LAN-Cell™ 2

High-Performance 3G Cellular Router + VPN + Firewall

The LAN-Cell 2 is a high-performance, rugged, upgradeable, enterprise-grade 3G cellular gateway that allows multiple PC's, laptops, web-cams, PLCs, POS terminals, ATMs and other Ethernet- and WiFi-based devices to simultaneously share a single cellular data account for primary or backup connectivity.

Building on the success of Proxicast's original LAN-Cell Mobile Gateway, the LAN-Cell 2 adds support for the latest 3G high-speed cellular technologies and dramatically expanded routing, security and management features.

The LAN-Cell 2 is the most advanced, secure and flexible 3G cellular router available. The LAN-Cell 2 protects your LAN equipment from Internet threats and gives you control over your cellular data connection in ways no other modem or router can.

Front view with Card-Guard™ and optional external cellular antenna installed (right side)

Key Features

- **Uses standard 3G PC-Card modems (PCMCIA)** from popular manufacturers

- **Supports EV-DO RevA/Rev0, 1xRTT, HSUPA, HSDPA, UMTS, EDGE & GPRS cards**

- **User accessible PC-Card slot** - easily upgrade modems or change carriers

- **Compact rugged modular metal chassis** with Card-Guard™ and Card-Lock™

- **4 port 10/100 Ethernet LAN switch** with LAN / DMZ / WLAN configurable zones

- **Built-in WiFi** 802.11a/b/g access point

- **10/100 Ethernet WAN port:** DSL, cable or Ethernet for primary or backup

- **RS-232 port** for serial modem backup

- **Auto fail-over between cellular & WAN ports** - user selectable priority

- **ICSA-certified IPSec-based VPN client** w/DES, 3DES, AES

- **ICSA-certified Stateful Packet Inspection Firewall**

- **Cell-Sentry™ cellular data budgeting system** - manages cellular costs

- **Supports dynamic or static IP addresses** assigned by cellular carriers

Applications for the LAN-Cell 2

At Proxicast, we don't just manufacture hardware. We design and build our products to help you meet your application needs.
Here are just a few of the many different application areas where the LAN-Cell is currently being used.

Industrial

The LAN-Cell is ideal for remote telemetry, SCADA, device monitoring, machine-to-machine communication (M2M) and data collection. The LAN-Cell can be configured to be "always connected" to a Cellular Data Network so you can access devices attached to the LAN-Cell from anywhere. The LAN-Cell can easily be powered by solar cells for truly remote applications.

- **SCADA / Telemetry / M2M / Data Collection**
- **Remote Monitoring & Diagnostics**
- **Remote Control, PLCs & RTUs**

Financial & Retail

With support for 5 simultaneous IPSec tunnels, the LAN-Cell's integrated VPN client enables secure, independent communication with your headquarters and financial institution from any remote location. State-of-the-art DES / 3DES / AES encryption protects POS transactions such as cash register & credit card processing, lottery ticket sales, ATM machines and information kiosks.

- **Automated Teller Machines**
- **POS, Kiosks, Vending**
- **Digital Signage**
- **High Availability**

Security

The LAN-Cell's built-in VPN client and encryption technology allows you to design and deploy secure data access applications over the public Internet and CDMA or GSM cellular networks. The LAN-Cell is ideal for security applications such as alarm monitoring and surveillance cameras. It is also commonly used to monitor traffic cameras and other highway sensors.

- **Video Surveillance**
- **Alarm Communications**
- **Traffic Control**

Emergency Management

When land-lines go down, cellular data may be the only option. The LAN-Cell provides a complete LAN, WiFi & Cellular Internet Access solution for data-intensive vehicles such as emergency response vans, mobile communications command posts, and public safety equipment. Proxicast's LAN-Cell has been the choice of many first responders, support organizations, and commercial firms that need to be online anywhere and anytime.

- **Homeland Security**
- **Police / Fire / EMS**
- **Disaster Response**

Commercial

IT departments can provide their mobile workgroups (e.g. construction trailers, temporary locations, client sites, etc.) with a secure extension of the corporate network. The LAN-Cell's integrated VPN client provides secure access to corporate systems without special software or configuration on each remote LAN computer. The LAN-Cell can provide backup WAN connections when primary Internet service fails. It is also great for mobile Internet hotspots such in taxis, limos, buses and shuttles.

- **VPN Access**
- **Temporary Locations**
- **Redundant Connectivity**
- **WiFi Hotspots**

Features

Front View

*Front view with Card-Guard™
and external cellular antenna installed (right side)*

*Rear view with optional Card-Guard™
and external cellular antenna installed (left side)*

High-Performance Cellular Router

The LAN-Cell 2 supports today's fastest 3G cellular standards, such as EV-DO Rev(A) and HSDPA/HSUPA. With some 3G services offering bandwidths of over 1,000 Kbps downstream and 500 Kbps upstream, many applications requiring broadband performance can now "go cellular". With its PC-Card architecture, the LAN-Cell 2 is carrier independent and can easily be upgraded as newer and faster cellular technologies become available.

