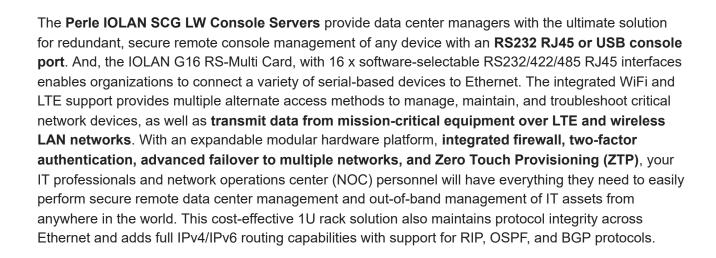
# **IOLAN SCG LW Secure Console Server**

perle.com/products/iolan-scglw-console-server.shtml

# Out-of-Band IT Infrastructure Management with integrated LTE & WiFi

- 18, 34 or 50 Console Management Ports
- Modular design supports RS232/RS422/RS485 RJ45 and USB 3.0 Interfaces
- Integrated LTE and Wi-Fi<sup>®</sup> for out of band access
- Dual 10/100/1000 Network Connection with RJ45 Copper and SFP Fiber Ports
- ZTP & PerleVIEW Central Management Software simplifies configuration, administration, monitoring, and troubleshooting.
- · Cloud Hosting -- Deploy and manage your network from the cloud
- Advanced routing engine with AAA security and SSH/SSL encryption to meet all data center compliance policies
- Dual AC or Dual Feed 48vDC Power for Fault-tolerant uptime

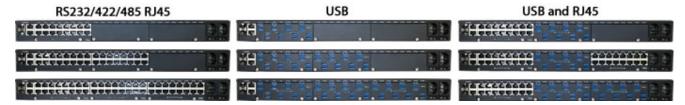


# Modular Hardware Platform enables Console Management of all IT assets

The modular IOLAN SCG LW Console Server provides up to 50 Console Management ports supporting USB, RS232, RS422, and RS485 interfaces . The modular design of the IOLAN SCG allows the user to swap, upgrade, and scale to any combination of 16-port module cards to support all types of admin ports in one Console Management solution.



#### **IOLAN SCG Interface Options**



The Perle IOLAN SCG is the only industry solution that can support up to 50 high-density USB 3.0 ports that are compatible with all manufacturers' USB solutions, including Cisco routers, switches, firewalls, servers (Solaris, Windows, Unix and Linux) PBXs, network storage equipment and security appliances.

The RS232 RJ45 ports are software configurable to use straight thru or rolled cables to connect your Cisco equipment and support DCD pin can be configured for 3rd party devices that need this extra signal. The software-selectable RS232/422/485 RJ45 interfaces simplify configuration and eliminate mechanical tampering associated with DIP switches. This mean the Perle IOLAN SCG supports more serial devices than any other Console Server on the market.

# Advanced Network Security, Authentication, and Data Encryption

**2 Factor Authentication (2FA)** ensures access to equipment and data is limited to authorized users, while remote authentication (RADIUS, TACACS+, & LDAP) management, enables integration with enterprise-grade systems to control access to devices in the field.

The **built-in firewall** offers intuitive policies to protect inside networks from unauthorized access. The firewall also allows inside networks to be separated from each other. If there are network resources that need to be available to an outside user, such as a web or FTP server, these resources can be placed on a separate network behind the firewall in a demilitarized zone (DMZ).

Network data transmissions and access to remote console admin ports on IT equipment are protected through standard **encryption tools** such as Secure Shell (SSH) and Secure Sockets Layer (TLS/SSL). By using encryption technologies, an IOLAN SCR Console Server protects sensitive and confidential data before being sent across a corporate Intranet or public Internet. For compatibility with peer encryption devices, all the major encryption ciphers such as AES, 3DES, RC4, RC2, and CAST128 are fully supported.

With multiple concurrent VPN sessions, OpenVPN, and IPSec VPN, robust authentication and encryption of IP packets is provided at the network layer of the OSI model. This is ideal for multi-vendor interoperation within a network, providing flexibility and the ability to match the right solution for a particular application.

# Multiple Out-of-Band (OOB) access methods

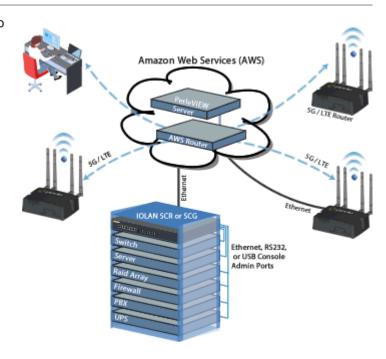
Every IOLAN SCG LW Console Server comes with three secure remote access methods to critical network devices.

- 1. The built-in high-speed LTE with HSPA+, UMTS, EDGE and GPRS/GSM fallback networks to protect your data center and branch office out-of-band management infrastructure against wired LAN failure. It can also be used to transmit serial data or establish a direct serial to serial peer connection, over cellular networks. This is ideal when devices are located where hardwired Ethernet connections are not available but cellular networks, with their affordable data packages, are accessible.
- 2. **Built-in WiFi network access over dual-band radio antennas** provides optimal wireless performance, signal reliability, and range. With broad range support of Wireless LAN Technology (IEEE 802.11 a,b,g,n @ 2.4Ghz/5Ghz) and fast wireless speeds up to 150Mbps, the IOLAN SCG LW is ideal to ensure you always have access to critical network devices.
- 3. Any dual combination of the two 10/100/1000Base-T Copper Ports and two 100/1000Base-X SFP Fiber Ports can be used to meet your unique network access requirements. This design provides users with a flexible, cost-effective solution to transmit data from mission-critical equipment over Copper or Fiber based Ethernet networks. When connecting to a fiber network, the pluggable SFP ports allow for flexible network configurations using SFP Optical Transceivers supplied by Perle, Cisco or other manufacturers of MSA compliant SFPs.

# **High Availability Access**

To simplify management and respond swiftly to issues, network administrators require access to all console ports via a single portal view. Perle's cloud-based centralized management solution puts all your network and IT infrastructure into a single application and provides secure reliable access and visibility during normal operations and critical network failures. Scalable to suit any business requirement, Cloud Centralized Management reduces human error and guarantees repeatability.

The IOLAN SCG LW also has built-in faulttolerant capabilities to ensure secure and reliable access for managing important mission-critical equipment. Redundant Path technology assures availability to Console



Management ports through Active Standby or Dual Network Access modes. Virtual Router Redundancy Protocol (VRRPv3) enables a group of devices to form a single virtual device to provide network redundancy. The dual AC power supply ensures that console management is available even if the primary AC power source fails. And, protection against electrostatic discharges and power surges is provided with robust 15Kv ESD protection circuitry on each console port.

