PitchBook

EMERGING TECH RESEARCH

Internet of Things (IoT)

H1 2021 VC Update

Report preview

The full report is available through the PitchBook Platform

Contents

H1 2021 timeline

IPO

March 18, 2021

Tuya Smart (NYSE: TUYA) sets a record for pure-play IoT VC exit value, debuting with a $11.8 billion valuation, highlighting the scale that smart home startups can achieve. Tuya is a smart home software platform vendor, justifying its SaaS multiple of 53.9x EV/forward revenue, as well as a smart home device reseller, which compresses its gross margin below that of a typical SaaS vendor. The company claims to be the largest IoT platform vendor globally by volume of connected devices given its partnerships with **Google** Home, **Amazon** Alexa, and **Samsung** SmartThings.

NEWS

May 12, 2021

The US government's Executive Order on Improving the Nation's Cybersecurity includes consumer IoT device security labeling criteria as part of its directive to the Secretary of Commerce.

M&A

June 1, 2021

Microsoft (NASDAQ: MSFT) acquires IoT security startup **ReFirm Labs**, its second IoT security acquisition in two years. The acquisition demonstrates the value of device-level security to information security incumbents.

NEWS

March 30, 2021

Arm debuts its v9 architecture, its first new architecture in 10 years. The CPU architecture includes innovations in confidential computing for security and ML efficiency. Processors built on this platform are intended to apply to IoT and 5G use cases running compressed ML algorithms.

NEWS

April 13, 2021

Project Connected Home Over IP (CHIP), a consortium of leading smart home device vendors and the Zigbee Alliance, announces that it will begin certifying devices against its smart home connectivity standard by the end of 2021. The standards organization has since been renamed Matter.

VC DEAL

June 23, 2021

Edge AI chip startup **Hailo** achieves unicorn status with a $100.0 million Series C at a 4.4x valuation step-up. The company has designed a chip to run AI inference with high energy efficiency on IoT devices. The round featured strategic investment from ABB Technology Ventures, NEC Corporation, and Latitude Ventures.

Timeline axis: Jan 1, Feb 1, Mar 1, Apr 1, May 1, Jun 1, Feb 1, Jul 1

H1 VC DEAL ACTIVITY

611
total deals

$10.9B
total raised

82.1%
half-over-half deal value growth

85.9%
YoY deal value growth

IoT VC ecosystem market map

Market map is a representative overview of venture-backed or growth-stage providers in each segment. Companies listed have received venture capital or other notable private investments.
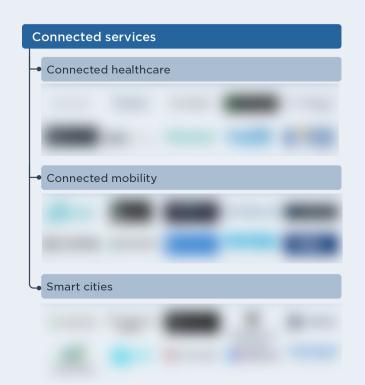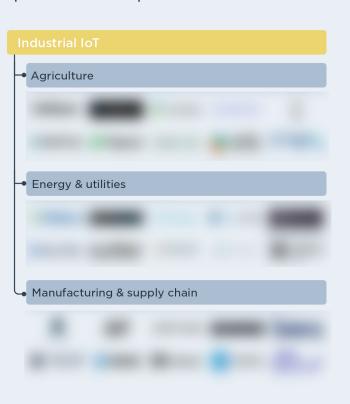
Hardware

Chipsets

Connectivity devices

Sensors & sensor systems

Connected buildings

Smart home

Commercial real estate

Smart retail

Networking

Network infrastructure

Next-gen networks

IoT VC ecosystem market map

Click to view interactive market map on the PitchBook platform

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Connected services

Connected healthcare

Connected mobility

Smart cities

Software

Application layer

Edge platforms

Middleware

IoT security

Industrial IoT

Agriculture

Energy & utilities

Manufacturing & supply chain

VC ACTIVITY

Figure 8.

Key IoT early-stage deals

COMPANY	CLOSE DATE	SEGMENT	SUBSEGMENT	DEAL SIZE ($M)*	DEAL TYPE	LEAD INVESTOR(S)	VALUATION STEP-UP
mIQroTech	June 22, 2021	Industrial IoT	Oil & gas process optimization	$10.0	Series A	New Page Capital	7.3x
Finite State	June 18, 2021	IoT software	IoT security platforms	$30.0	Series B	Energize Ventures	2.6x
Foundries.io	June 17, 2021	IoT software	Universal platforms (PaaS)	$8.0	Series A	IQ Capital Partners	N/A
oneNav	May 20, 2021	Connected services	Biometrics & wearables	$21.0	Series B	GV	2.6x
iWire Connect	May 16, 2021	IoT software	Connectivity solutions	$34.0	Series A	Noor Capital	N/A
Birdie	May 11, 2021	Connected services	Remote patient monitoring	$11.4	Series A	Index Ventures	1.4x
Tomahawk Robotics	April 15, 2021	IoT software	Application enablement	$10.0	Series A	Southeast Investor Group, Topmark Partners, Naples Technology Ventures	2.1x
Epicmems	March 10, 2021	IoT networking	5G	$46.4	Series A	IDG Capital	N/A
Kangaroo	January 24, 2021	IoT hardware	Sensors	$20.0	Series A	Growth Technology Partners, Context Ventures, Kishore Ganji	N/A
VDOO	January 13, 2021	IoT software	IoT security platforms	$57.0	Series B	GGV Capital, Celesta Capital, Verizon Ventures, Qumra Capital	2.0x