Advanced Routing & Management

The LAN-Cell 2 has routing and security features typically found only in wired corporate routers costing thousands more. The LAN-Cell 2 provides seamless Internet connectivity and unmatched security to PCs and laptops as well as devices that were never designed for connection to the Internet, such as sensors, data loggers, PLCs, ATMs, and traffic controls. All without requiring any additional software or configuration on your remote equipment. Use the LAN-Cell 2 to manage your wired Ethernet, Cellular, and even Satellite communications.

Enterprise Level Security & VPN

The LAN-Cell's NAT and advanced rule-based SPI firewall provide highly granular security and policy enforcement for all remote devices and users. The built-in 3DES and AES encryption-capable VPN client and server software eliminates the need to configure individual devices and extends your secure corporate network to devices that cannot run VPN software.

Modular Chassis with Card-Guard™ & Card-Lock™

The LAN-Cell 2's unique modular chassis allows the device to operate with the cellular PC-Card exposed or protected inside the unit. By using the Card-Guard, the PC-Card modem is completely protected from harm or tampering. Optional PC-Card "pigtail" cables provide a rugged external antenna connection for different PC-Card modems and antennas. The chassis also features Proxicast's Card-Lock system that prevents the PC-Card from coming loose or being unintentionally removed.

Cell-Sentry™ Cellular Data Budgeting System

Cellular carriers offer a variety of data service plans scaled to meet your application needs, but can impose steep overage charges for exceeding your allotment.
Even "unlimited" plans have maximum "caps" that can trigger additional fees.
The LAN-Cell 2's Cell-Sentry feature monitors cellular usage and can alert you at predefined threshold or even block additional cellular usage to avoid overage charges.

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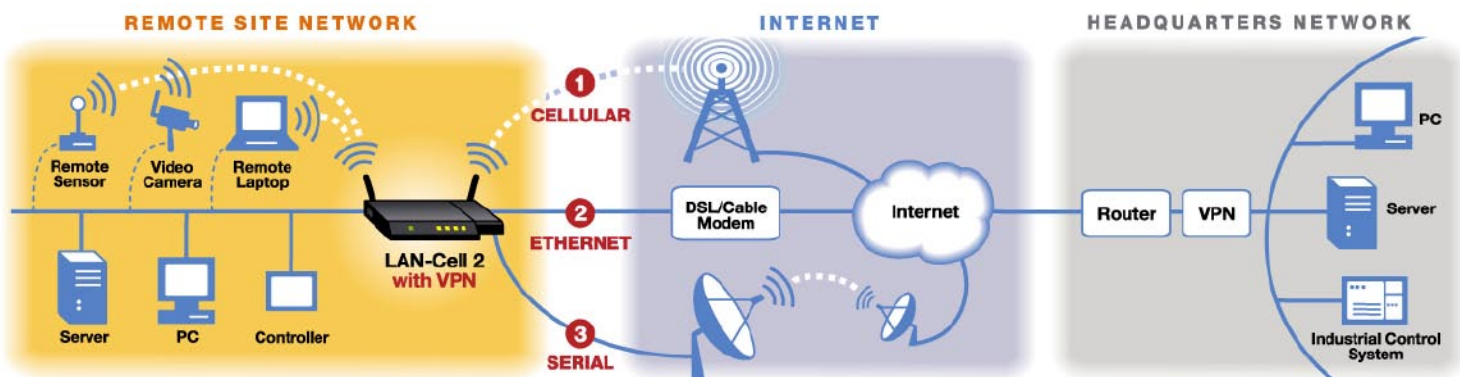
LAN-Cell™ 2 3G Cellular Gateway

Rear view with optional Card-Guard™ and external cellular antenna installed (left side)

Hardware Specifications

Physical
- Dimensions:
  Main Unit:
  8.69" L x 5.38" D x 1.25" H
  (220mm x 137mm x 32mm)
  With Card-Guard:
  11.25" L x 5.38" D x 1.25" H
  (286mm x 137mm x 32mm)
- Weight: 2.4 lbs (1.09 kg) -
  with power supply & Card-Guard
- Rugged 19 gauge steel enclosure
- Includes side-attached mounting brackets for mobile and fixed installations

Power
- 12 VDC - 1200 ma max (vehicle & solar power compatible)
- Includes auto switching 120-240 VAC to 12 VDC power supply (global plug kit optional)
- 2.1 mm jack (positive center pin)
- Power consumption: 5W (typical), 8W (max)

Environmental
- Operating Temperature: -22 to 140 F (-30 to 60 C)
- Operating Humidity: 0% to 92% (non-condensing)

