

## 阿里巴巴 Alibaba (BABA US)

云栖大会 2024: 发布开源大模型通义 Qwen2.5, AI 应用进一步走向商业化

### ASPARA2024: Open-sourced LLM Qwen2.5 Launched, Enabling AI Applications to be Further Commercialized

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热点速评 Flash Analysis

(Please see APPENDIX 1 for English summary)

#### 事件

2024年9月19-21日,以“云启智跃,产业蝶变”为主题的2024云栖大会在浙江杭州云栖小镇开幕。大会为期3天,吸引大模型、自动驾驶、机器人等领域的400多家国内外企业来到现场,是AI硬科技内容最多的一次云栖大会。除了主论坛的圆桌论坛,大会还设置人工智能+、计算、前沿应用三大主题馆,全景式展示最新技术形态与产品,探索AI从科技前沿到提升生产效率、打造美好生活的應用前景。

#### 点评

**阿里加速 AI 方面的投入,定位并建设面向 AI 时代全方位基础设施供应体系。**阿里巴巴集团 CEO、阿里云智能集团董事长兼 CEO 吴泳铭发表演讲,认为 AI 行业在过去 22 个月中发展迅猛,但对于 AGI 而言仍处于行业早期。并预言生成式 AI 最大的想象力,绝不是在手机屏幕上做一两个新的超级 app,而是接管数字世界,改变物理世界。同时阿里更新了针对 AI 时代建设全面适应于未来的基础设施生态的相关进展:再次强调针对 AI 需求而调整的 IaaS, PaaS, MaaS 的业务模式,打造从服务器、网络、存储到容器、AI 平台、数据湖、数据库以及安全保障的全产业链基础设施;另外也发表了 AI 模型和应用更新,从通义千问、通义万相、通义灵码、到实时记录、阅读助手、AI 翻译、阿里云百炼以及魔搭社区等。

**阿里通义千问发布 Qwen2.5 大模型并开源,性能大幅提升并增配适合手机应用的 3B, 14B 等版本。**CTO 周靖人宣布:通义千问发布新一代开源模型 Qwen2.5, 开源旗舰模型 Qwen2.5-72B 性能超越 Llama 3.1-405B; 通义旗舰模型 Qwen-Max 全方位升级,性能已经逼近 GPT-4o。今年6月通义千问 Qwen2.0 已率先开源,累计下载超 4000 万次,在 HuggingFace 上排名开源预训练模型全球第一,并在全球衍生出 5 万余种衍生模型,超越 Mistral, 全球排名第二仅次于 Meta Llama。本次发布的 Qwen2.5 版本的预训练数据量超 18 万亿 token, 128k 输入和 8k 输出的 context, 可撰写万字报告,并大幅增强指令遵循能力以及数学和编程的能力。Qwen2.5 适配了 0.5B, 1.5B, 3B, 7B, 14B, 32B 和 72B 等不同尺寸模型,适用于不同终端,并且支持 29 种语言。同时阿里云百炼平台可以有效结合模型能力以及调用企业数据,提供商业级的 AI 辅助赋能平台。

Qwen2.5 系列是一个超级 AI 模型「百宝箱」,涵盖了多个尺寸的大语言模型、多模态模型、数学模型和代码模型。每个尺寸都有基础版本、指令跟随版本和量化版本,总计上架了 100 多个模型,刷新了业界纪录。在语言模型方面, Qwen2.5 开源了 7 个尺寸: 0.5B、1.5B、3B、7B、14B、32B、72B, 每个都在同等参数赛道创造了业界最佳成绩。所有 Qwen2.5 系列模型都在 18 万亿 (18T) tokens 的数据上进行了预训练。相比 Qwen2, 整体性能提升了 18% 以上,拥有更多的知识、更强的编程和数学能力。旗舰模型 Qwen2.5-72B 在 MMLU-redux (通用知识)、MBPP (代码能力) 和 MATH (数学能力) 等基准测试中,分别取得了 86.8、88.2、83.1 的高分。72B 作为 Qwen2.5 系列的旗舰模型,在多个核心任务上,以不到 1/5 的参数超越了拥有 4050 亿巨量参数的 Llama3.1-405B。

