

IOLAN SCR1618 Secure Console Server

In-Band and Out-of-Band IT Infrastructure Management



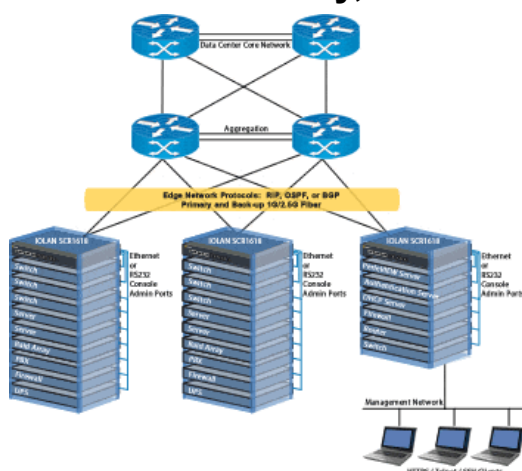
- 16 x RS232 RJ45 Console Management Ports
- 16 x Ethernet RJ45 Console Management Ports
- 2 x SFP Slots supporting 1G/2.5G Fiber or 10/100/1000Base-T
- **PerleVIEW Central Management Platform** simplifies configuration, administration, monitoring, and troubleshooting.
- **Cloud Hosting** -- Deploy and manage your network from the cloud
- Advanced routing engine with AAA security and SSH/SSL encryption to meet all data center compliance policies

The **IOLAN SCR1618 Console Server** provides data center managers with secure remote console management of any device with an **RS232 or Ethernet RJ45 console port**. This cost-effective 1U rack solution maintains protocol integrity across Ethernet and adds full IPv4/IPv6 routing capabilities with support for RIP, OSPF, and BGP protocols. An **integrated firewall** and **two-factor authentication** enhance security while the powerful multi-core CPU ensures lightning-fast routing and switching. With **advanced failover** to multiple networks and **Zero Touch Provisioning (ZTP)**, the IOLAN SCR is ideal for data center management and out-of-band management of IT assets from anywhere in the world.

Console Management for IT assets

The **IOLAN SCR1618 Console Server** supports **Ethernet and RS232 RJ45 connectivity to console ports** on equipment such as **Cisco, Juniper, HP, routers, switches, firewalls, servers, PBXs, network storage equipment**, and **security appliances** through an IP network. This makes it an ideal out of band management solution for IT equipment located in data centers or remote sites.

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 interoperability within a network, providing flexibility and the ability to match the right solution for a particular application.

High Availability Access

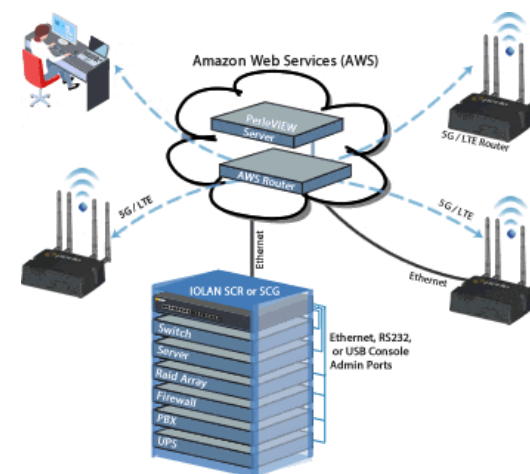
To simplify management and respond swiftly to issues, network administrators require access to all console ports via a single portal view. Perle's cloud-based centralized management solution puts all your network and IT infrastructure into a single application and provides secure reliable access and 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 SCR has built-in fault-tolerant capabilities to ensure secure and reliable access for managing important mission-critical equipment. With 18 x Routing / Switching Ethernet interfaces, the IOLAN SCR provides multiple redundant network paths to ensure that console management access is available even if part of the network is down. The dual AC power supply ensures that console management is available even if the primary AC power source fails.

Protection against electrostatic discharges and power surges is provided with robust 15Kv ESD protection circuitry on each console port.

Lifetime Warranty

All Perle IOLAN SCR 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 SCR deploying and upgrading new services and equipment while minimizing capital expenditures, is easy.



Software Features - IOLAN SCR 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 can 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

Network Assist: This Windows-based desktop application helps busy IT managers configure and monitor the status of deployed Perle devices.

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-GCM, 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

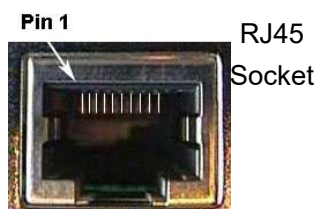
Specifications				
Lifetime limited warranty	Reach, RoHS and WEEE Compliant	HTSUS Number: 8517.62.0020	UNSPSC Code: 43222625	ECCN: 5A992
 				

Interface Ports	
Back of Product	
Integrated Device Management Ports (Serial)	• 16 x RS232 RJ45 • Data Bits: Configurable for 5,6,7 or 8-bit protocol support • Parity: Odd, Even, Mark, Space, None • Flow Control: Hardware, Software, Both, None • Serial Protection: 15Kv Electrostatic Discharge Protection (ESD)
Integrated Device Management Ports (Ethernet)	• 16 x 10/100/1000 Base-T Copper • Software selectable 10/100/1000 Ethernet, Auto • Software selectable Half/Full/Auto duplex • Ethernet isolation 1.5KV magnetic • Up to 100m / 328ft
Network	• 2 x SFP Slots supporting 1G/2.5G Fiber or 10/100/1000Base-T • IEEE 802.3 for 10Base-TX • IEEE 802.3u for 100Base-TX and 100Base-FX • IEEE 802.3ab for 1000Base-T • IEEE 802.3x for Flow Control
Local Console Port	1 x RS232 RJ45
LEDs	Power 1 & 2, System, WAN / IP Health, Ethernet Port Activity & Speed
Reset	Reset Button used for restart, factory default and safe mode
Power	
Power Input	Dual AC power supplies
Nominal Input Voltage	110/230v AC
Input Voltage Range	100-240v AC
AC Input Frequency	47-63Hz
Current Consumption @ 100v (Amps)	0.2A

