



Global Data Center Solutions



Telehouse Interconnect

- The home of the connected world -

We bring together thousands of partners creating new business opportunities for you now and in the future.

Over 30 years of delivering

- market leading data centers
- highly reliable global networks
- cutting-edge security standards
- and excellence in customer service

Contents

The Data Center Solution Suite	4
Telehouse: Strength in Numbers	6
Global History	8
Telehouse Colocation: A Secure Community	10
Telehouse Global Standards and Remote Managed Services	12
Domestic and Global Connectivity Services	14
Managed Solutions	16
Global Map	18
Testimonials: What our customers think	20
Environmental and Social Responsibility	22
KDDI: Where Connectivity and Innovation Meet	24
Request a Site Tour	26

The Data Center Solution Suite

Five layers of services enabling fully outsourced end-to-end data center management.



Domestic and Global Network Services

Providing you access to over 750 carriers and ISPs and global networks reaching over 190 countries enabling a truly global presence.

- IP Connectivity
- International Private Leased Circuits
- Global IP VPN
- Global Internet Exchanges



Content Delivery Networks

Built to deliver big data loads across the globe within milliseconds maximizing customer experience.

- 200+ Global Points
- Content Acceleration
- Media Acceleration
- Cloud DNS



Security Services

State-of-the-art security services designed for business-critical systems protecting from external threats, enabling a secure mobile workforce.

- Managed Firewalls
- Managed Intrusion Detection Prevention Systems
- SSL-VPN



Virtual Data Center & Cloud Services

Hosted from within our facilities, migrate your applications from physical to virtual infrastructure enabling you to scale dynamically with your business needs.

- Virtual servers and storage
- Virtual backup
- Virtual desktops
- Software-as-a-Service Portfolio



Managed Data Center Services

At the core of your infrastructure, our Tier 3 colocation racks ensure your business is on the most reliable platform supported by a team of experts.

- 48 Global Data Center Sites
- 24/7 remote hands
- Hardware supply and migration
- System monitoring
- Managed cross connects
- Infrastructure Automation Management

Connecting to the world through our global networks



Telehouse: Strength in Numbers

The fast facts that count when selecting your data center partner:

30 Years

Telehouse originally pioneered the business of collocated data centers in 1989, housing business-critical IT systems for over 30 years.

99.999% Uptime

All our new facilities provide a Global SLA of 99.999% power availability and 99.99% on temperature.

5,500 Minds

With over 5,500 employees in our global sector we are continuously looking at ways to improve our service and provide you with the best infrastructure solution.

750+ Carriers/ISPs

Our Telehouse data centers provide direct access to over 750 carriers and ISPs with further interconnection to some of the world's leading internet exchanges.

20 MVA

Telehouse employs and operates sophisticated power distribution systems for resilience, plus state-of-the-art cooling and building management systems. At an average 20MVA per data center our facilities are large enough to cope with the most demanding technology.

30+ Services

The partnership between KDDI and Telehouse means we have a wealth of expertise and services to provide customized data center proposals with over 30 managed services supporting our infrastructure solutions.

447,000 sqm

We keep up with our customer's rate of growth; space provisioning ranges from half a rack to large dedicated suites. With over 447,000 sqm of data center space, Telehouse has room for even the most dynamic growth.

48 Sites

Telehouse has 48 data center sites in 13 countries and territories and 24 major cities around the world.

3,000 Customers

Over 3,000 companies occupy our network-rich data centers providing access points to the financial, cloud, IT and consumer markets.

5 Major Hubs

Telehouse manage 5 major internet hubs across the world in New York, London, Paris, Frankfurt, and Tokyo critical to routing global traffic.

Telehouse Interconnect

Telehouse Interconnect, the home of the connected world, brings together more than 3,000 business partners, including Carriers, Mobile and Content Providers, Enterprises and Financial services companies. This makes Telehouse a unique place to create business opportunities, now and in the future.

Cloud Interconnect

Telehouse enables many of the world's largest private and public cloud service providers to connect seamlessly and securely to end users. It offers Enterprises secure, low-latency, and cost effective connections to cloud services within our data centers.

Carrier Interconnect

Our connectivity with 750+ partners – including leading global Internet Exchanges and Tier 1 carriers – makes us the ideal choice for companies that cannot compromise on latency.