**算力方面,新型 AI 服务器架构磐久 Infra 2.0, 阿里云灵骏集群可支持 10 万卡级别算力规模。**基于全新的 CIPU2.0, 阿里云在会上推出磐久 AI 服务器 Infra 2.0, 实现单机 16 卡、显存 1.5T 以上,支持 Solar RDMA 互联。该架构采用超钛金电源实现 97% 以上的高能效,并可通过 AI 算法预测 GPU 故障,准确率达 92%,保障 AI 算力的性能和稳定性。在存储方面,阿里云并行文件存储 CPFS 实现端到端全链路性能提升,单客户端吞吐达 25GB/s,高性能数据流动达到 100GB/s,为 AI 智算提供指数级扩展存储能力。通过底层计算、存储、网络等基础设施的升级,阿里云灵骏集群

可提供超大规模、超强性能的智能算力，万卡规模性能线性度超过 96%，并行存储吞吐 20TB/s，万卡规模下网络带宽利用率超过 99%，可支持单集群十万卡级别 AI 算力规模。

**阿里云百炼平台上的三款通义千问主力模型再次降价，最高降幅 85%。**继 5 月首次大幅降价后，阿里云百炼平台上的 3 款通义千问主力模型再次降价，为了让企业和开发者以低成本的方式用上大模型。Qwen-Turbo 价格直降 85%，低至百万 tokens 0.3 元，Qwen-Plus 和 Qwen-Max 分别再降价 80%和 50%。在能力上，Qwen-Plus 推理能力追平 GPT4，可应用于复杂任务，比同等规模较行业价格低 84%，具备行业最高等级产品性价比。“百模大战”时代在探索产业应用的同时，有可能延续云时代的价格战的竞争趋势。

**大会邀请英伟达、月之暗面、清华大学等产学研领袖共同探讨 AI 未来发张方向。**大会认为过去 18 个月 AI 的发展和突破是在不断加速的，从年初 2 月的 Sora 到年中的 GPT-4o 到刚刚发布的 GPT-o1，都反应了生成式 AI 能力已经不仅仅局限在语言类模型和对下一个 token 的猜测，而是泛化到多模态领域，尤其是 o1 更是在数学和科学等需要强逻辑关系推理的领域能力从去年的小学生水平快速发展到目前的博士生水平。面向未来，月之暗面认为 AI 的发展将持续加速，一方面纵向语言类大模型的能力将进一步提高，另一方面横向将泛化到其他多模态领域。

**AI 赋能行业应用方面阿里联合行业伙伴不断探索，自动驾驶、机器人、医疗等行业的应用案例和潜力均有涉及。**论坛中小鹏汽车创始人何小鹏携“全球首款 AI 汽车”P7+亮相，并提出“端到端四部曲”的目标，即采用 AI 大模型实现 2 日进化一版，在 L2 级别智能驾驶的硬件基础上实现 L3+ 级别的用户体验，目前小鹏 P7+仅处于第一步，即实现大模型端到端上车，在全国的城区范围内实现 100% 无图智驾。小鹏汽车早在 2022 年就携手阿里云建设自动驾驶智算中心，近两年阿里云帮助小鹏将其算力扩张超 4 倍至 2.51Eflops。本次大会阿里联合英伟达共同发布智驾解决方案，阿里千问大模型搭载到英伟达 Drive AGX Orin 平台，实现“驾算一体”的解决方案。尽管这项合作刚刚开始，且未来上车仍有较长的时间，这样的纯第三方的端到端模型对 AI 能力欠缺的车企仍不失为一种快速搭载和追赶智驾能力的选择，成为百度自动驾驶有力的竞争对手，但由于车企参与度尚不明确，仍有待观察。未来阿里将持续赋能自动驾驶，并在机器人及其他可移动产品领域同行业伙伴合作，打造面向未来 AI 应用的基础设施。

