



**TJ MICRO**  
SYSTEMS  
POWERED BY  
**GCOMM**

# THE GCOMM NETWORK



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 [tjmicro.com.au](http://tjmicro.com.au)

# RUN YOUR BUSINESS CONFIDENTLY ON A ROBUST, HIGH-PERFORMANCE NETWORK

GCOMM owns and operates an Australia-wide, aggregated, highly redundant IP network that utilises leading-edge Cisco routing and switching technology. Built on a highly scalable infrastructure, our network lets you facilitate point-to-point or point-to-multipoint connectivity either in conjunction or independent of the Internet.

Our network utilises Multiprotocol Label Switching (MPLS) technology which enables us to manage traffic flow across our network and provide Quality of Service (QoS) to our customers. This means that you have more control over your bandwidth resources and can manage them more efficiently, thereby improving user experience and reducing cost.

## LAST MILE CONNECTIVITY

With more than 40 carrier interconnections terminated at our points of presence in six cities across Australia, GCOMM provides access to a broad range of 'last mile' connectivity options that vary in speed, contention and price, including:

- DSL
- NBN
- Ethernet over Copper
- Fixed Wireless
- Ethernet over Fibre
- Dark Fibre
- DWDM

This wide choice of connectivity options enables us to architect highly customised and redundant Wide Area Network (WAN) solutions for you as we can cherry pick the most appropriate 'last mile' infrastructure at each of your sites depending on your needs.

*Robust, built for high-performance and cleverly designed, the GCOMM network empowers you to connect your offices, data centres and people with confidence and access a range of services and technologies that drive business performance.*



## GCMM NETWORK HIGHLIGHTS

### ✓ CARRIER DIVERSITY

The largest 'last mile' aggregation network means that the best choice is provided to each of your sites based on availability, budget and specific business requirements.

### ✓ REDUNDANCY

Through our core network, GCOMM can auto-failover to redundant providers ensuring uninterrupted availability.

### ✓ GEOGRAPHIC FOOTPRINT

Our network spans across Australia and is connected via 7 points of presence in 6 cities enabling us to provide nationwide coverage.

### ✓ NETWORK OWNERSHIP

As we have full control over our network, we can deliver and monitor your solutions "end to end", deliver the right products with the right fit and control and address service issues.

### ✓ NETWORK INFRASTRUCTURE

GCOMM's core network is built entirely on a Cisco foundation, with a fully redundant architecture capable of supporting up to 100Gbps of routing throughput.

### ✓ NETWORK CAPACITY

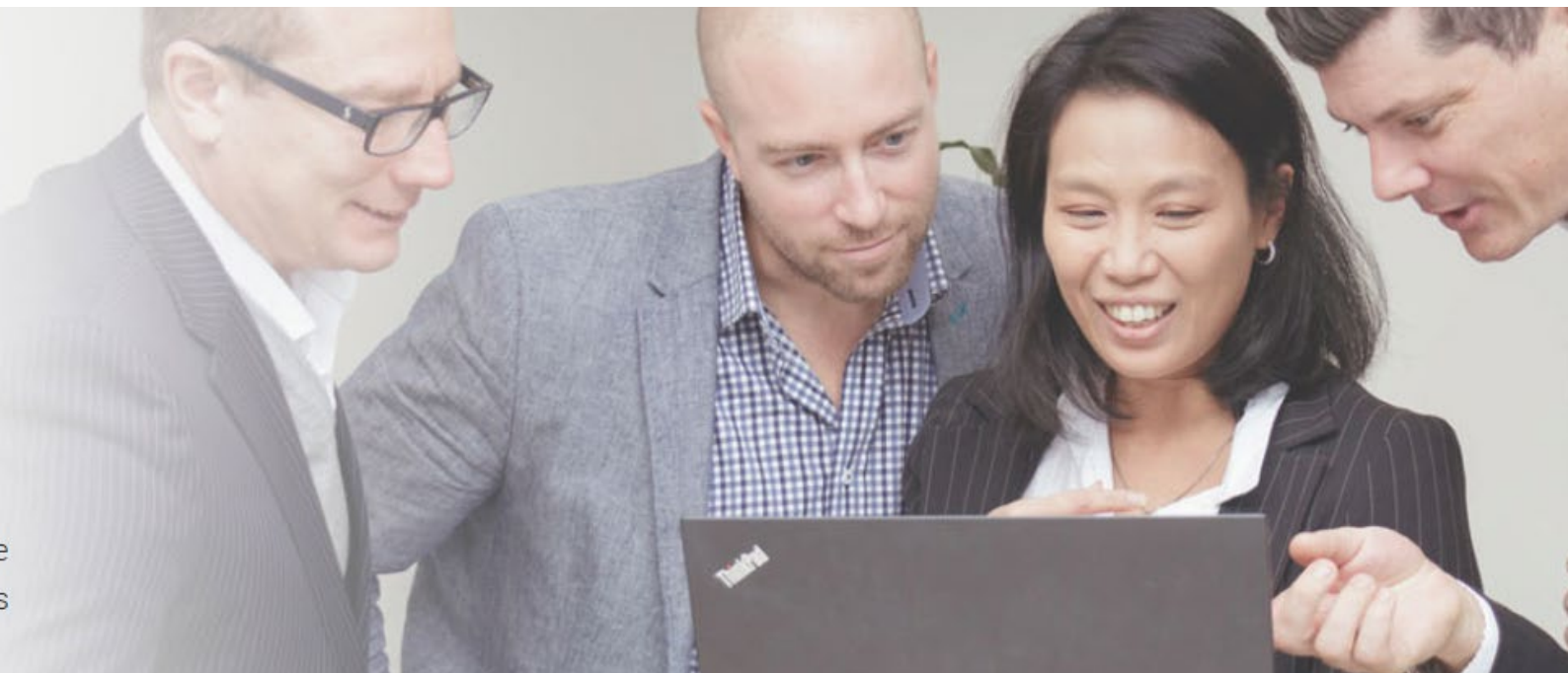
GCOMM continually invests in our network infrastructure to ensure we can deliver the highest level of service to our customers. To that end, we have significantly increased our network capacity and ability to scale.