Global History

1989:

First Telehouse data center is established in New York, USA and becomes operational.

1990:

Telehouse opens Europe's first purpose built colocation facility in London Docklands - Telehouse North.

1994:

Telehouse North becomes the home of the London Internet Exchange.

1996:

Telehouse launches its first data center in Paris with Telehouse Jeûneurs. Telehouse New York establishes the New York International Internet Exchange.

1998:

Telehouse Los Angeles opens for business.

1999:

Telehouse East opens as the third facility in London and Voltaire opens in Paris.

2000:

Telehouse expands in Asia in Hong Kong and Seoul, Korea.

2008:

Telehouse Singapore and Telehouse Beijing open for business.

2009:

Telehouse opens third facility in France, Magny Les Hameux in outer Paris and Cape Town in South Africa.

2010:

Telehouse opens its fourth facility in London, Telehouse West. Also open in Johannesburg, South Africa, Hanoi in Vietnam and Shanghai in China.

2011:

Telehouse opens Chelsea facility in New York, a second facility in Hong Kong and expands in Istanbul.

2012:

Telehouse expands in Europe with Frankfurt and Moscow.

2013:

Telehouse further expands in China with second facilities in Beijing and Shanghai.

2015:

Telehouse launches its second data center in Osaka.

2016:

Telehouse launches its fifth data center in London and third in Tama, Tokyo.

Telehouse Colocation: A Secure Community

At Telehouse, colocation means locating off-site in the most protected environments, amongst the world's leading financial platforms, content delivery networks, internet exchange points, cloud hubs, telecommunication providers and professional services. Our network-rich facilities guarantee you 99.999% uptime with 24x7x365 remote hands support.



Shared Colocation

Three levels of privacy

Shared Colocation

Designed for customers who need limited rack presence and power feed. This is the most affordable option with fast deployment and installation. Customers can bring their own rack into the open space (where available) or utilize our 42U securely locked, fully ventilated cabinets.

Caged Colocation

Suited to the customer with more business-critical infrastructure, our caged colocation service enables you to license a secure area of our data center rooms. Built with highly resilient steel mesh frames and lockable doors, customers can customize their space dimensions. Our teams will work closely with you to ensure the most efficient layout, cabling and power delivery.

Dedicated Suite Colocation

Our dedicated suites feature even higher levels of privacy and security as required by certain business-critical systems. These are provided in fully enclosed, solid partitioned areas within our data center facilities. Many suites are purpose-built to provide high density rack hosting and cold aisle containment.



Caged Colocation



A Customized Fit-Out

High Density Rack Hosting

- High level of power feeds to our data centers enables high density racks
- Confidently collocate blade servers and high performance hardware
- Diverse cooling capabilities ensure racks are managed cost-effectively
- Scale up to 10kVA per rack and above

Cold Aisle Containment

- Hot and cold aisle containment is built into many of our facilities
- Reduces energy usage and excess carbon footprint
- Prevents hot air recirculation and cold air bypass
- Proven to offer 5 times longer ride-through time during cooling failure than without it

Disaster Recovery

- Backup mission-critical applications and storage with a second data center site
- Low latency between our data centers, ideal for reducing downtime and instantaneous restoration
- Multiple carriers provide diverse routing and full network redundancy

High Density Dedicated Suites

Telehouse Global Standards and Remote Managed Services

The Telehouse global data center standards ensure that regardless of where you locate your infrastructure with us, you will receive the same level of high specification and excellent customer service. In addition to Tier 3 performance standards, we have over 300 items of technical specifications which our purpose built facilities abide by.

Here are key representative specifications of our data centers:

Facilities

- Built and located in low risk areas
- With convenient access to major transport modes
- Meet or exceed local building codes for seismic design for earthquake proof construction

- Multi-zoned, Inergen-gas fire suppression with Very Early Smoke Detection and Alarm (VESDA)
- Built above sea level with flood control features and water leakage detection systems
- Height of finished floor to ceiling from 2,800mm to 3,500mm for high density areas
- Raised floor height for airflow and cabling from 600mm to 1,200mm for high density areas

Power and Cooling

- Power to racks from as little as 2kVA to high density hosting options
- Dual routed power feed supply to our data centers
- Minimum N+1 generators with long-running time autonomy with short refueling times
- Minimum N+1 redundant UPS with battery supply
- Minimum air conditioning redundancy at N+1 configuration for CRAC units and UPS distribution