# Easy Set-up and Configuration with Front Panel Display and Keyboard

The IOLAN SCG LW is incredibly easy to get up and running on the network. The Front Panel Display and Keyboard allows a user to assign an IP address directly through the display without a direct PC connection. The rest of the unit can then be configured over the network using a variety of configurator options including PerleVIEW, WebManager, CLI, etc.

The Front Panel Display is also a convenient way to monitor and trouble-shoot RS232, USB, and Ethernet port activity.

For large scale roll-outs, the Micro SD Card slot can be used to back-up and restore configuration files as well as load new firmware. Perle is committed to eliminating configuration hassles for all IOLAN's on your IP network.

### Flexible and Reliable Serial to Ethernet Connections

An IOLAN SCG Console Server is ideal for connecting serial based COM port, UDP or TCP socket based applications to remote devices. Perle's TruePort re-director provides fixed TTY or COM ports to serial based applications enabling communication with remote devices connected to Perle IOLAN's either in encrypted or clear text modes.

TrueSerial® packet technology delivers the most authentic serial connections across Ethernet for serial protocol integrity.

You can also tunnel serial data between devices across an IP network.

# **Advanced IP Technology**

With support for IPv6, the IOLAN SCG provides organizations with investment protection to meet this rapidly growing standard.

Demand for IPv6, which is compatible with IPv4 addressing schemes, is driven by the need for more IP address. With the implementation and rollout of advanced cellular networks, a robust method is needed to handle the huge influx of new IP addressable devices on the Internet. In fact, the US Department of Defense has mandated that all equipment purchased be IPv6 compatible. In addition, all major Operating Systems such as Windows, Linux, Unix, and Solaris, as well as routers, have built-in support for IPv6.

It is therefore important for end users and integrators to select networking equipment that incorporates the IPv6 standard. The IOLAN line with support for IPv6 already built in is the best choice in serial to Ethernet technology.

# More reasons that make the IOLAN SCG Console Servers the preferred choice:

- Cellular data speeds up to 100Mbps
- Direct serial to serial peer connection over cellular data networks
- Remote equipment console management over cellular data networks
- As a wireless client proxy, provides wireless connectivity to central access points for serial and Ethernet devices
- Can provide a direct serial to serial peer connection over wireless

- Software Access Point (SoftAP) for up to 6 wireless clients.
- Fast Wireless Roaming capability is ideal for mobile applications where the IOLAN can transparently roam between APs (Access Points) that share the same ESS (Extended Service Set)
- Primary/Backup host functionality enables automatic connections to alternate hosts should the primary TCP connection go down.
- EasyPort Web Access equipment serial console ports by using your Java-enabled Internet browser
- · Java-free browser access to remote serial console ports via Telnet and SSH.
- Dynamic DNS Easy console management access from anywhere on the Internet.

# **Lifetime Warranty**

All Perle IOLAN SCG models are backed by the best service and support in the industry including Perle's unique lifetime warranty. Since 1976 Perle has been providing its customers with networking products that have the highest levels of performance, flexibility, and quality. With the Perle IOLAN SCG deploying and upgrading new services and equipment while minimizing capital expenditures, is easy.

## Software Features - IOLAN SCG LW Secure Console Server

#### **Management & Configuration**

Zero Touch Provisioning (ZTP): automates the provisioning of both the configuration and firmware files through DHCP/Bootp Options

PerleView Central Management: a web-based server configuration tool that simplifies setup and deployment and gives network managers visibility and control over network configurations at remote sites.

Management & Monitoring: HTTP/HTTPS, CLI/Piping, Telnet, SNMPv1/v2/v3, RESTful API, TACACS+

Multiple firmware versions can be saved on the unit. This allows the customer to change between older and newer firmware versions without the need to download.

Multiple configuration files can be stored on the unit., This allows the customer to easily switch between older and newer configurations during testing or production deployments.

Automatic check for software updates available over FTP, HTTP, HTTPS, SCP, SFTP, and TFTP

LLDP-Link Layer Discovery Protocol, as per IEEE 802.1AB, is a neighbor discovery protocol that is used for network devices to advertise information about themselves to other devices on the network. This protocol runs over the data-link layer, which allows two systems running different network layer protocols to learn about each other via TLVs (Type-Length-Value).

RESTful API uses HTTP requests to access and use IOLAN statistics and configuration data. Any of the CLI commands can be executed through a RESTFul API script that cn be controlled externally from a server.

Connectivity Watchdog can instruct the IOLAN to take different actions (i.e. reboot) if the network connectivity to a pre-define IP address is lost. This is helpful for situations when the IOLAN is deployed on remote locations hard to service if the network connectivity is lost.

Automatic DNS Update: Utilize DHCP Opt 81 to set IOLAN domain name for easy name management and with Dynamic DNS support, users on the Internet can access the device server by name without having to know its IP address. See Automatic DNS update support for details

Dynamic DNS with DYNDNS.org

Installation Wizard

#### **Remote Access**

Dial, direct serial: PPP, PAP/CHAP, SLIP

HTTP tunneling enables firewall-safe access to remote serial devices across the internet

Automatic DNS update: Utilize DHCP Opt 81 to set IOLAN domain name for easy name management and with Dynamic DNS support, users on the Internet can access the device server by name without having to know its IP address.

IPSEC VPN client/servers: Microsoft IPSEC VPN Client, Cisco routers with IPSEC VPN feature set, Perle IOLAN SDS, SDG, STS, STG, SCS, SCG, and SCR models

OpenVPN: Clients & Servers

## Logging, Reporting & Alerts

Email alert notification

Syslog, Event Type, Report Type, Alerts & Monitoring, Triggers Status Screen Report, Data Usage, Diagnostic, Login Banner

#### Accessing Console Management Ports (Serial & Ethernet)

Serial Protocols: PPP, PAP/CHAP, SLIP

Connect directly using Telnet / SSH by port and IP address

Use an internet browser to access with HTTP or secure HTTPS

Java-free browser access to remote serial console ports via Telnet and SSH

Ports can be assigned a specific IP address

Multisession capability enables multiple users to access ports simultaneously

Multihost access enables multiple hosts/servers to share serial ports
Console Management Functions
Sun / Oracle Solaris Break Safe
Local port buffer viewing - 256K bytes per port
External port buffering via NFS, encrypted NFS and Syslog
Event notification
Windows Server / Azure - SAC support GUI access to text-based Special Administrative Console
Terminal Server Functions
Telnet
SSH v1 and v2
Auto session login
LPD, RCP printer
MOTD - Message of the day
Serial to Ethernet functions
Tunnel raw serial data across Ethernet - clear or encrypted
Raw serial data over TCP/IP
Raw serial data over UDP
Serial data control of packetized data
Share serial ports with multiple hosts/servers
Virtual modem simulates a modem connection - assign IP address by AT phone number
Virtual modem data can be sent over the Ethernet link with or without SSL encryption
TruePort com/tty redirector provides fixed TTY or COM ports to serial based applications enabling communication with remote devices connected to Perle IOLAN's either in encrypted or clear text modes.
TrueSerial packet technology provides the most authentic serial connections across Ethernet ensuring serial protocol integrity