Source: PitchBook | Geography: Global | *As of June 30, 2021

Figure 9.

Key IoT late-stage deals

COMPANY	CLOSE DATE	SEGMENT	SUBSEGMENT	DEAL SIZE ($M)*	LEAD INVESTOR(S)	VALUATION STEP-UP
Sealed	June 24, 2021	Connected buildings	Smart home platforms & devices	$16.0	Fifth Wall, FootPrint Coalition	8.2x
Hailo	June 23, 2021	IoT hardware	System on chip	$100.0	Zohar Zisapel, OurCrowd, Delek Automotive Systems	4.4x
MachineMetrics	June 16, 2021	Industrial IoT	Manufacturing platforms & devices	$20.0	Teradyne	2.6x
Claroty	June 15, 2021	IoT software	IoT security platforms	$140.0	Bessemer Venture Partners, 40 North Ventures	N/A
MacroMeta	June 15, 2021	IoT software	Cloud services	$19.4	Pelion Venture Partners	3.2x
Andium	April 8, 2021	Industrial IoT	Machine visibility and monitoring for predictive maintenance	$15.0	OGCI Climate Investments	2.5x
Flex Logix Technologies	March 22, 2021	IoT hardware	System on chip	$55.0	Mithril Capital Management	2.4x
Tink	March 12, 2021	Connected buildings	Smart home platforms & devices	$48.2	Cadence Growth Capital	2.1x
SecuriThings	February 10, 2021	IoT software	IoT security platforms	$14.0	Aleph	2.4x
Horizon Robotics	January 7, 2021	IoT hardware	System on chip	$400.0	Yunfeng Capital, Baillie Gifford, Contemporary Amperex Technology, CPE Funds Management	N/A

Source: PitchBook | Geography: Global | *As of June 30, 2021

UPTAKE

Founded
2014

288 employees
in 6 offices globally

Total VC raised:
$293.0M

Last completed financing:
$117.0M in Series D

Lead investors:
Baillie Gifford, Valor Equity Partners, Revolution, and GreatPoint Ventures

Overview

Uptake is an industrial AI & IoT software company in the asset performance management (APM) market. The company's product suite includes operational technology (OT) data integration, preventive maintenance optimization, maintenance cost analysis, condition-based monitoring, and predictive analytics. The company also offers vertical products for fleet management, energy & utilities, and equipment dealers. This product suite is almost entirely cloud-native. The company went through several rounds of layoffs in 2018 and 2019 as it reset expectations around growth.

The company defends its market position with intellectual property. In 2018, **Uptake** acquired Asset Performance Technologies for its library of equipment failure modes. **Uptake** leverages this dataset to build digital twins that evolve over time with new data. We track 22 active patents for the company. These patents relate to data science for anomaly detection and factory monitoring but do not specify advanced AI techniques such as deep learning. Its patents also cover wind turbine anomaly detection specifically, suggesting the company has a competitive advantage in that industry.

Leadership

The company was co-founded by Groupon (NASDAQ: GRPN) co-founder Brad Keywell and Eric Lefkofsky. Keywell's non-industrial background has led to increased innovation in user experience. The company remains founder-led since its inception, leading to a focus on product development. Beyond the CEO role, the company has undergone executive turnover over the past three years. In Q3 2020, the company hired Kayne Grau as President. Grau formerly led automotive marketplace startup **DRIVIN** through an acquisition. The board of directors contains only investors, including multiple representatives of Revolution Growth. The board could benefit from increased industrials experience to improve commercial strategy.

Competitors

Uptake competes with asset performance management vendors including **AVEVA** (LON: AVV), **Aspen Technology** (NASDAQ: AZPN), **GE Digital**, **IBM** (NYSE: **IBM**), **SAP** (ETR: **SAP**), and **SAS**. Other APM solutions tend to be deployed primarily on-premises. APM vendors also benefit from installed bases of pre-existing IoT platforms and devices, creating a lock-in effect. **AVEVA**

About PitchBook Emerging Tech Research

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As the private markets continue to grow in complexity and competition, it's essential for investors to understand the industries, sectors and companies driving the asset class.

Our Emerging Tech Research provides detailed analysis of nascent tech sectors so you can better navigate the changing markets you operate in—and pursue new opportunities with confidence.

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