Security and Access

- ISO 27001 (Information Security Management Standard) or SSAE 16 certified
- 24x7x365 on-site personnel security guards with on-site control center
- Internal and external CCTV surveillance cameras with audit logs
- Independent client card identification system
- Centralized monitoring BMS (Building Management System) in place for fast response and reporting



Generators



UPS Batteries



Remote hands support

Migration and Hardware Supply:

We can manage the migration of your data systems from your current infrastructure to our data centers in a seamless and secure transition. Telehouse have global OEM partnerships with a number of leading hardware manufacturers enabling us to provide you cutting-edge hardware at affordable prices.

- For customers with international operations Telehouse can set up a local IT infrastructure
- Including provisioning, installation, configuration and ongoing maintenance
- We can provide future upgrades to ensure optimum performance

Remote Hands

We provide a highly skilled and experienced team of support engineers operating 24x7x365. Standard remote hands include:

1. Check alarm status on customer equipment and provide fault investigation where required.
2. Investigate faults on customer circuits supplied by Telehouse which includes full end-to-end test and repair where applicable.
3. Change out of faulty equipment peripherals such as network cards, power supply units, hard disks, memory, etc. and replacement.
4. Perform equipment resets/reboots at the request of the customer.
5. Investigate localized customer network issues when notified by the customer.
6. On-site support for equipment and circuit installations at the customer's location.

Managed Cross-Connects:

- Interconnect your cabinet directly to a diverse community of trading exchange platforms, cloud and content providers, Internet exchanges, carriers and Internet service providers.
- Telehouse cabling engineers are highly trained in the installation, repair and removal of customer cabling infrastructure delivering quick turnaround times.
- Choose from CAT5, CAT6, Single-Mode Fiber and Multi-Mode Fiber along with many other available options.

System Monitoring:

Telehouse customers have the ability to pro-actively monitor device response time, packet loss, memory usage and a wide range of other metrics.

A powerful, web-based, managed device monitoring service, requiring no proprietary software installation with email and SMS alerts.

Domestic and Global Connectivity Services

Connect your business across the globe securely and efficiently. With access to our internet exchanges, 750+ carriers and ISPs, low-latency cables and our content delivery networks, our customers are connected to perform at their best.

Global Internet Exchanges

Here is a select few of the internet exchanges hosted in our data centers that we can connect you to. Speak to our team to ask about any others not listed below:

- LINX - London Internet Exchange
- LONAP - London Network Access Point
- France-IX - France Internet Exchange
- SFINX - Service for French Internet Exchange
- DE-CIX- Deutscher Commercial Internet Exchange
- NAPAfrica - South Africa Internet Exchange
- NYIIX - New York International Internet Exchange
- LAIIX - Los Angeles International Internet Exchange
- JPIX - Japan Internet Exchange

IP Connectivity

A fast, flexible and failsafe route to the internet with burst-to-port capability, the Telehouse IP Transit is a multi-homed backbone network supported by several Tier 1 telecom providers including multiple levels of network redundancy, server load balancing and firewall protection .

Bandwidth services are offered ranging from 10Mbps to 10Gbps depending on your needs.

Features include:

- Fast Ethernet, Gigabit Ethernet or 10 Gigabit Ethernet interface
- Option for BGP routing
- Primary/Secondary DNS
- IP address allocation
- Stringent SLAs with fixed or usage based billing

International Private Leased Circuits

KDDI is known for industry leading quality assurance and maintenance of its vast global networks. With state-of-the-art fiber optic cables around the world and the ability to acquire affordable network capacity, KDDI becomes the ideal one point of contact for your data center and network architecture.

With network reach in over 190 countries, KDDI provides fully managed networks for Euro-Asia links, Pan-European networks, Transatlantic and Transpacific links and East Asia networks.

Global IP-VPN

We offer a fully scalable end-to-end international IP-VPN service which enables customers with international subsidiaries to easily build full-mesh global networks.