I/O Connections
- (4) 10/100 Mbps Ethernet LAN switch ports (auto-negotiate / auto MDI /MDIX)
- (1) 10/100 Mbps Ethernet WAN port (auto-negotiate / auto MDI/MDIX)
- (1) RS232 (RJ45) serial modem port - 230Kbps max (RJ45 to DB9 cable included)
- (1) RS-232 (RJ45) serial configuration port (RJ45 to DB9 cable included)
- (1) SMA Reverse Polarity Male WiFi 802.11a/b/g antenna connector (antenna included)
- (1) Bulkhead antenna connector hole (external pigtail antenna connector optional)

PC-Card Modems Supported
The LAN-Cell 2 supports a wide-range of 3G PC-Card modems and technologies:
- CDMA: EV-DO Rev A, Rev 0, 1xRTT
- GSM: HSDPA, HSUPA, EDGE, GPRS
- WCDMA: UMTS
See the Proxicast web site for a list of the specific 3G PC-Card modems currently supported. Support for addtional PC-Card modems will be included in free future firmware upgrades.

Wireless LAN
- IEEE 802.11a/b/g compliant access point built-in
- 64/128/152 bit WEP encryption
- MAC Filtering
- IEEE 802.1x (EAP-MD5/TLS/TTLS/PEAP)
- WPA/WPA-PSK/WPA2/WPA2-PSK
- Configurable power output (70mw max)

General Product Information

Regulatory Certifications
- EMC: FCC Part 15 Class B, CE-EMC Class B, C-Tick Class B, VCCI Class B
- Safety: CSA International, CE EN60950-1 (UL60950-1, CSA60950-1, EN60950-1, IEC60950-1)
- Green Product, RoHS compliant

Standard Items Included
- LAN-Cell 2 cellular router unit
- Card-Guard modular card protection cover
- 120-240 VAC power supply
- Ethernet cable
- Serial cable
- Console cable
- WiFi antenna
- Mounting hardware
- Cable ties for Card-Lock
- Quick Start Guide
- Documentation & Support CD-ROM
- One year limited warranty

Optional Items - Sold Separately
- PC-Card cellular modem cards
- External cellular antennas and accessories
- PC-Card to "pig-tail" cables
- International power plug kit
- Vehicle power adapter

Software Specifications

Cellular WAN Management
- Auto-failover routing between Ethernet, Cellular and Serial (user selectable routing priority)
- Auto-connect on demand or stay connected 7x24 with "always-on" feature
- ICMP heartbeat (ping continuity) monitor to ensure persistent connections
- Configurable load balancing between WAN interfaces
- MAC address access control list
- Traffic redirect to an external device for high-availability applications
- Bandwidth utilization and bandwidth throttling controls
- Cell-Sentry™ cellular data budgeting system - helps manage cellular costs

Virtual Private Networks
- ICSA-certified IPSec-compliant VPN
- 5 Simultaneous VPN connections
- DES, 3DES, AES encryption
- Local User Database or RADIUS server for Extended Authentication
- LAN-Cell initiated/terminated IPSec VPNs and VPN client pass-through
- IPSec NAT Traversal + Keep-alive packet support
- Redundant VPN connection (VPN HA)
- Manual key, IKE and PKI (X.509)
- Wizard based VPN set up

- Interoperable with standard IPSec-based VPN products (e.g. Cisco, SonicWall, Juniper, WatchGuard, NetScreen, etc.)

Firewall
- ICSA-certified Stateful Packet Inspection (SPI) firewall
- Packet Filter
- Denial of Service protection
- Attack Alerts & Logs
- Access Control by type of service

Security & Certificates
- Digital Certificates - X.509, PKCS#7 & PKCS#12
- Local & Remote Certificate Authority
- Supports SCEP/CMP with CA & RA auto-enrollment

IP & Routing
- DHCP client & server
- Multi-NAT / SUA / port translation and port-forwarding
- IP Routing: UDP, TCP, ICMP, ARP, RIP V1 and RIP V2
- IP Multicast
- Programmable static routes
- Policy-based routing and traffic shaping
- Application level priority for bandwidth sensitive applications such as VoIP

- Configurable LAN / DMZ / WLAN zones
- IP Alias (3 VLANs)
- Dynamic DNS support (DDNS)

Device Management
- Web-based configuration utility (HTTP or HTTPS)
- Terminal-based configuration utility (Telnet or SSH)
- User upgradable firmware via LAN, WAN or serial and over-the air cellular
- FTP/TFTP for firmware upgrade & configuration backup/restore
- SNMP support
- Command line interface for advanced configuration
- Remote management from LAN & WAN
- User selectable IP port assignments for each management utility
- Detailed event logging & packet tracing with Syslog and E-Mail log/alert support

**Your Authorized
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