此外，在医疗领域，百川智能展示出了通用医疗增强大模型与内测版医疗应用“AI 健康顾问”。在未来医疗模型的发展路径上，百川智能提出了从 AI 健康顾问到生命大模型的完整技术发展路线，涵盖了从辅助诊断到 AGI 的各个阶段。在教育领域，精准学发布和展示了公司首个超拟人一对一 AI 老师。基于通义千问的基础大模型，结合精准学独有的私有数据，精准学团队成功训练出了专注于教育领域的垂直大模型——“心流大模型”，同时，团队面向学科知识教学优化了语音识别与语音合成技术。

## 风险

AI 商业化发展不及预期，产业应用合作不及预期，算力供给不足，行业竞争加剧。

图 2 HPN7.0 高性能网络利用双层结构支持 AI 业务需求



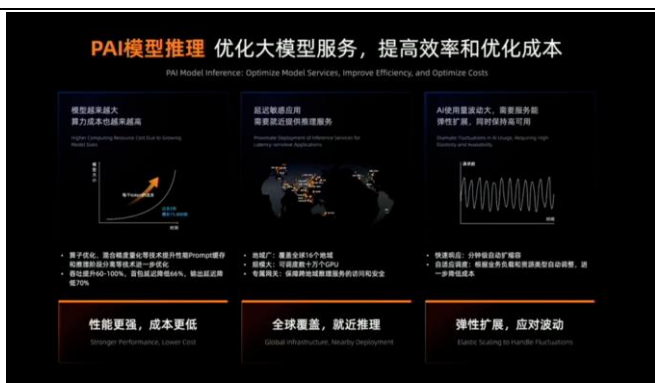
资料来源：云栖大会 2024 官网，海通国际

图4 容器提升大规模调度和“热调整”能力



资料来源：云栖大会 2024 官网，海通国际

图 6 PAI 模型推理平台降低成本服务应用



资料来源：云栖大会 2024 官网，海通国际



图 7 PAI Service: 灵活高效的 AI 训练推理平台



资料来源：云栖大会 2024 官网，海通国际

图 8 多模数据湖: OpenLake 数据处理解决方案



资料来源：云栖大会 2024 官网，海通国际

图 9 多模态数据库适配 AI 业务需求



资料来源：云栖大会 2024 官网，海通国际

图 10 构建大模型全生命周期的安全保障



资料来源：云栖大会 2024 官网，海通国际

图 11 通义模型大家族



资料来源：云栖大会 2024 官网，海通国际

图 12 开源语言模型 Qwen2 全球第二，仅次于 Meta Llama



资料来源：云栖大会 2024 官网，海通国际



## APPENDIX 1

### Summary

On September 19-21, 2024, the 2024 Apsara Conference with the theme of “Cloud Enlightenment and Intelligent Leap, Industrial Butterfly Transformation” opened in Hangzhou, Zhejiang Province. The conference lasted three days, attracting more than 400 domestic and foreign enterprises in the fields of large models, automatic driving, robotics and other fields to the scene, which is the most hard-core AI technology content of the Aspara Conference. In addition to the roundtable forum of the main forum, the conference also set up three major theme pavilions of AI+, computing, and cutting-edge applications, panoramic display of the latest technology forms and products, and exploration of AI from the forefront of science and technology to enhance productivity and create the prospect of application of a better life.

## 附录 APPENDIX

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**优于大市**，未来 12-18 个月内预期相对基准指数涨幅在 10%以上，基准定义如下

**中性**，未来 12-18 个月内预期相对基准指数变化不大，基准定义如下。根据 FINRA/NYSE 的评级分布规则，我们会将中性评级划入持有这一类别。

**弱于大市**，未来 12-18 个月内预期相对基准指数跌幅在 10%以上，基准定义如下

各地股票基准指数：日本 – TOPIX, 韩国 – KOSPI, 台湾 – TAIEX, 印度 – Nifty100, 美国 – SP500; 其他所有中国概念股 – MSCI China.