- Access the highly secure and seamless KDDI Global IP-VPN network from over 190 countries
- Fully interconnect securely whether your employees are located globally, nationally or locally
- The KDDI IP-VPN solution is cost effective as it avoids the multiple private circuits needed to build a private network
- Available at all Telehouse data centers

Content Delivery Networks

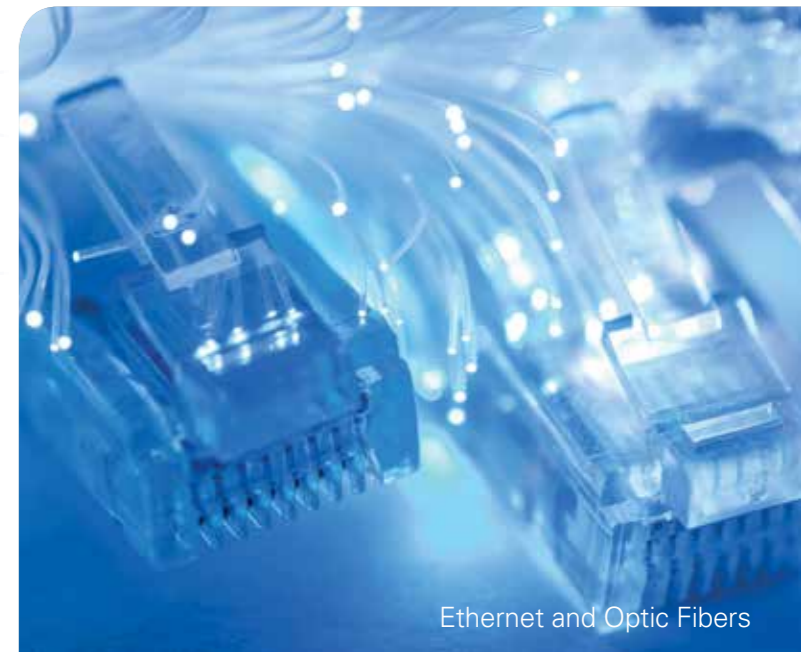
CDNetworks, a subsidiary of KDDI, is the only multinational content delivery network with local expertise and infrastructure on six continents, including China and Russia.

- Delivers massive amounts of traffic for over 40,000 websites every day including the world's leading household names.
- Enables customers to reduce their annual CDN costs.
- Reaches over 99% of the world within a few milliseconds.



Services include:

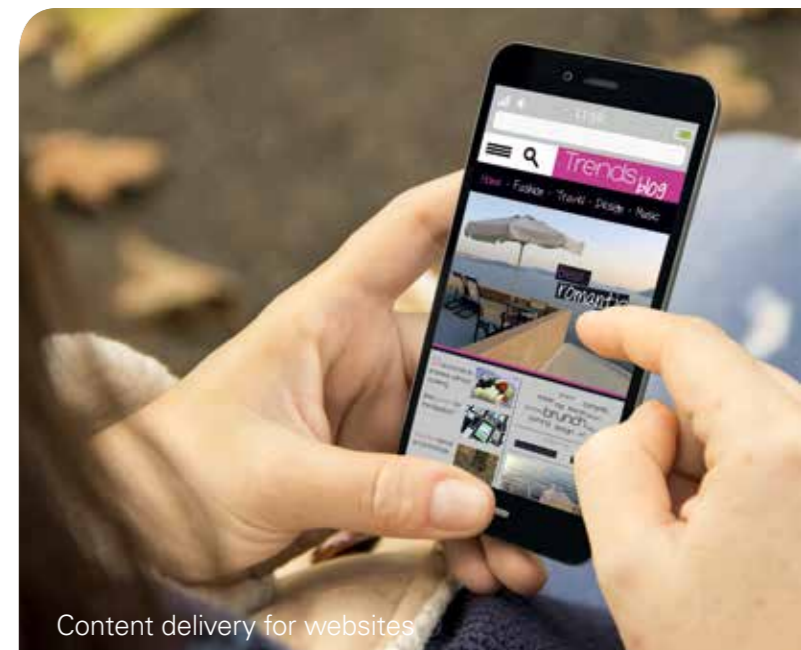
- Content Acceleration - experience vast improvement in speed, stability and reliability of websites by delivering static (cacheable) content (images, movies, flash, etc.), using edge servers located in more than 100 cities worldwide.
- Media Acceleration - latest media delivery technologies enabling customers to provide an outstanding online experience especially through video-on-demand acceleration.
- Cloud Security – DDoS protection through a combination of 200+ global PoP locations, our Anycast DNS methodology and DDoS absorption infrastructure automatically inspect and clean traffic.