Current Consumption @ 240v (Amps)	0.15A
Typical Power Consumption (Watts)	16.8 Watts
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)
Environmental Specifications	
Operating Temperature	0°C to 55°C, 32°F to 131°F
Storage Temperature	-40°C to 85°C, -40°F to 185°F
Humidity	5 to 95% (non condensing) for both storage and operation.
Operating Altitude	Up to 3,048 meters (10,000 ft)
Ingress Protection Rating	IP30
Heat Output (BTU/HR)	122
MTBF (Hours)	190,295 Hours <i>Calculation model based on MIL-HDBK-217-FN2 @ 30°C</i>
Case	SECC Zinc plated sheet metal (1 mm)
Mounting	1U - 19' rack, front and rear mounting hardware included
Product Weight and Dimensions	
Product Weight	3.54 kg / 7.08 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)
Packaging	
Shipping Dimensions	59 x 36 x 9 (cm) / 23.23 x 14.17 x 3.54 (in)
Shipping Weight	4.26 kg / 9.40 lbs

Regulatory Approvals	
Emissions	• FCC 47 Part 15 Subpart B Class A • ICES-003 (Canada) • EN55011 (CISPR11) • CISPR 32 / EN 55032 • EN61000-3-2 Limits for Harmonic Current Emissions • EN61000-3-3 Limits of Voltage Fluctuations and Flicker
Immunity	• CISPR 35 / EN 55035 • EN61000-4-2 (ESD): Contact • EN 61000-4-3 (RS): EN 61000-4-4 (EFT) • EN61000-4-5 (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 CE Mark

IOLAN RJ45 Serial Connector Pinout - Straight-through cable to connect to Cisco Console port



Pinout	Direction	EIA-232
1	in	CTS
2	in	DSR
3	in	RxD
4	N/A	GND
5	N/A	GND
6	out	TxD
7	out	DTR
8	out	RTS

Product List



IOLAN SCR1618 Console Server: 16 x RS232 RJ45 Console Management Ports, 16 x Ethernet Managements Ports, 2 x SFP Slots supporting 1G/2.5G Fiber or 10/100/1000Base-T, IPv4/IPv6 routing (RIP, OSPF, BGP), ZTP, Cloud-hosting, advanced data encryption and user authentication, 15kv ESD, Dual AC Power

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS
04031134	04031131	04031132	04031135	04031136

Related Accessories

Cable Accessories



3 meter RJ45 to RJ45 CAT5 Straight-thru cable #1100360-10

04005120



3 meter RJ45 to RJ45 CAT5 Rolled (crossover) cable #1100370-10. For use with Perle

04005130



DBA0010C - RJ-45F to DB-25F crossover (DTE) adapter #1100270-10 for IOLAN.

04007010



DBA0011C - RJ-45F to DB-25M crossover (DTE) adapter #1100280-10 for IOLAN.

04007020



DBA0013C - RJ-45F to DB-25M straight-thru (DCE) adapter #1100290-10 for modems on IOLAN.

04007030



DBA0020C - RJ-45F to DB-9F crossover (DTE) adapter #1100300-10 for Perle serial console

04007040



DBA0021C - RJ-45F to DB-9M crossover (DTE) adapter #1100310-10 for IOLAN.

04007050



DBA0031C - RJ-45m to RJ-45F SUN/Cisco crossover adapter #1100320-10 for

04007060



C Model Kit Includes: (1) RJ-45 to DB-25 DTE Male adapter, (1) RJ-45 to DB-25 DCE Male adapter,

04007070



DBA0023C - RJ-45F to DB-9M straight-thru (DCE) adapter #1100350-11 for modems on IOLAN

04007210



IOLAN SCG/SCR RJ45F to DB9M adapter with DCD.

04007220



IOLAN SCG/SCR RJ45F to DB25M adapter with DCD.

04007230



DBA0031C 8pck - 8 pack of #04007060 RJ45M to RJ45F Sun/Cisco crossover adapter for IOLAN.

04031290



DBA0010C 8pck - 8 pack of #04007010 RJ45F to DB-25F (DTE) crossover adapter for IOLAN.

04031300



DBA0011C 8pck - 8 pack of #04007020 RJ45F to DB25M (DTE) crossover adapter for IOLAN.

04031310



DBA0020C 8pck - 8
pack of #04007040
RJ45F to DB9F
(DTE) crossover
adapter for IOLAN.

04031320



DBA0021C 8pck - 8
pack of #04007050
RJ45F to DB9M
(DTE) crossover
adapter for IOLAN.

04031330



DBA0013C 8pck - 8
pack of #04007030
RJ45F to DB25M
Straight-thru adapter
for modems on

04031340



DBA0040 8pck - 8
pack of #04007220
IOLAN SCG/SCR
RJ45F to DB9M
adapter with DCD.

04031360



DBA0041 8pck - 8
pack of #04007230
IOLAN SCG/SCR
RJ45F to DB25M
adapter with DCD.

04031390

Accessories



DIN Rail Mounting Kit for select IOLAN Rack models

04032490

Maintenance agreements - Console Server / Device Server / Terminal Server



32 to 34 Port Terminal/Device/Console Servers - Express Replacement 1 Year Maintenance Contract

SERNSS32



32 to 34 Port Terminal/Device/Console Servers - Express Replacement 1 Year Maintenance Contract, French

SERNSS32F