RFC 2217 standard for transport of serial data and RS232 control signals

Customizable or fixed serial baud rates

Serial encapsulation of industrial protocols such as ModBus, DNP3 and IEC-870-5-101

ModBus TCP gateway enables serial Modbus ASCII/RTU device connection to ModBus TCP

Data logging will store serial data received when no active TCP session and forward to network peer once session re-established - 32K bytes circular per port

#### Redundancy

Load Balancing

**VPN** Failover

Virtual Router Redundancy Protocol (VRRPv3) enables a group of devices to form a single virtual device to provide network redundancy

Primary/Backup host functionality enables automatic connections to alternate hosts

## **Routing / Switching Protocols**

The IOLAN can be configured for any of the major routing protocols for an easy integration within the data center Ethernet backbone: RIP/RIPNg, OSPFv3, BGP-4, NAT, IPv4/IPv6, Static Routing, IPv6 Encapsulations (GRE, 6in4), Port Routing, STP, MSTP

IPv6 to IPv4 translation is fully supported for environments where the Ethernet data backbone is run on IPv6 and the port management is run on IPv4

Using NAT for enhanced security, the IOLAN can map a single IP address, across all or several of it's Ethernet ports.

## **IP Applications**

DDNS, DNS Proxy / Spoofing, relay, client, Opt. 82,

NTP & SNTP (versions 1, 2, 3, 4)

DHCP / DHCPv6 server / DHCP Snooping & BOOTP

#### **VLAN & VPN**

VLAN, OpenVPN, VPN Failover (16 concurrent VPN tunnels)

IPSec VPN: NAT Traversal, ESP authentication protocol

#### **Firewall Features**

Ability to set up firewalls to restrict incoming and outgoing packets

Built in Zone-Based Policy Firewall for local security and traffic filtering.

Access Control Lists (list & ranges & time)

Filter based on MAC Address, IP, Port, Protocol, User

IEEE 802.1x Authentication and Port Security can be enabled for any Ethernet port for increased security port access.

Layer 2 MAC address filtering

Port Forwarding

**BGP Communities** 

#### **Security Features**

AAA Security via remote authentication (Radius, TACACS+, & LDAP)

Trusted host filtering (IP filtering), allowing only those hosts that have been configured in the host table access to the router.

Ability to disable services (for example, Telnet, TruePort, Syslog, SNMP, Modbus, HTTP) for additional security

Ability to disable Ping responses

SSH client/server connections (SSH 1 and SSH 2). Supported ciphers are Blowfish, 3DES, AES-CBC, AES-CTR, AES-GMC, CAST, Arcfour and ChaCha20-Poly1305. Ability to individually disable network services that won't be used by the SSH client/server connections.

SSL/TLS client/server data encryption (TLS v1.2)

SSL Peer authentication

SSL encryption: AES-GCM, key exchange ECDH-ECDSA, HMAC SHA256, SHA384

Encryption: AES (256/192/128), 3DES, DES, Blowfish, CAST128, ARCFOUR(RC4), ARCTWO(RC2)

Hashing Algorithms: MD5, SHA-1, RIPEMD160, SHA1-96, and MD5-96

Key exchange: RSA, EDH-RSA, EDH-DSS, ADH

VPN: OpenVPN & IPSec VPN (NAT Traversal, ESP authentication protocol)

Certificate Support (X.509)
Certificate authority (CA) list
Local database
RIP authentication (via password or MD5)
2 Factor (2F) Authentication over e-mail enhances administration access security
Management Access Control
Demilitarized Zone (DMZ)
Secure HTTP/HTTPS/FTP/Telnet Authentication Proxy
SNMP v3 Authentication and Encryption support
IP Address filtering
Disable unused daemons
Active Directory via LDAP

#### **Protocols**

IPv6, IPv4, TCP/IP, Reverse SSH, SSH, SSL, IPSec/IPv4, IPSec/IPv6, IPSec, RIPV2/MD5, ARP, RARP, UDP, UDP Multicast, ICMP, BOOTP, DHCP, TFTP, SFTP, SNTP, Telnet, raw, reverse Telnet, LPD, RCP, DNS, Dynamic DNS, WINS, HTTP, HTTPS, SMTP, SNMPV3, PPP, PAP/CHAP, SLIP, CSLIP, RFC2217, MSCHAP

# **Hardware Specifications - IOLAN SCG LW Secure Console Server**

Processor	1750 MIPS, 500 MHz core 32 bit ARM processor, with integrated hardware encryption processor
Memory	
RAM MB	1000
Flash MB	4000
Interface Ports	

Integrated Device Management Ports	2 x USB 3.0
Modular Device Management Ports	Create 18, 34, or 50-port SCG Console Servers using any combination of 16-port module cards to support all types of admin ports in one Console Management solution:
	<ul> <li>IOLAN G16 RS232 Card: Interface Module with 16 x RS232 RJ45 interfaces with software configurable Cisco pinouts</li> <li>IOLAN G16 USB Card: Interface Module with 16 x USB 3.0 (Type-A) Console Management Ports.</li> <li>IOLAN G16 RS-Multi Card: Interface Module with 16 x software selectable RS232/422/485 RJ45 interfaces. RS485 Full and Half duplex</li> </ul>
Sun / Solaris	Sun / Oracle 'Solaris' Safe - no "break signal" sent during power cycle causing costly server re-boots or downtime
Serial Port Speeds	50bps to 230Kbps with customizable baud rate support
Data Bits	Configurable for 5,6,7 or 8-bit protocol support Use TruePort to transparently pass 9-bit serial data
Parity	Odd, Even, Mark, Space, None
Flow Control	Hardware, Software, Both, None
Serial Port Protection	15Kv Electrostatic Discharge Protection (ESD)
Local Console Ports	1 x RS232 RJ45 1 x Micro USB with DB9 adapter
Network	2 x 10/100/1000Base-T RJ45 Copper 2 x 100/1000Base-X Fiber SFP Ports Note: Any combination of two network ports can be used. Software selectable Ethernet speed 10/100/1000, Auto Software selectable Half/Full/Auto duplex
Micro SD Card slot	Yes
Ethernet Isolation	1.5Kv Magnetic Isolation