Ethernet and Optic Fibers



KDDI Pacific cable ship



Content delivery for websites

Managed Solutions

Our customers trust us to support their hosting environment, connectivity, virtual migration, delivery and security of their business-critical data.

Speak to our consultants to discuss how we can develop a seamless and secure end-to-end infrastructure for your growing business.

Data Center Automation Management

A cutting-edge management and automation system which can monitor over 10,000 possible characteristics within an infrastructure. Benefit from:

- Automated remediation for level 1 and level 2 incidents
- Proactive detection and alerting for potential capacity related issues
- Capacity Planning and Performance Tuning
- Reduction in the use of IT resources and quicker recovery time

Project Management

KDDI has long standing experience in establishing new offices/relocation for clients and IT infrastructure for factories and production sites.

- Consultation on the data center layout, networks, servers, support on security and maintenance operations.
- Engineering of LAN, WAN (including routers and firewalls), telephone system and security systems.

System Integration

- For a seamless IT infrastructure, we work with our clients to fully integrate their data centers, networks, platforms and applications.
- We utilize emerging technologies, industry-specific capabilities and software partnerships to achieve high performance and deliver results.

Virtual Data Centers and Infrastructure-as-a-Service

Our virtual data center platforms are located in our Telehouse data centers, giving you the ability to scale your infrastructure as and when you need to.

Benefit from:

- A seamless migration from physical to virtual infrastructure
- An affordable backup and disaster recovery environment
- Private dedicated or shared servers with 99.99% SLA
- Improved network performance on KDDI Global IP-VPN
- A self-service portal for speedy provisioning

Virtual Desktop Infrastructure

Remote desktop architectures that provide your employees the flexibility to work anywhere, while enabling them to securely access their office windows desktop or application environment either running on-premises or on our cloud platform.

Software-as-a-Service Portfolio

Our SaaS products are highly secure applications enabling you to scale your IT services without the burden of installing and managing them.

- KDDI GoToMyPC - Remote desktop access service for the global mobile worker.
- KDDI File Storage - Hosted from within our data centers, share and send your confidential files securely to internal and external recipients.
- TeleOffice - Web-based video conferencing tool with the ability to share files and view presentations.
- KDDI ChatWork - a secure real-time company chat tool enabling you to share files and assign tasks.
- KDDI Syncnel - easiest and safest way to sync documents or contents securely.

Security Services

Beyond our physical security, we provide customers with virtual security for their systems and network.

- Managed Firewall - VPN Firewalls are ideal for secure network access between headquarter locations, remote/branch offices and mobile workers. Our deployments are fully integrated to work with your existing network and security infrastructure.
- Managed Intrusion Detection/Prevention Systems - we can provide a highly effective layer of security designed to protect critical assets from cyber threats. Organizations can detect and prevent attempts by attackers to compromise systems, applications and data.
- SSL-VPN - Easy for remote users to access internal applications and files. Does not require any additional client software or complicated settings, logging in from home or the road requires only a web browser and Internet connection.

Global Map

Telehouse operates 48 data center sites around the world, delivering a consistent level of high quality service with remote managed support.



Testimonials:

What our customers think

If you want to know how companies like you have benefited from partnering with Telehouse, check out these testimonials and ask about the prolific brands that trust Telehouse:



A customer visit

“We realized early on that the project would be a huge undertaking, but we had to ensure the company was on the best possible technology. We saw Telehouse as the best provider to ensure our data was secure but the level of service they provided was a huge factor in **transforming what could have been a difficult move into a very smooth transition.**”

The Telehouse team has always been accommodating and efficient – we’re confident we’re being looked after and that has allowed us to pass great levels of service on to our hospitals.”

Head of IT, HEALTHCARE

“As the majority of our customers are public sector, the services we provide have to be extremely reliable with minimal downtime. It was essential to work with a provider who offers secure, reliable and resilient data centers, and had previous experience of hosting and working with government and public sector bodies.

Each rack is powered by a resilient feed and has the flexibility to be designed and adapted around an individual customer’s specific requirements; our decision to work with Telehouse was made easy.”