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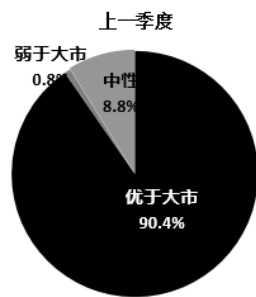
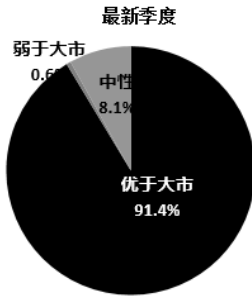
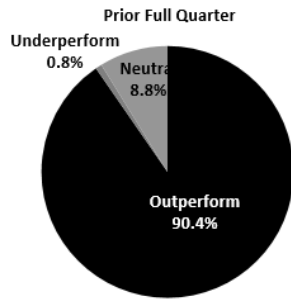
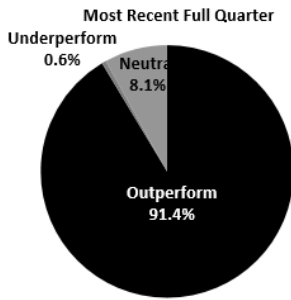
Analyst Stock Ratings

**Outperform:** The stock's total return over the next 12-18 months is expected to exceed the return of its relevant broad market benchmark, as indicated below.

**Neutral:** The stock's total return over the next 12-18 months is expected to be in line with the return of its relevant broad market benchmark, as indicated below. For purposes only of FINRA/NYSE ratings distribution rules, our Neutral rating falls into a hold rating category.

**Underperform:** The stock's total return over the next 12-18 months is expected to be below the return of its relevant broad market benchmark, as indicated below.

**Benchmarks for each stock's listed region are as follows:** Japan – TOPIX, Korea – KOSPI, Taiwan – TAIEX, India – Nifty100, US – SP500; for all other China-concept stocks – MSCI China.



截至 2024 年 6 月 30 日海通国际股票研究评级分布

	优于大市	中性 (持有)	弱于大市
海通国际股票研究覆盖率	91.4%	8.1%	0.6%
投资银行客户*	3.1%	4.8%	0.0%

\*在每个评级类别里投资银行客户所占的百分比。

上述分布中的买入，中性和卖出分别对应我们当前优于大市，中性和落后大市评级。

只有根据 FINRA/NYSE 的评级分布规则，我们才将中性评级划入持有这一类别。请注意在上表中不包含非评级的股票。

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中性，未来 12-18 个月内预期相对基准指数变化不大，基准定义如下。根据 FINRA/NYSE 的评级分布规则，我们会将中性评级划入持有这一类别。

卖出，未来 12-18 个月内预期相对基准指数跌幅在 10%以上，基准定义如下

各地股票基准指数：日本 – TOPIX, 韩国 – KOSPI, 台湾 – TAIEX, 印度 – Nifty100; 其他所有中国概念股 – MSCI China.

Haitong International Equity Research Ratings Distribution, as of June 30, 2024

	Outperform	Neutral (hold)	Underperform
HTI Equity Research Coverage	91.4%	8.1%	0.6%
IB clients*	3.1%	4.8%	0.0%

\*Percentage of investment banking clients in each rating category.

BUY, Neutral, and SELL in the above distribution correspond to our current ratings of Outperform, Neutral, and Underperform.

For purposes only of FINRA/NYSE ratings distribution rules, our Neutral rating falls into a hold rating category. Please note that stocks with an NR designation are not included in the table above.