Integrated Wirele	ess Access
WLAN (Wi-Fi®)	IEEE 802.11 a,b,g,n,i
Wireless Topology	Infrastructure (AP) and Peer to Peer- (SoftAP) modes
Wireless Radio	Dual-Band Radio ; 2.4GHz and 5GHz 20, 40Mhz SISO 2.4-GHz
Wireless Data Rates	802.11n: 15, 30, 45, 60, 90, 120, 135, 150 Mbps (40Mhz channel @ 400ns Short GI) 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11b: 1, 2, 5.5, 11 Mbps
Operational Frequency Range (MHz)	2412 to 2484 MHz 4910 to 5825 MHz
Modulation	DSSS, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM

Wireless 802.11b/g (20 MHz channel) Receiver 1 Mbps: -95.0 Sensitivity in 2 Mbps: -92.0 dBm (2.4Ghz 5.5 Mbps: -89.2 SISO) 6 Mbps: -91.0 9 Mbps: -89.0 11 Mbps: -86.3 12 Mbps: -88.0 18 Mbps: -85.5 24 Mbps: -82.5 36 Mbps: -79.0 48 Mbps: -74.0 54 Mbps: -72.7 802.11n (20 MHz channel) @ 400ns GI 7.2 Mbps (MCS0): -89.3 14.4 Mbps (MCS1): -86.5 21.7 Mbps (MCS2): -84.5 28.9 Mbps (MCS3): -81.5 43.3 Mbps (MCS4): -78.0 57.8 Mbps (MCS5): -73.5 65.0 Mbps (MCS6): - 71.5 72.2 Mbps (MCS7): -70.0 802.11n (40 MHz channel) @ 400ns GI 15.0 Mbps (MCS0): -89.3 30.0 Mbps (MCS1): -86.5 45.0 Mbps (MCS2): -84.5 60.0 Mbps (MCS3): -81.5 90.0 Mbps (MCS4): -78.0 120.0 Mbps (MCS5): -73.5 135.0 Mbps (MCS6): - 71.5 150.0 Mbps (MCS7): -70.0

(20 MHz channel) Wireless **Transmit** 1 Mbps: 16.0 Power in dBm 2 Mbps: 16.0 (2.4Ghz SISO) 5.5 Mbps: 16.0 6 Mbps: 16.5 9 Mbps: 16.5 11 Mbps: 16.0 12 Mbps: 16.5 18 Mbps: 16.5 24 Mbps: 16.5 36 Mbps: 15.2 48 Mbps: 14.3 54 Mbps: 13.5 MCS0: 16.0 MCS1: 16.0 MCS2: 16.0 MCS3: 16.0 MCS4: 15.2 MCS5: 14.3 MCS6: 13.5 MCS7: 12.6 (40 MHz channel) MCS0: 14.0 MCS7: 11.8 Wireless 802.11a Receiver 6 Mbps: -92.5 Sensitivity in 9 Mbps: -90.5 dBm (5Ghz 12 Mbps: -90.0 SISO) 18 Mbps: -87.5 24 Mbps: -84.5 36 Mbps: -81.0 48 Mbps: -76.5 54 Mbps: -74.6 802.11n (20MHz channel) @ 400ns GI 7.2 Mbps (MCS0): -91.4 14.4 Mbps (MCS1): -88.0 21.7 Mbps (MCS2): -86.0 28.9 Mbps (MCS3): -83.0 43.3 Mbps (MCS4): -79.8 57.8 Mbps (MCS5): -75.5 65.0 Mbps (MCS6): - 74.0 72.2 Mbps (MCS7): -72.4 802.11n (40MHz channel) @ 400ns GI

> 15.0 Mbps (MCS0): -88.5 150.0 Mbps (MCS7): -69.3

Wireless	802.11a
Transmit	6 Mbps: 18.0
Power in dBm	9 Mbps: 18.0
(5Ghz SISO)	12 Mbps: 18.0
	18 Mbps: 18.0
	24 Mbps: 17.4
	36 Mbps: 16.5
	48 Mbps: 15.8
	54 Mbps: 14.5
	802.11n (HT20) @ 400ns GI
	7.2 Mbps (MCS0): 18.0
	14.4 Mbps (MCS1): 18.0
	21.7 Mbps (MCS2): 18.0
	28.9 Mbps (MCS3): 18.0
	43.3 Mbps (MCS4): 16.5
	57.8 Mbps (MCS5): 15.8
	65.0 Mbps (MCS6): 14.5
	72.2 Mbps (MCS7): 12.0
	802.11n (HT40) @ 400ns GI
	15.0 Mbps (MCS0): 16.5
	150.0 Mbps (MCS7): 12.0
Short Guard	800ns and 400ns (Short Guard Interval)
Interval (SGI)	
Wireless	Dual-band 2.4/5.0 GHz, Omni-directional, Dipole antenna, 50 Ohm, 2 dBi, black
Antenna	with RP-SMA / RSMA finger tighten connector. Same antenna can be used as Mair
	and/or Diversity for increased wireless performance, signal reliability, and extended
	range.
Maximal Ratio	2.4 GHz MRC support for up to 1.4 Extended Range and 5 GHz Diversity Capable
Combining	2. 1 G1/2 Witte capport for up to 1.1 Extended Hange and 6 G1/2 Biveronty Capable
(MRC), Rx	
Diversity	
Wireless	WEP, WPA-PSK, WPA2-PSK & Enterprise (EAP, PEAP, LEAP), 802.11i (includes
Security	hardware-accelerated Advanced Encryption Standard [AES]), 802.1x supplicant
	nardware-accelerated Advanced Encryption Standard [AEO]), 502. 1X Supplicant
Fast Wireless	Ideal for mobile applications, the IOLAN can transparently roam between APs
Roaming	(Access Points) that share the same ESS (Extended Service Set)
WiFi Protected	A plug and play set up feature where the IOLAN can easily connect to a WPS
Setup (WPS	capable central access pointor SoftAP compliant device supporting WPS
V2)	
Integrated Cellul	lar Access

