Startup Valuation Report

Yuri S Villas Boas

September 27, 2025

Executive Overview

This document presents a comprehensive valuation model for a Bitcoin security company operating an anonymous computation marketplace. The company (Mark) connects computation providers (Patrick) with clients (Charlie) through three revenue streams: platform fees from recurring computation services (28.00% take rate), one-time hardware sales for self-sovereign users, and branded merchandise that enhances brand loyalty and offsets customer acquisition costs. The model requires two funding rounds: a \$200,000 seed round for marketplace platform development, followed by a \$600,000 Series A for hardware development, projecting a path to \$7.00–8.00M valuation by Year 3.

1 Business Model: Two Revenue Streams + CAC Optimization

1.1 Revenue Stream Segmentation

- **Subscriptions:** Anonymous marketplace for recurring memory-intensive computation services

- **Hardware:** One-time purchase for technical users wanting self-sovereign security tools

- **Merchandise (CAC Offset):** Branded items (t-shirts, caps, mugs) sold at profitable margins to reduce customer acquisition costs

1.2 Subscription Service: Anonymous Computation Marketplace

The subscription service operates as a computation matchmaking marketplace connecting:

- **Charlie (Clients):** Users needing recurring memory-intensive computation without owning adequate hardware - anonymity critical for privacy

- **Patrick (Providers):** PC owners monetizing idle computational capacity - can operate publicly to attract clients

- **Mark (Marketplace):** Platform providing anonymous client matching, reputation system, and dispute arbitration

Key marketplace dynamics:

- Computation jobs are simple but memory-intensive, recurring weekly

- Anonymity is critical for Charlie, while Patrick can promote services openly

- Provider incentives drive viral growth as they recruit clients to increase revenue[1]

- First-mover advantage critical to build reputable user base before competitors

- Tiers differentiate by computation duration: 2, 24, 48, 168, and 336 hours

Table 1: Customer Segment Characteristics

Attribute	Subscription Users	Hardware Users
Technical Level	Low-Medium	High
Purchase Preference	Recurring	One-time
Price Sensitivity	Medium	Low
SAM Size	500,000[2, 3]	200,000[2, 3]
Merchandise Attach Rate	60.00%[4]	65.00%[4]

2 Enhanced Business Model with CAC Optimization

2.1 Subscription Pricing (Based on Computation Economics)

Table 2: Anonymous Computation Marketplace Economics

Tier	Hours	Charlie Price	Mix	Patrick Cost	Patrick GP	Mark Rev	Total Markup	Monthly Rev/User
Basic	2	1.00	35.00%	0.36	0.54	0.28	2.78x	0.35
Medium	24	18.00	40.00%	4.31	8.63	5.04	4.17x	7.20
Professional	48	42.00	15.00%	8.63	21.57	11.76	4.87x	6.30
Golden	168	210.00	9.00%	30.20	120.80	58.80	6.95x	18.90
Platinum	336	839.00	1.00%	60.40	543.59	234.92	13.89x	8.39
Weighted Avg			100.00%					41.14

Note: Patrick's costs based on 350 W @ $0.12/kWh, 4.28 runs/month. All values in USD/month.

2.2 Marketplace Economics Justification

The pricing structure reflects a progressive markup model:

- **Patrick's Progressive Markup (2.50–10.00x):**

  - Basic (2.50x): Lower margin for short jobs to encourage provider participation

  - Professional (3.50x): Premium for 48-hour commitment reflecting provider scarcity

  - Higher tiers (5.00–10.00x): Balanced markup for long-duration jobs

- **Mark's Platform Fee (28.00% of Charlie's payment):** Funds anonymous matchmaking infrastructure, reputation system maintenance, dispute resolution, and first-mover advantage consolidation

- **Economic Balance:** Progressive markups ensure provider incentives align with job commitment requirements while maintaining platform sustainability

2.3 Hardware Portfolio

Device	Retail (USD)	Margin (%)[5]	Mix (%)	GP/unit
Entry	500	40.00	60.00	200
Professional	1,000	45.00	30.00	450
Premium	2,000	50.00	10.00	1,000
Weighted Avg GP				355

2.4 Merchandise Economics (CAC Offset Strategy)

Product Category	Price (USD)	Margin (%)[6]	Profit/Unit
T-shirts	25.00	50.00	12.50
Caps/Hats	20.00	45.00	9.00
Mugs	15.00	55.00	8.25
Stickers/Decals	5.00	70.00	3.50
Hoodies/Coats	45.00	40.00	18.00
Backpacks	35.00	45.00	15.75
Average basket	28.00	48.00	13.44

60.00% of subscription customers purchase merchandise, reducing effective CAC by $8.06[4]

References

[1] Geoffrey G. Parker, Marshall W. Van Alstyne, and Sangeet Paul Choudary. *Platform Revolution: How Networked Markets Are Transforming the Economy and How to Make Them Work for You.* W. W. Norton and Company, 2016. ISBN: 978-0393249132.

[2] Chainalysis. *The 2024 Geography of Cryptocurrency Report.* Chainalysis Inc., 2024. URL: https://go.chainalysis.com/geography-of-crypto-2024.html.

[3] Triple-A. *Global Crypto Ownership Data.* Triple-A, 2023. URL: https://triple-a.io/crypto-ownership-data/.

[4] Shopify. *Future of Commerce Report 2024.* Shopify Inc., 2024. URL: https://www.shopify.com/research/future-of-commerce.

[5] Industry Analysis. *Hardware Security Device Margins: Industry Benchmarks.* Tech. rep. Internal analysis based on public financial reports. Industry Research Group, 2024.

[6] Printful. *How to Calculate Profit Margins for Print Products.* 2023. URL: https://www.printful.com/blog/printful-pricing.

[7] Market Analysis Team. *Customer Acquisition Cost Estimates.* Tech. rep. Based on industry benchmarks from multiple sources. Internal Research, 2024.

[8] Harvard Business School. "Airbnb: A Case Study in Building a Two-Sided Marketplace". In: *HBS Case Collection* (2016). Case 9-816-080.

[9] V. Kumar, J. Andrew Petersen, and Robert P. Leone. "How Valuable Is Word of Mouth?" In: *Harvard Business Review* 85.10 (2007), pp. 139–146.

[10] NFX. *The Network Effects Bible: 13 Different Network Effects and How They Work*. NFX, 2018. URL: https://www.nfx.com/post/network-effects-bible.

[11] CB Insights. *The Platform Economy: How Online Marketplaces Are Changing Business*. CB Insights, 2021. URL: https://www.cbinsights.com/research/platform-economy-marketplace-business-model/.

[12] Recurly Research. *2024 Subscription Industry Report: Churn Benchmarks*. Recurly, 2024. URL: https://info.recurly.com/research/churn-rate-benchmarks.

[13] High Alpha and OpenView. *2024 SaaS Benchmarks Report*. Tech. rep. High Alpha, 2024. URL: https://www.highalpha.com/2024-saas-benchmarks-report.

[14] OpenView. *2023 SaaS Benchmarks Report*. Tech. rep. OpenView Venture Partners, 2023. URL: https://openviewpartners.com/2023-saas-benchmarks-report/.

[15] Y Combinator. *YC for Hardware*. 2022. URL: https://www.ycombinator.com/blog/yc-for-hardware.