Head of Networks, MANAGED SERVICES

“The infrastructure, level of support and security it boasts is unrivalled and it provides our tech team with the peace of mind that the proprietary technology they have painstakingly developed is in safe hands. To deliver reliable live content we need to have 100 per cent confidence in the security, resilience and reliability of our service. **If something goes wrong, then we have complete faith in the support team at Telehouse** to ensure our service remains un-disrupted. That is invaluable for an online company.”

Chief Strategy Officer, ONLINE MEDIA

“By working with Telehouse, we wanted to take advantage of their technology in order to offer our customers the quickest and most efficient trading platform possible.

Our customers demand the best and fastest service possible and are simply not content with low latency; they demand ultra-low latency.

Our presence within Telehouse will enable our customers to trade quicker and more efficiently because they can be connected even closer to brokers and exchanges.”

Chief Operating Officer, FINANCIAL

“One of our key requirements when expanding into Europe was ensuring we partnered with a data center that understood the growth and scope of the online gaming sector.

Telehouse’s ability to provide us with low-latency connectivity into a ready-made hub of online media clients has allowed us to continue offering potential new customers greater bandwidth connectivity combined with feature rich, media content, enhancing the gamer’s experience. In turn, alongside Telehouse, we are able to provide an exciting new customer base with **a future-proofed, scalable solution that will allow us to continue to grow the business** in the midst of increased market demand.”

CEO, GAMING

“The implementation was very fast, and flawless. We have worked with a lot of different housing providers in the past and **we can honestly say Telehouse has outperformed them all.** The documentation and support we received were excellent, with no troubling issues. The impact this has had on our business now and for the future, is and will be huge.”

CEO, TELECOMMUNICATIONS



Customer meeting

Environmental and Social Responsibility

As a data center provider we understand the negative impact our business can have on the wider environment through the production of excess CO2 emissions. As part of the KDDI Group, Telehouse strives to fulfil and achieve the four pillars of its Green Policy Strategy.



Forest conservation

The KDDI Green Policy:

1. Contributing to the realization of a low carbon-emission society
2. Promoting initiatives for biodiversity and forest conservation
3. Continuous activities for a recycling-oriented society
4. Enhancing management systems that protect the environment

In 2014, KDDI invested US \$153 million in pollution prevention schemes, power-saving equipment, environmentally friendly disposal of waste products, recycling, ISO standards and green credentials, research and development into environmental technologies and donations to forest conservation groups.



Solar Panel Project

Power saving energy schemes among Telehouse facilities:

- Use of energy efficient lighting systems throughout the data center
- Cold aisle containment employed to improve cooling efficiency
- Adiabatic cooling used to adjust the airflow to control temperature
- Variable speed pumping systems used in our chillers, fans and UPS filter drives
- High power Busbars used for the safe and efficient distribution of electricity
- Energy monitoring systems to identify supply and deviation
- Vertical indirect adiabatic and evaporative cooling system delivering low PUE

Corporate Social Responsibility

Within our CSR strategy, a strong focus lies on the development and improvement of ICT infrastructures in emerging markets. Some of our recent activities include:

- Supporting the development of network communications in Cambodia, Myanmar, Malaysia, Bhutan and Vietnam
- Educational development in Cambodia through local school construction and charity concerts.
- Supporting the cultivation of young, promising engineers to create innovative internet services
- Providing research and development support to government to tackle cyber-attacks
- Working with WWF India on a dolphin conservation project in the Ganges river through acoustic observation



Cold aisle containment



Constructed KDDI School, Cambodia

KDDI: Where Connectivity and Innovation Meet



KDDI's continuous investment in data communications, innovation and customer support has enabled Telehouse to provide data centers that are cutting-edge platforms for growing business.

KDDI Fast Facts:

- One of Asia's largest telecommunication providers with over 40 million subscribers
- Global Fortune 500 company with over US \$40 billion annual revenues
- Global networks covering over 190 countries
- Over 27,000 employees and over 100 offices around the world
- Over 80 subsidiaries including CDNetworks and DMXTechnologies

A leader of communications in Japan

- Providing advanced telecommunication services in Japan for over 60 years
- 1st provider of carrier aggregation technology in Japan
- Introduced the first Wide Area Network Virtual Switch combining layer 2 and layer 3 networks behaving as one wide area switch

Overseas consumer expansion in Myanmar

- Joint partnership with MPT, Myanmar's major network provider
- Over 6 million SIM cards sold in the first 6 months of operating in Myanmar
- Investing \$2 billion in building new base stations in large cities

KDDI Open Innovation Fund

- A newly established corporate venture fund based in Tokyo and San Francisco, California supporting innovative startups
- Invested in areas of gaming apps, data-sharing, Internet of Things and contents delivery



Research and Development Laboratories

Research and Development at KDDI

KDDI invest over US \$200 million¹ in research and development annually within the data communication fields. These include core networks, wireless technologies, network monitoring, cloud computing, green ICT technologies, data and network security, multimedia and social communication.