	4G LTE with fallback networks - HSPA+, UMTS, EDGE and GPRS
Antennae (Included)	Two multiband swivel-mount dipole antennae - SMA connectors
Cellular Data	4G LTE (Cat. 3)
Rates	DL: max. 100 Mbps, UL: max. 50 Mbps HSPA+ DL Cat.24
	DL: max. 42 Mbps, UL: max. 5.76 Mbps EDGE Class 12 data rates
	DL: max. 237 kbps, UL: max. 237 kbps GPRS Class 12 data rates
	DL: max. 85.6 kbps, UL: max. 85.6 kbps
SIM Card slot	Accepts Micro SIM (3FF) as per reference standards:
(empty)	ETSI TS 102 221 V9.0.0, Mini-UICC
	The SIM card must be obtained by the user from their carrier of choice
Front Panel LCD	Display and Keyboard Indicators
	Network Link Activity
	Serial Tx/Rx data per port
LED Indicators	
	System Ready
	Network Link Activity
Environmental S	Specifications
Heat Output	IOLAN SCG18: 69.95
(BTU/HR)	IOLAN SCG34: 92.13
	IOLAN SCG50: 114.31
MTBF (Hours)	73,722
	Calculation model based on MIL-HDBK-217-FN2 @ 30 °C
Operating	0°C to 55°C, 32°F to 131°F
Temperature	
Storage	-40°C to 85°C, -40°F to 185°F
Temperature	
Humidity	5 to 95% (non condensing) for both storage and operation.
Case	SECC Zinc plated sheet metal (1 mm)
Ingress	IP30
-	
Protection	

**Mounting** 1U - 19" rack, front and rear mounting hardware included

#### **Regulatory Approvals**

**Emissions** FCC 47 Part 15 Subpart B Class A

ICES-003 (Canada) EN55011 (CISPR11) EN55032 (CISPR32)

EN61000-3-2 Limits for Harmonic Current Emissions EN61000-3-3 Limits of Voltage Fluctuations and Flicker

Immunity EN55024

EN 61000-4-2 (ESD): Contact:

EN 61000-4-3 (RS): EN 61000-4-4 (EFT): EN 61000-4-5 (Surge): EN 61000-4-6 (CS): EN 61000-4-8 (PFMF)

EN 61000-4-11

Safety UL/EN/IEC 62368-1 (previously 60950-1)

CAN/CSA C22.2 No. 62368-1

Carrier Specific IOLAN SCG LA: Auto-detecting

Approval

Verizon Certified AT&T Certified

**IOLAN SCG LE:** not required

Cellular Radio EN 301 908-1

EN 301 908-2 EN 301 511 47 CFR Part 22 47 CFR Part 24 EN 301 908-13

## **IOLAN SCG LA:**

Penta Band LTE: 700/700/850/AWS (1700/2100)/1900 MHz; FDD-Band (13,17,5,4,2)

- Tri Band UMTS (WCDMA): 850/AWS (1700/2100)/1900 MHz; FDD-Band (5,4,2)

- Quad Band GSM/GPRS/EDGE: 850/900/1800/1900 MHz

#### **IOLAN SCG LE:**

- Penta Band LTE: 800/900/1800/2100/2600 MHz;

Cellular Data Technologies Supported - FDD-Band (20,8,3,7,1); Tri Band UMTS (WCDMA):

- 900/1800/2100 MHz; FDD-Band (8,3,1);

- Dual Band GSM/GPRS/EDGE: 900/1800 MH

Wireless	FCC/ICES
Regulatory	ETSI
Domain	TELEC
	Users are responsible for verifying approval for use in their individual countries.
Radio	FCC Part 15.247 Subpart C (2.4 Ghz)
<b>Approvals</b>	FCC Part 15.407 Subpart E (5 Ghz)
	RSS-210 (Canada), RSS-Gen Issue 2 (Canada), ICES-003 Issue 4
	ETSI EN 301 489-1 (V1.9.2)
	ETSI EN 301 489-17 (V2.2.1)
	ETSI EN 300 328 (V1.8.1)
	ETSI EN 301 893 (V1.7.1)
Frequency	FCC / ICES
Bands	2.412 to 2.462 GHz; 11 channels
	5.180 to 5.320 GHz; 8 channels
	5.500 to 5.700 GHz, 8 channels (excluding 5.600 to 5.640 GHz)
	5.745 to 5.825 GHz; 5 channels
	ETSI
	2.412 to 2.472 GHz; 13 channels
	5.180 to 5.320 GHz; 8 channels
	5.500 to 5.700 GHz; 8 channels (excluding 5.600 to 5.640 GHz)
	MIC (formally TELEC)
	2.412 to 2.472 GHz; 13 channels
	4.920 to 4.980 GHz; 4 channels
	5.030 to 5.091 GHz; 3 channels
	5.180 to 5.240 GHz; 8 channels
	5.500 to 5.700 GHz; 11 channels
Other	Reach, RoHS and WEEE Compliant
	CCATS - G168387
	ECCN - 5A992
	HTSUS Number: 8517.62.0020
	Perle Limited Lifetime warranty
<b>D</b>	D. J. A.O. M. J. J.

**Dual Feed DC Models** 

Power

**Dual AC Models** 

Power Supply	USA: IEC320-C13 to NEMA 5-15P line cord UK: IEC320-C13 to BS1363 line cord EU: IEC320-C13 to CEE 7/7 Schuko South Africa: IEC320-C13 to				
	BS546 line cord Australia: IEC320-C13 to AS3112 line cord				
Nominal Input Voltage	110/230v AC	48v DC			
Input Voltage Range	100-240v AC	24- 60v DC			
AC Input Frequency	47-63Hz	-			
Current	@ 100v (Amps)	@ 48v DC (Amps)			
Consumption	IOLAN SCG18: 0.21	IOLAN SCG18: 0.21			
-	IOLAN SCG34: 0.27	IOLAN SCG34: 0.27			
	IOLAN SCG50: 0.33	IOLAN SCG50: 0.33			
	@ 240v (Amps)				
	IOLAN SCG18: 0.09				
	IOLAN SCG34: 0.12				
	IOLAN SCG50: 0.14				
	20.5 Watts				
Typical Power Consumption	Note: USB cards can use an additional power of 2.5 Watts per port up to a max of 8 Watts total				
Power Line Protection	Fast transients: 1 KV (EN61000-4-4 Criteria B) Surge: 2KV (EN61000-4-5 common mode), 1KV (EN61000-4-5 differential and common modes)				
Weight and Dimensions	Dual AC Models	Dual Feed DC Models			
Product Weight	IOLAN SCG18: 3.33 kg /	IOLAN SCG18: 3.24 kg / 7.14 lbs			
J	7.34 lbs	IOLAN SCG34: 3.41 kg / 7.52 lbs			
	IOLAN SCG34: 3.50 kg /	IOLAN SCG50: 3.57 kg / 7.87 lbs			
	7.72 lbs	Č			
	IOLAN SCG50: 3.67 kg /				
	8.09 lbs				