### ✓ NETWORK AGGREGATION

We aggregate with Australia's major telecommunications carriers at our points of presence to provide a range of 'last mile' connectivity services. Some of our carrier partners include Telstra, Optus, AAPT, TPG, Vocus, Superloop and Megaport. Between our points of presence, we have redundant, carrier diverse backhaul consisting of Wavelength and Ethernet technologies.

### ✓ ACCESS TO INTERNET BACKBONE

The GCOMM Internet backbone is available directly from within all our data centre facilities. All customers utilising our data centre services can easily connect to our multihomed Internet backbone via an Ethernet port. The Internet backbone provides outstanding reliability due to our multiple upstream carrier networks, which are coupled with geographical diversity.







## ✓ DATA CENTRE HIGHLIGHTS

- ✓ At least Tier 3 facilities
- ✓ 24x7x365 monitoring
- ✓ Fully redundant heating, ventilation and air conditioning systems
- ✓ Diesel generator power backup
- ✓ Certifications: ISO 9001 Quality Systems, Information Security Management System (ISMS) ISO 27001

## ✓ MULTIHOMED INTERNET UPSTREAM

Across our network, we supply high quality IP transit to our customers. Leveraging our robust network capability, strong partnerships with Australia's largest Tier 1 upstream providers and peering arrangements with top level content and cloud providers, GCOMM enables speedy and reliable delivery of data.

## ✓ LAYER 2

GCOMM can provide an enterprise-wide layer 2 networking solution to enable our customers to have full control over their routing and networking needs. We provide a national footprint for layer 2 point-to-point and layer 2 aggregation services across all our carrier partners in Australia.

## ✓ BGP

GCOMM utilises BGP routing protocol to provide you with more control over how your networks are advertised to your providers, better network performance and added Internet connection redundancy. We peer with major providers such as AAPT, TPG and Superloop and customers who have IP ranges.

## ✓ INTERSTATE CONNECTIVITY

Our national private IP network has strong interstate connectivity built in enabling you to connect all your offices, employees and partners securely and seamlessly across Australia. We can deliver interstate connectivity as layer 2, layer 3 or independently of the GCOMM network depending on the level of control you wish to retain over routing and networking decisions.

## ✓ INTERNATIONAL CONNECTIVITY

GCOMM can provide fibre connectivity from your Australian business sites to your international locations in the form of a secure private IP network. Delivered as layer 3, our international connectivity solutions allow you to share data, voice, video and use other business critical applications securely and seamlessly across a scalable platform.

## ✓ QUALITY OF SERVICE

The GCOMM network has been designed from the ground up to support Quality of Service (QoS), which enables prioritisation of your performance-sensitive applications, such as VoIP and video conferencing. QoS helps two network problems: bandwidth and time sensitivity.

QoS can help you allocate bandwidth to critical applications and you can limit bandwidth for less critical applications. Applications, such as video and voice, must have a certain amount of bandwidth to work correctly. Using QoS, you can provide that bandwidth, when necessary. In addition, a high priority can be placed on applications that are sensitive to timing or cannot tolerate delay by assigning that traffic to a high-priority queue.

## ✓ CONTROL OVER RESOURCES

QoS provides control over which resources (bandwidth, equipment, wide-area facilities, etc.) are being used. For example, you can limit the bandwidth by FTP transfers or give priority to mission-critical applications that are most important to your business, first.

# THE GCOMM

## NETWORK OPERATIONS CENTRE

Equipped with the latest technology, our Network Operations Centre is the hub from which we monitor and manage our network and data centres around-the-clock. In addition, we proactively monitor individual sites and associated services for customers who use GCOMM's managed services, helping them maximise network availability and reduce maintenance and staffing costs.

Using sophisticated monitoring tools, our engineers keep a close watch over your entire network, from WAN components, routers, switches, servers, PCs and mobile devices to applications that run on them. This gives us the ability to immediately spot potential problems and resolve many issues remotely, without having to send an engineer to the site. Many faults are resolved without our customers even knowing they existed.



### LEADING-EDGE TECHNOLOGY

Enterprise grade software tools for monitoring and managing complex network infrastructures.



### PROVEN ENGINEERING EXPERTISE

Staffed with certified and trained level 2 and level 3 network engineers.



### FAST FAULT RESOLUTION

Response times and escalation protocols defined through comprehensive service level agreements.



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## **ABOUT** TJ Microsystems

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Established in 1996, TJ Microsystems has grown to be the largest Managed Service Provider in North Queensland. Servicing small to medium Business, Government, Education and Non-For-Profit Organisations, we offer our clients a highly skilled team of professionals in all areas of IT Support. With dedicated staff throughout Far North Queensland, our goal is to improve our client's productivity and success through industry leading technology and best practice.

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**Need help?**

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Call us on **(07) 4041 2183** or email at **[sales@tjmicro.com.au](mailto:sales@tjmicro.com.au)**.

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