Recent Research Achievements

1. Multicore Optical Fiber Transmission

KDDI successfully trialed the world's first long distance transoceanic optical transmission using a new seven-core optical fiber and optical amplifier. Setting a world record for minimizing signal leakage and interference.

2. Data Compression Format for C-RAN

Next generation LTE standard will increase the traffic on communication lines entering base stations. KDDI has developed a format that compresses data by 50% without any loss of communication quality and has now been recognized as an international standard.

3. High-Speed Encryption

An electronic encryption/decryption technology that processes large data volumes 7-10 times faster than the Advanced Encryption Standard; now recommended by the Japanese government.

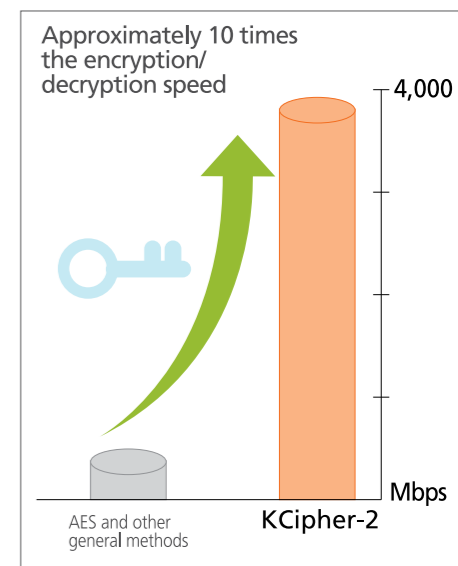
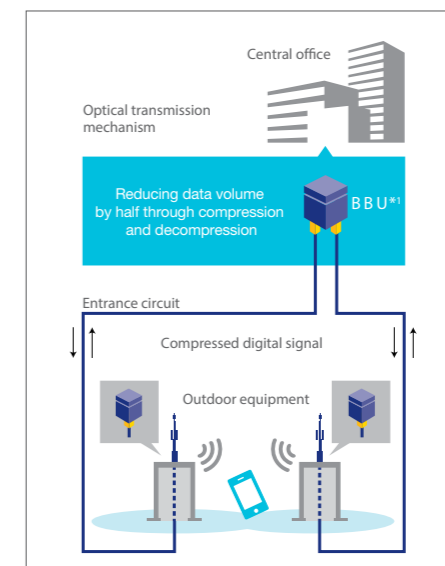
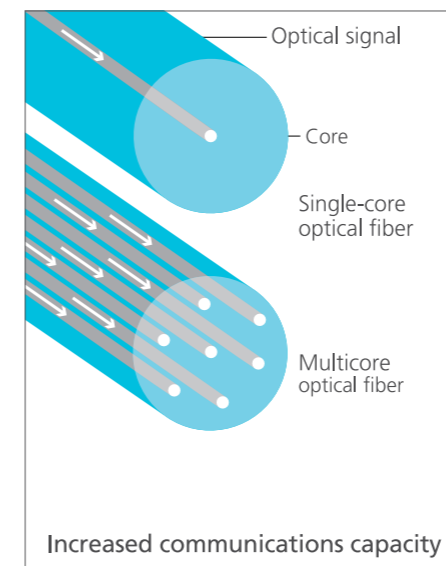
自由 au 学生も家族も1人1人、選べる自由。



KDDI new phone collection



Base stations in Myanmar



1. 2014 figure - \$234 million

Request a Site Tour

Visit our facilities and see for yourself why we are the trusted brand in data centers.

Whether a primary site, disaster recovery site, singular or a global multi-site network, the Telehouse data centers are designed and built to provide a highly dependable core infrastructure.

Come and visit our facilities and meet the committed people that strive to deliver you a platform for real business growth.

Contact your local office to discuss our services:

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Telehouse - A KDDI Group Company