Product Dimensions	1U Rack form factor - 26.4 x 43.4 x 4.4 (cm), 10.38 x 17.1 x 1.75 (in)			
Shipping Weight	IOLAN SCG18: 4.27 kg / 9.41 lbs IOLAN SCG34: 4.44 kg / 9.79 lbs IOLAN SCG50: 4.61 kg / 10.16 lbs	IOLAN SCG18: 4.18 kg / 9.22 lbs IOLAN SCG34: 4.35 kg / 9.59 lbs IOLAN SCG50: 4.51 kg / 9.94 lbs		
Shipping	59 x 36 x 9 (cm), 23.22 x 14	.17 x 3.54 (in)		

# **Dimensions**

# IOLAN G16 RS232 Card RJ45 Serial Connector Pinout - DCE mode (Straight-through)

		Pinout	Direction	EIA-232
		1	in	CTS
		2	in	DSR
		3	in	RxD
		4		GND
R.I45 Socket	RJ45 Socket Pin 1	5		not used
NO-0 OCKET		6	out	TxD
		7	out	DTR
		8	out	RTS

Optional Perle adapters for use with straight thru CAT5 cabling

# IOLAN G16 RS232 Card RJ45 Serial Connector Pinout - DTE mode (Rolled)

1	out	RTS
2	out	DTR
	<u>'</u>	

Pin 1	3	out	TxD
	4		GND
	5	in	DCD
	6	in	RxD
	7	in	DSR
	8	in	CTS

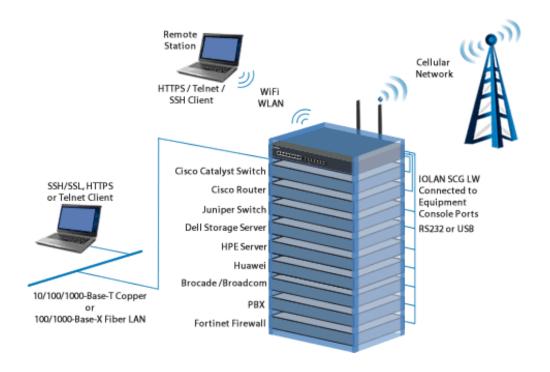
(A rolled RJ45 cable will automatically perform DTE to DCE crossover)

# **IOLAN G16 RS-Multi Card RJ45 Serial Connector Pinout**

	Pinout	Direction	EIA- 232	EIA- 422	EIA-485 Full Duplex	EIA-485 Half Duplex
	1	out	RTS	TxD+	TxD+	DATA+
	2	out	DTR			
	3	out	TxD	TxD-	TxD-	DATA-
	4		GND	GND	GND	GND
RJ45	5		GND	GND	GND	GND
Socket Pin 1	6	in	RxD	RxD+	RxD+	
	7	in	DSR			
	8	in	CTS	RxD-	RxD-	

Optional Perle adapters for use with straight thru CAT5 cabling

# **Data Center Console Management**



# **Seamless Wireless Roaming**

#### Serial devices can roam

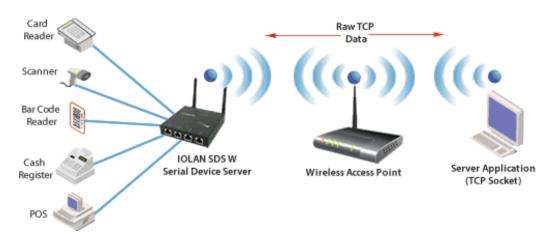
IOLAN SDS W units installed on mobile devices, such as fork lifts with a serial interface, can maintain a continuous connection to network services that are part of Wireless Access Point infrastructure that shares the same ESS (Extended Service Set).



## **TCP**

# **Using RAW TCP Sockets over Wireless LAN**

A raw TCP socket connection which can be initiated from the serial-Ethernet device or from the remote host/server. This can either be on a point to point or shared basis where a serial device can be shared amongst multiple devices. TCP sessions can be initiated either from the TCP server application or from the Perle IOLAN W **serial-Ethernet** adapter.



#### **UDP**

## **Using Raw UDP Sockets over Wireless LAN**

For use with UDP based applications, Perle IOLANs can convert serial equipment data for transport across UDP packets either on a point to point basis or shared across multiple devices.



#### **Console Server**

# **Console Management over Wireless LAN**

For access to remote console ports on routers, switches, etc. Perle IOLAN's enable administrators secure access to these RS232 ports via in-band Reverse Telnet / SSH over wireless LANs.



#### **COM/TTY**

## Connect Serial-based Applications over Wireless LAN with a COM/TTY Port Driver

Serial ports can be connected to network servers or workstations running Perle's TruePort software operating as a virtual COM port. Sessions can be initiated either from the Perle IOLAN or from TruePort.



## **Serial Tunneling over Wireless**

## Serial Tunneling between two Serial Devices over Wireless Peer to Peer

Serial Tunneling enables you to establish a link across Ethernet to a serial port on another IOLAN. Both IOLAN serial ports must be configured for Serial Tunneling. Typically one serial port is configured as a Tunnel Server and the other serial port as a Tunnel Client.



Product		Power	Product
Image	Description	Cord	Number

Product Image	Description	Power Cord	Product Number
	IOLAN SCG18 R-LAW Console Server: 16 x RS232 RJ45 interfaces with software configurable Cisco pinouts, 2 x USB 3.0 (Type-A) Console Management Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (America including AT&T and Verizon) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Mico SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual AC Power	USA NONE	04032734 04032738
Nationally).	IOLAN SCG18 R-LAWD Console Server: 16 x RS232 RJ45 interfaces with software configurable Cisco pinouts, 2 x USB Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (America including AT&T and Verizon) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Micro SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, REST / Python, Cloud-hosting, advanced data encryption, user authentication and event management security features included, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual Feed DC Power.	None	04033860
3.511110000	IOLAN SCG18 R-LEW Console Server: 16 x RS232 RJ45 interfaces with software configurable Cisco pinouts, 2 x USB 3.0 (Type-A) Console Management Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (ETSI Europe) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Mico SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual AC Power	UK EU NONE	04032771 04032772 04032778

Product Image	Description	Power Cord	Product Number
Distribution of the second of	IOLAN SCG18 R-LEWD Console Server: 16 x RS232 RJ45 interfaces with software configurable Cisco pinouts, 2 x USB Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (ETSI Europe) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Micro SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, REST / Python, Cloud-hosting, advanced data encryption, user authentication and event management security features included, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual Feed DC Power.	None	04033900
	IOLAN SCG18 U-LAW Console Server: 18 x USB 3.0 (Type-A) Console Management Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (America including AT&T and Verizon) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Mico SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual AC Power	USA NONE	04033094 04033098
4	IOLAN SCG18 U-LEW Console Server: 18 x USB 3.0 (Type-A) Console Management Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (ETSI Europe) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Mico SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual AC Power	UK EU NONE	04033131 04033132 04033138

