Application Note

ATLAS CPE with LTE for Quick and Resilient Business Ethernet Networks

With over 30 billion connected devices worldwide, there has been unprecedented growth in the requirement for connected devices. Every second, hundreds of new devices are being connected globally. The proliferation of IoT devices and cloud-based interconnections is an interlacing web of "smart" devices that can be powered on, connected to the Internet and quite often, connected to one another.

Machines can now communicate for themselves using machine to machine (M2M) artificial intelligence (AI), sensor fusion and vision technologies to connect and power analytics and automation. The need to rapidly connect these and other devices to either wired or wireless networks is increasingly important. You have deadlines to meet and you need connectivity as soon as possible. It should be as easy as turning a switch on or off, but it is not. Network connectivity is often the bottleneck. Your plan may be to install a fixed Business Ethernet link, but that comes with a lead-time that can cause delays.

To assist in getting your new location or business up and running quickly, Transition Networks has several options encompassed within our ATLAS Series Gigabit Ethernet CPE with built-in LTE modem that accelerates network connectivity with secure features and benefits. The ATLAS CPE with LTE supports:

- o Rapid Deployment
- o Secure Mobile Data
- o Managed Dual Path

The Need for Speed – Rapid Deployment
When you have a new location, one of the first things you need to do is to connect it to your network. You may also be looking for resiliency with redundant failover capabilities, or you may only need connectivity for a limited time for a short-term situation.

How Rapid Deployment Works

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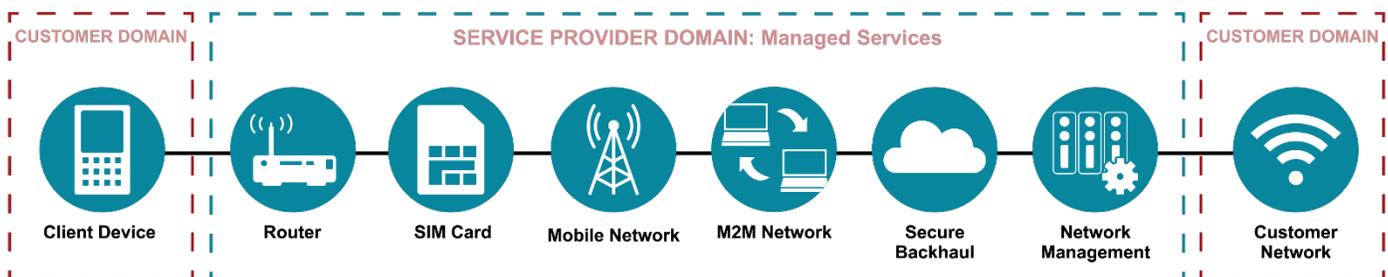
Rapid Connectivity
You can reduce the impact on your business of waiting for wired service delivery by getting up and running quickly with the ATLAS CPE with LTE. The ATLAS solution provides worldwide LTE, UMTS/HSPA+ and GSM/GPRS/EDGE convergence, ensuring it can be connected even in remote areas devoid of 3G or 4G service. The ATLAS 4G LTE Module is pre-approved by worldwide carriers including Vodafone (Global) / Deutsche Telekom / British Telecom / Telefónica (Europe) / Verizon / AT&T / T-Mobile / US Cellular (North America) / Rogers / TELUS / Bell (Canada) and more.
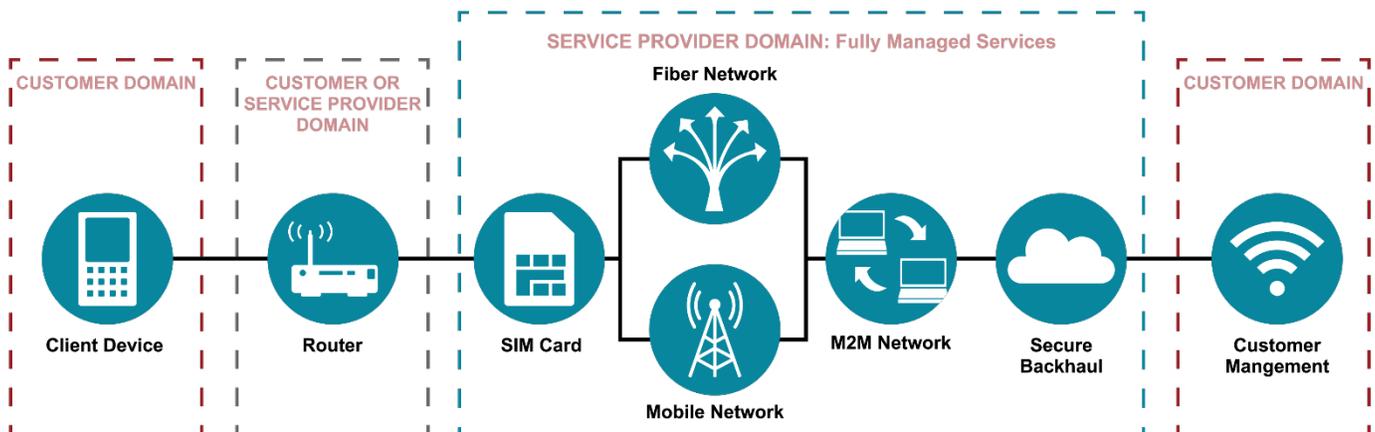
Temporary Use
For sporting events or temporary locations, such as construction sites, public venues, military and other applications, our rapid deployment ATLAS model with LTE offers secure and reliable Business Ethernet service, avoiding the investment in long contracts while still offering fully featured Business Ethernet.