Previous rating system definitions (until 30 Jun 2020):

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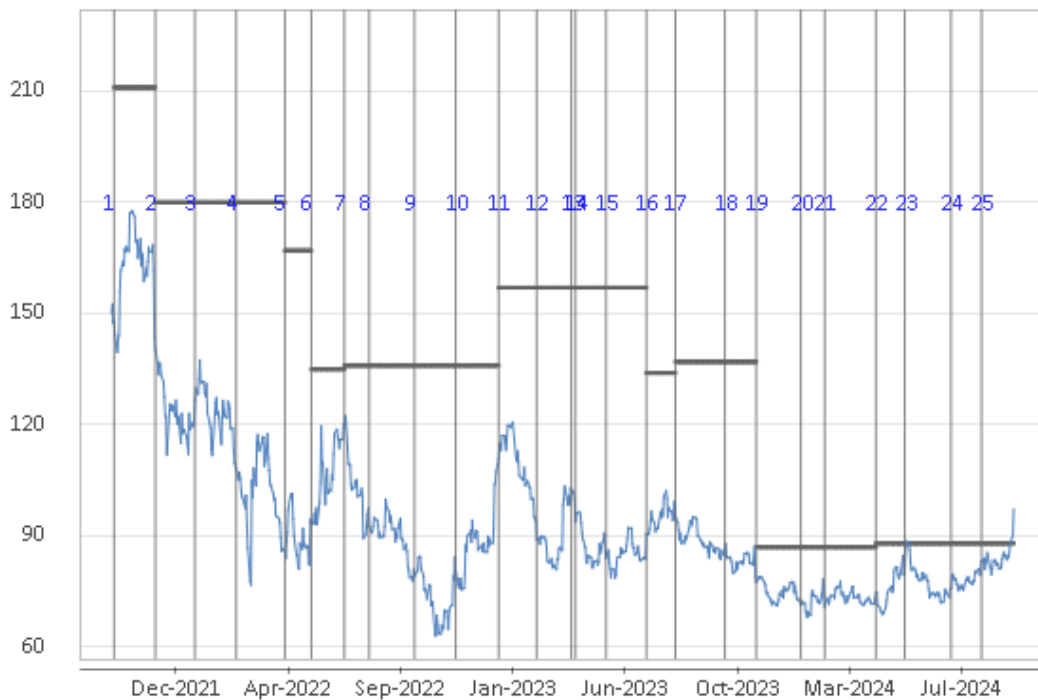
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## Alibaba - BABA US



1. 30 Sep 2021 OUTPERFORM at 152.39 target 211.00.
2. 19 Nov 2021 OUTPERFORM at 161.58 target 180.00.
3. 6 Jan 2022 OUTPERFORM at 121.16 target 180.00.
4. 25 Feb 2022 OUTPERFORM at 109.72 target 180.00.
5. 25 Apr 2022 OUTPERFORM at 86.49 target 167.00.
6. 27 May 2022 OUTPERFORM at 82.31 target 135.00.
7. 6 Jul 2022 OUTPERFORM at 120.13 target 136.00.
8. 5 Aug 2022 OUTPERFORM at 95.72 target 136.00.
9. 29 Sep 2022 OUTPERFORM at 80.99 target 136.00.
10. 18 Nov 2022 OUTPERFORM at 78.16 target 136.00.
11. 9 Jan 2023 OUTPERFORM at 107.40 target 157.00.
12. 24 Feb 2023 OUTPERFORM at 94.78 target 157.00.
13. 7 Apr 2023 OUTPERFORM at 102.74 target 157.00.
14. 12 Apr 2023 OUTPERFORM at 93.84 target 157.00.
15. 19 May 2023 OUTPERFORM at 90.68 target 157.00.
16. 7 Jul 2023 OUTPERFORM at 84.30 target 134.00.
17. 11 Aug 2023 OUTPERFORM at 94.85 target 137.00.
18. 10 Oct 2023 OUTPERFORM at 86.06 target 137.00.
19. 17 Nov 2023 NEUTRAL at 87.07 target 87.00.
20. 10 Jan 2024 NEUTRAL at 72.88 target 87.00.
21. 8 Feb 2024 NEUTRAL at 78.23 target 87.00.
22. 10 Apr 2024 OUTPERFORM at 72.99 target 88.00.
23. 15 May 2024 OUTPERFORM at 79.51 target 88.00.
24. 10 Jul 2024 OUTPERFORM at 75.70 target 88.00.
25. 16 Aug 2024 OUTPERFORM at 79.47 target 88.00.