Product Image	Description	Power Cord	Product Number
No. of the state o	IOLAN SCG18 S-LAW Console Server: 16 x software selectable RS232/422/485 RJ45 interfaces, 2 x USB Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (America including AT&T and Verizon) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz, Micro SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, REST / Python, Cloud-hosting, advanced data encryption, user authentication and event management security features included, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual AC Power	USA NONE	04034944 04034948
Military	IOLAN SCG18 S-LAWD Console Server: 16 x software selectable RS232/422/485 RJ45 interfaces, 2 x USB Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (America including AT&T and Verizon) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Micro SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, REST / Python, Cloud-hosting, advanced data encryption, user authentication and event management security features included, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual Feed DC Power.	None	04035310
D. H.	IOLAN SCG18 S-LEW Console Server: 16 x software selectable RS232/422/485 RJ45 interfaces, 2 x USB Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (ETSI Europe) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz, Micro SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, REST / Python, Cloud-hosting, advanced data encryption, user authentication and event management security features included, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual AC Power	UK EU NONE	04034981 04034982 04034988

Product Image	Description	Power Cord	Product Number
Marine Control of the	IOLAN SCG18 S-LEWD Console Server: 16 x software selectable RS232/422/485 RJ45 interfaces, 2 x USB Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (ETSI Europe) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Micro SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, REST / Python, Cloud-hosting, advanced data encryption, user authentication and event management security features included, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual Feed DC Power.	None	04035350
	IOLAN SCG34 R-LAW Console Server: 32 x RS232 RJ45 interfaces with software configurable Cisco pinouts, 2 x USB 3.0 (Type-A) Console Management Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (America including AT&T and Verizon) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Mico SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual AC Power	USA NONE	04032854 04032858
	IOLAN SCG34 R-LAWD Console Server: 32 x RS232 RJ45 interfaces with software configurable Cisco pinouts, 2 x USB Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (America including AT&T and Verizon) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Micro SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, REST / Python, Cloud-hosting, advanced data encryption, user authentication and event management security features included, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual Feed DC Power.	None	04033980

Product Image	Description	Power Cord	Product Number
	IOLAN SCG34 R-LEW Console Server: 32 x RS232 RJ45 interfaces with software configurable Cisco pinouts, 2 x USB 3.0 (Type-A) Console Management Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (ETSI Europe) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Mico SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual AC Power	UK EU NONE	04032891 04032892 04032898
	IOLAN SCG34 R-LEWD Console Server: 32 x RS232 RJ45 interfaces with software configurable Cisco pinouts, 2 x USB Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (ETSI Europe) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Micro SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, REST / Python, Cloud-hosting, advanced data encryption, user authentication and event management security features included, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual Feed DC Power.	None	04034020
	IOLAN SCG34 U-LAW Console Server: 34 x USB 3.0 (Type-A) Console Management Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (America including AT&T and Verizon) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Mico SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual AC Power	USA NONE	04033214 04033218

Product Image	Description	Power Cord	Product Number
	IOLAN SCG34 U-LEW Console Server: 34 x USB 3.0 (Type-A) Console Management Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (ETSI Europe) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Mico SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual AC Power	UK EU NONE	04033251 04033252 04033258
	IOLAN SCG34 RU-LAW Console Server: 16 x RS232 RJ45 interfaces with software configurable Cisco pinouts, 18 x USB 3.0 (Type-A) Console Management Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (America including AT&T and Verizon) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Mico SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual AC Power	USA NONE	04033454 04033458
	IOLAN SCG34 RU-LEW Console Server: 16 x RS232 RJ45 interfaces with software configurable Cisco pinouts, 18 x USB 3.0 (Type-A) Console Management Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (ETSI Europe) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Mico SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual AC Power	UK EU NONE	04033491 04033492 04033498

Product Image	Description	Power Cord	Product Number
	IOLAN SCG34 S-LAW Console Server: 32 x software selectable RS232/422/485 RJ45 interfaces, 2 x USB Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (America including AT&T and Verizon) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz, Micro SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, REST / Python, Cloud-hosting, advanced data encryption, user authentication and event management security features included, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual AC Power	USA NONE	04035064 04035068
	IOLAN SCG34 S-LAWD Console Server: 32 x software selectable RS232/422/485 RJ45 interfaces, 2 x USB Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (America including AT&T and Verizon) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Micro SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, REST / Python, Cloud-hosting, advanced data encryption, user authentication and event management security features included, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual Feed DC Power.	None	04035430
	IOLAN SCG34 S-LEW Console Server: 32 x software selectable RS232/422/485 RJ45 interfaces, 2 x USB Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (ETSI Europe) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz, Micro SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, REST / Python, Cloud-hosting, advanced data encryption, user authentication and event management security features included, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual AC Power	UK EU NONE	04035101 04035102 04035108

Product Image	Description	Power Cord	Product Number
	IOLAN SCG34 S-LEWD Console Server: 32 x software selectable RS232/422/485 RJ45 interfaces, 2 x USB Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (ETSI Europe) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Micro SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, REST / Python, Cloud-hosting, advanced data encryption, user authentication and event management security features included, COM port redirector, 15kv ESD, Expandable using IOLAN G16 Cards, Dual Feed DC Power.	None	04035470
	IOLAN SCG50 R-LAW Console Server: 48 x RS232 RJ45 interfaces with software configurable Cisco pinouts, 2 x USB 3.0 (Type-A) Console Management Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (America including AT&T and Verizon) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Mico SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD, Dual AC Power	USA NONE	04032974 04032978
	IOLAN SCG50 R-LAWD Console Server: 48 x RS232 RJ45 interfaces with software configurable Cisco pinouts, 2 x USB Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (America including AT&T and Verizon) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Micro SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, REST / Python, Cloud-hosting, advanced data encryption, user authentication and event management security features included, COM port redirector, 15kv ESD, Dual Feed DC Power.	None	04034100

Product Image	Description	Power Cord	Product Number
	IOLAN SCG50 R-LEW Console Server: 48 x RS232 RJ45 interfaces with software configurable Cisco pinouts, 2 x USB 3.0 (Type-A) Console Management Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (ETSI Europe) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Mico SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD, Dual AC Power	UK EU NONE	04033011 04033012 04033018
1411931123113112112	IOLAN SCG50 R-LEWD Console Server: 48 x RS232 RJ45 interfaces with software configurable Cisco pinouts, 2 x USB Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (ETSI Europe) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Micro SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, REST / Python, Cloud-hosting, advanced data encryption, user authentication and event management security features included, COM port redirector, 15kv ESD, Dual Feed DC Power.	None	04034140
	IOLAN SCG50 U-LAW Console Server: 50 x USB 3.0 (Type-A) Console Management Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (America including AT&T and Verizon) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Mico SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD, Dual AC Power	USA NONE	04033334 04033338