Managed Dual Path – Extra Resiliency when you Need It
For businesses that require always on availability, the ATLAS CPE with LTE provides a cost-effective way of providing a redundant link using LTE as a backup to the wired network service. In the event of a network fiber issue, the service will failover to LTE mobile and then automatically revert to the primary service when it becomes available. The ATLAS device uses L2TPv3 tunnels that terminate on an upstream router or LINUX based server. If the tunnel is up and operational and it detects a loss of signal (LOS) on the network, it will automatically divert traffic to the redundant link at a fast switching time of < 1 second. It also has programmable holdover and wait to restore timers to prevent links from "flapping."

How Managed Dual Path Works

SERVICE PROVIDER DOMAIN: Fully Managed Services

CUSTOMER DOMAIN

CUSTOMER OR SERVICE PROVIDER DOMAIN

Fiber Network

CUSTOMER DOMAIN

Client Device | Router | SIM Card | Mobile Network | M2M Network | Secure Backhaul | Customer Mangement

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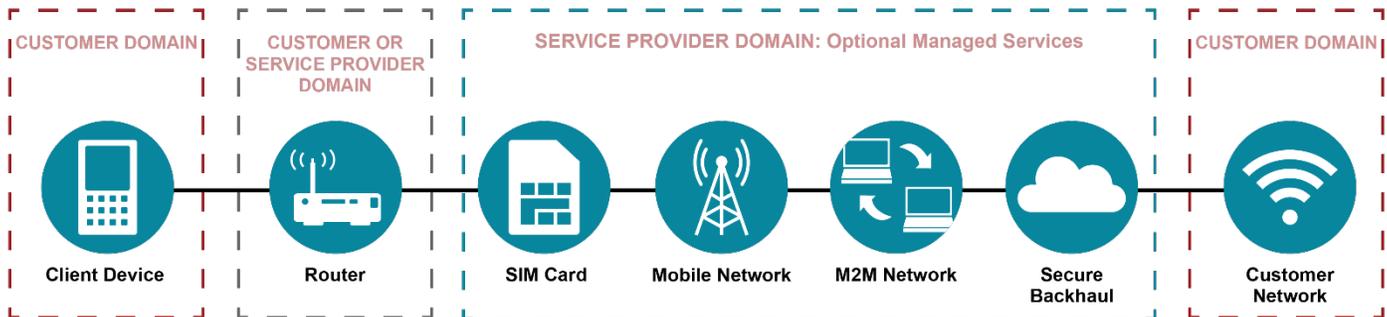
Security When You Need it!
Secure Mobile Data connectivity is a simple and cost-effective way to connect remote devices for two-way communications of key information anytime, anyplace.

How Secure Mobile Data Works

CUSTOMER DOMAIN	CUSTOMER OR SERVICE PROVIDER DOMAIN	SERVICE PROVIDER DOMAIN: Optional Managed Services				CUSTOMER DOMAIN
Client Device	Router	SIM Card	Mobile Network	M2M Network	Secure Backhaul	Customer Network

Public APNs are designed to provide basic Internet access for the most commonly used apps and websites. However, they are not designed to provide organizations with the secure services needed to run critical business systems

Private APNs provide a superior solution to secure data when compared to using the public internet or any other shared access. When a Private mobile APN is used in conjunction with fixed line backhaul terminating at a customer's corporate office, the organization's data remains on the customer's private data network between the remote location and the office. This means these devices don't share the public Internet pathways, so the devices are inherently more secure. Private APN's create a secure mobile VPN. This architecture offers considerably more security than a typical VPN solution that uses a VPN server in conjunction with client software to transport data over the public Internet.

There are several benefits to using a private APN:

- External corporate infrastructure (e.g. VPN gateway) is exposed only to provisioned devices and not the public Internet
- Devices are more secure and may not need to use VPN client software, reducing the load on company firewalls, Internet connectivity and other border systems
- Specific IP addresses can be assigned to SIM cards, so devices can be uniquely identified by account name, specific assets, machines, applications, or people

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About the ATLAS CPE with LTE

The ATLAS stand-alone Gigabit Ethernet NID with built-in LTE modem operates at full bandwidth 1 Gbps (bi-directional) on a single fiber link supporting up to four 10/100/1000Base-T Ethernet ports. It supports robust Layer 2 features with up to 4K VLANs.

The ATLAS CPE includes a 4G Cat 4 LTE wireless module that is 10 to 15 times faster and has 5 times lower latency than 3G. Depending on the network, the module is capable of 150 Mbps downlink and 50 Mbps uplink data rates. It's LINUX based open source operating system allows future proofing for new feature development and support.

For more information, visit transition.com/atlas.