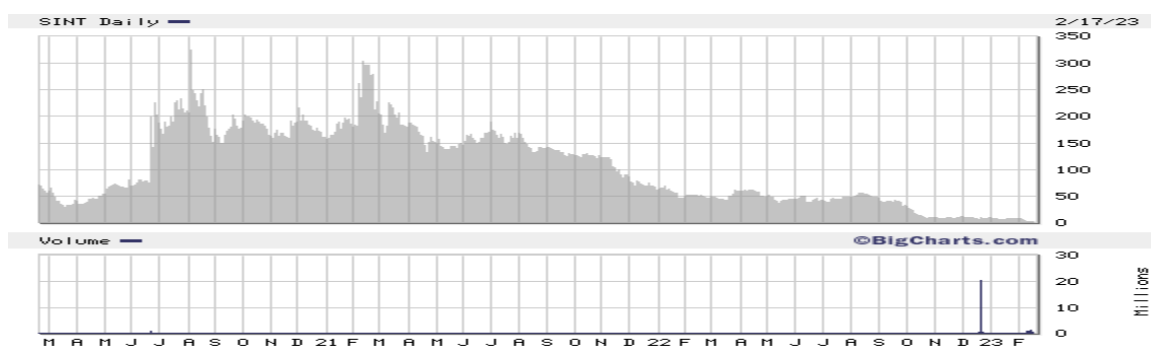
Source: Company reports and Ascendant Capital Markets estimates



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## SINTX Technologies, Inc.



Source: <https://bigcharts.marketwatch.com/>

Report	Report Date	Rating	Price Target
1	9/11/2019	Buy	300.00
2	11/15/2019	Buy	325.00
3	4/4/2020	Buy	250.00
4	5/16/2020	Buy	225.00
5	8/21/2020	Buy	400.00
6	11/21/2020	Buy	425.00
7	3/31/2021	Buy	450.00
8	5/21/2021	Buy	475.00
9	8/25/2021	Buy	450.00
10	11/16/2021	Buy	350.00
11	4/13/2022	Buy	325.00
12	6/1/2022	Buy	275.00
13	8/16/2022	Buy	250.00
14	11/18/2022	Buy	200.00

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### Ascendant Capital Markets, LLC Rating System

**BUY:** We expect the stock to provide a total return of 15% or more within a 12-month period.

**HOLD:** We expect the stock to provide a total return of negative 15% to positive 15% within a 12-month period.

**SELL:** We expect the stock to have a negative total return of more than 15% within a 12-month period.

Total return is defined as price appreciation plus dividend yield.

### Ascendant Capital Markets, LLC Distribution of Investment Ratings (as of January 15, 2023)

Rating	Count	Percent	Investment Banking Services Past 12 months	
			Count	Percent
Buy	44	98%	18	41%
Hold	0	0%	0	0%
Sell	1	2%	0	0%
Total	45	100%	18	40%

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