Product Image	Description	Power Cord	Product Number
	IOLAN SCG50 U-LEW Console Server: 50 x USB 3.0 (Type-A) Console Management Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (ETSI Europe) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Mico SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD, Dual AC Power	UK EU NONE	04033371 04033372 04033378
	IOLAN SCG50 RRU-LAW Console Server: 32 x RS232 RJ45 interfaces with software configurable Cisco pinouts, 18 x USB 3.0 (Type-A) Console Management Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (America including AT&T and Verizon) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Mico SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD, Dual AC Power	USA NONE	04033574 04033578
	IOLAN SCG50 RRU-LEW Console Server: 32 x RS232 RJ45 interfaces with software configurable Cisco pinouts, 18 x USB 3.0 (Type-A) Console Management Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (ETSI Europe) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Mico SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD, Dual AC Power	UK EU NONE	04033611 04033612 04033618

Product Image	Description	Power Cord	Product Number
	IOLAN SCG50 RUU-LAW Console Server: 16 x RS232 RJ45 interfaces with software configurable Cisco pinouts, 34 x USB 3.0 (Type-A) Console Management Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (America including AT&T and Verizon) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Mico SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD, Dual AC Power	USA NONE	04033694 04033698
	IOLAN SCG50 RUU-LEW Console Server: 16 x RS232 RJ45 interfaces with software configurable Cisco pinouts, 34 x USB 3.0 (Type-A) Console Management Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (ETSI Europe) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Mico SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD, Dual AC Power	UK EU NONE	04033731 04033732 04033738
	IOLAN SCG50 S-LAW Console Server: 48 x software selectable RS232/422/485 RJ45 interfaces, 2 x USB Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (America including AT&T and Verizon) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz, Micro SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, REST / Python, Cloud-hosting, advanced data encryption, user authentication and event management security features included, COM port redirector, 15kv ESD, Dual AC Power	USA NONE	04035184 04035188

Product Image	Description	Power Cord	Product Number
	IOLAN SCG50 S-LAWD Console Server: 48 x software selectable RS232/422/485 RJ45 interfaces, 2 x USB Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (America including AT&T and Verizon) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Micro SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, REST / Python, Cloud-hosting, advanced data encryption, user authentication and event management security features included, COM port redirector, 15kv ESD, Dual Feed DC Power.	None	04035550
	IOLAN SCG50 S-LEWD Console Server: 48 x software selectable RS232/422/485 RJ45 interfaces, 2 x USB Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (ETSI Europe) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz, Micro SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, REST / Python, Cloud-hosting, advanced data encryption, user authentication and event management security features included, COM port redirector, 15kv ESD, Dual AC Power	UK	04035221
	IOLAN SCG50 S-LEW Console Server: 48 x software selectable RS232/422/485 RJ45 interfaces, 2 x USB Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (ETSI Europe) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz, Micro SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, REST / Python, Cloud-hosting, advanced data encryption, user authentication and event management security features included, COM port redirector, 15kv ESD, Dual AC Power	EU NONE	04035222 04035228

Product	Description	Power	Product
Image		Cord	Number
	IOLAN SCG50 S-LEWD Console Server: 48 x software selectable RS232/422/485 RJ45 interfaces, 2 x USB Ports, Front Panel Display and Keyboard, 2 x auto-sensing 10/100/1000 Ethernet Combo Ports (RJ45 or SFP), Cellular WWAN capability based on 4G LTE (ETSI Europe) with fallback networks (HSPA+, UMTS, EDGE and GPRS), Wireless LAN (WiFi) client IEEE 802.11 a, b, g, n @ 2.4Ghz/5Ghz,Micro SD Card Slot, Micro USB and RS232 RJ45 Console Admin Ports, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, REST / Python, Cloud-hosting, advanced data encryption, user authentication and event management security features included, COM port redirector, 15kv ESD, Dual Feed DC Power.	None	04035590

# **Accessories**

Accessory Image	Description	Model Number	Accessory Number
	IOLAN G16 RS232 Card: Interface Module with 16 x RS232 RJ45 interfaces with software configurable Cisco pinouts. Field upgradeable accessory to add ports to expandable IOLAN SCG Console Servers.	IOLAN G16 RS232 Card	04033800
	IOLAN G16 USB Card: Interface Module with 16 x USB 3.0 (Type-A) Console Management Ports. Field upgradeable accessory to add ports to expandable IOLAN SCG Console Servers.	IOLAN G16 USB Card	04033810
	IOLAN G16 RS-Multi Card: Interface Module with 16 x software selectable RS232/422/485 RJ45 interfaces. Field upgradeable accessory to add ports to expandable IOLAN SCG Console Servers.	IOLAN G16 RS- Multi Card	04033820

Please click here to see what adapters you may need

Accessory Image	Description	Model Number	Accessory Number	
	IOLAN SCG/SCR RJ45F to DB9M adapter with DCD. View Pinout	DBA0040 Adapter	04007220	
	IOLAN SCG/SCR RJ45F to DB25M adapter with DCD. View Pinout	DBA0041 Adapter	04007230	
	DBA0040 8pck - 8 pack of #04007220 IOLAN SCG/SCR RJ45F to DB9M adapter with DCD. View Pinout	DBA0040 Adapter 8 Pck	04031360	
	DBA0041 8pck - 8 pack of #04007230 IOLAN SCG/SCR RJ45F to DB25M adapter with DCD. View Pinout	DBA0041 Adapter 8 Pck	04031390	
Maintenance agreements - Console Server / Device Server / Terminal Server Please click here to check for maintenance availability in your region				
	16-18 Port Terminal/Device/Console Servers - Express Replacement	NSS-16 PortZPRESSREP	SERNSS16	
	16-18 Port Terminal/Device/Console Servers -	NSS-16	SERNSS16F	

PortZPRESSREPF

portEXPRESSREP

PortXPRESSREPF

SERNSS32

SERNSS32F

**NSS-32** 

NSS-32

Express Replacement French

Express Replacement French

Express Replacement

32-34 Port Terminal/Device/Console Servers -

32-34 Port Terminal/Device/Console Servers -

Accessory Image	Description	Model Number	Accessory Number
	48-50 Port Terminal/Device/Console Servers - Express Replacement	NSS-48 portXPRESSREP	SERNSS48
	48-50 Port Terminal/Device/Console Servers - Express Replacement French	NSS-48 PortXPRESSREPF	SERNSS48F

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