



# Nodegrid Serial Console - R Series

Out-of-Band Secure Remote Access and Control for Infrastructure Management Devices



Nodegrid Serial Console - R Series - Copper



Nodegrid Serial Console - R Series - Fiber

## Benefits

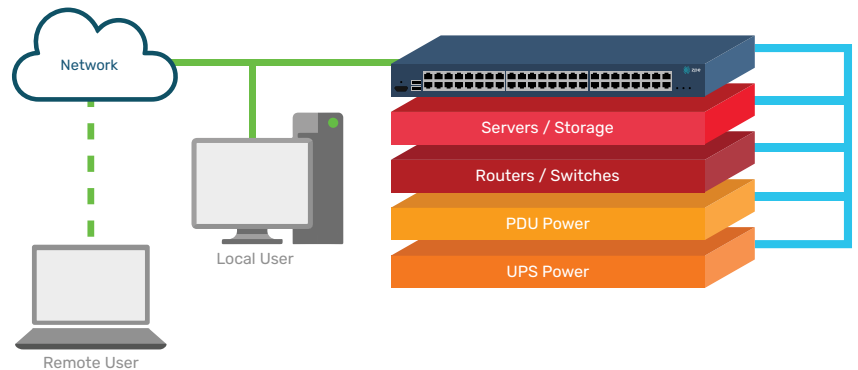
- **Reduce CAPEX and OPEX** expenses with consolidated extensible solution and automated management.
- **Reduce downtime** and trips to the data center with instant access.
- **Minimizes MTTR, downtime and expenses** with secure, centralized remote device access & control
- **Increases site reliability** with open industry standard hardware, and easy-to-use software

## Features

- **Strong Out-of-Band Management** integration
- **Extensible applications** with virtualization and containers
- **Zero Touch Provisioning (ZTP)** over the WAN for fast and easy setup in remote locations
- **Integrates with ZPE Cloud and Nodegrid Manager** vendor-neutral, unified management solution
- **Modern x86-64bit Linux Kernel** for fast security patching and widespread software availability
- **Extended Automation** based on actionable data
- **Gateway and multi-routing** table capability
- **SSL VPN and Secure Tunnel**
- **DHCP server** - extra IPs for your remote site or replace your current router altogether
- **Firewall** - built in and turns on with a checkbox
- **Secure** - selectable encrypted cryptographic protocols and cypher suite levels, configuration checksum™
- **Power control and monitoring** - get alerts on IT device health and solve problems automatically
- **Orchestration** - Puppet, Chef, Ansible, RESTful

Nodegrid Serial Console (NSC-R) is the data center's next generation console server providing secure, hyperscale remote access and power management to all IT devices, regardless of manufacturer.

**Nodegrid Serial Console** provides fast, secure and reliable In-Band and Out-of-Band access to server, network, storage, power and other serial console devices for faster problem resolution. In addition, when coupled with ZPE's vendor-neutral Nodegrid Manager software, IT staff immediately have centralized access to NSC devices and all other physical and virtual devices (VM, Service Processor and KVM/IP) managed by the software, providing a truly hyper-converged infrastructure management solution.



**Fast.** No more waiting! Nodegrid Serial Console's lightning fast dual-core x86-64 CPU, large memory and SSD coupled with a modern 64-bit Linux OS can handle 1,000+ concurrent sessions, allowing for more operations, users and I/O than older console servers.

**Secure.** Blends existing policy-based enterprise AD/LDAP/SAML authentication and authorization with the latest in cryptographic protocols and cypher suite levels, up-to-date SSL and SSH data encryption, IP filtering, secure boot, self-encrypted disk and a system configuration checksum to help your information remain secure.

**Reliable.** Deployed by the biggest tech and financial companies in the world; Designed by award-winning console industry veterans. Built using reliable and open modular industry standard hardware components.

#### Accessibility

- Dual Gigabit Ethernet ports with Multiple Routing Table and fail-over to Wi-Fi hotspot and console port.

#### Managed Devices

- Serial devices, USB devices, Network devices, PDU, and IPMI devices

#### Networking

- IPv4 / IPv6 Support
- Embedded Layer 2 Switching, VLAN, Layer 3 Routing, BGP, OSPF, RIP, QoS, DHCP (Client and Server)

#### Port Access

- Direct access by port name, TCP port, device name and IPv4/IPv6
- High performance port login: <1 sec on SSH, <3 sec on Telnet
- 250+ simultaneous sessions
- Port sharing
- Command line interface (CLI)
- Port custom field support, port icon configuration, port search
- Device clustering across multiple Nodegrid units
- Break-over SSH support

#### System Management

- Extensible automated control based on actionable real-time data
- Web GUI management portal, command line interface (CLI), Linux root shell
- Zero Touch Provisioning for configuration and firmware updates
- Multiple and customizable user levels of access
- Auto-discovery via network scan and custom probes
- NTP support, global time zone support and cell tower time synchronization
- SNMP
- Orchestration Integration and Automation: Puppet, Chef, Ansible, RESTful, ZPE Cloud and Nodegrid Manager

#### Security

- Edgified, hardened device with BIOS protection, TPM 2.0, UEFI Secure Boot, Signed OS, Self-Encrypted Disk (SED), Geofencing
- X.509 SSH certificate support, 4096-bit encryption keys
- Selectable cryptographic protocols for SSH and HTTPS (TLSv1.3)
- Selectable cypher suite levels: high, medium, low, custom
- SSL VPN - Client and Server
- IPsec, Wireguard, Strongswan with support for multi sites
- Local, AD/LDAP, RADIUS, TACACS+, Kerberos, authentication
- SAML support via DUO, OKTA, Ping Identity
- Local, backup-user authentication support
- User-access lists per port
- Group/role-based authorization: AD/LDAP, RADIUS, TACACS+
- Fine grain and role based access control
- Firewall - IP packet and security filtering, IP forwarding support
- MD5 / SHA System Configuration Checksum™
- System event syslog
- Custom security settings
- Strong password enforcement
- Two Factor Authentication with RSA and DUO

#### Access Protocols

- HTTPS, SSHv2; optional HTTP, Telnet and SSHv1

#### Device View Options

- Tree, Table, Geo Map, Node and WEB with search

#### Data Logging and Notifications

- Local port buffering – 20 MB per port
- Local, NFS, syslog, off-line data logging
- Time stamp and rotation for data logging
- Event destination: email, syslog, local
- Notification: syslog, email

#### Operating System

- Built-in x86-64bit Linux kernel

#### Power Specifications

- 40V-63 VDC dual power input (redundant)
- Power consumption 45 W typical
- Single or Dual AC: 100-240 VAC, 50/60 Hz

#### Warranty

- 2 year limited warranty

#### CPU & Storage

- Intel x86\_64 multi-core
- 4GB of DDR3 DRAM
- 32GB FLASH (MSATA SSD)

#### Interfaces

- 16, 32, 48, 96 RS-232 serial ports on RJ45 @ 230,400 bps max/port.
- 2 Gigabit (10/100/1000BT) Ethernet interfaces on RJ45 or optionally 2 SFP+ 1/2.5/10GB compatible
- 1 RS-232 serial console port on RJ45
- 1 USB 3.0 Host and 2 USB 2.0 Hosts on Type A connector
- 1 HDMI output port

#### Physical

- Front-Rear mounting brackets
- Size (L x W x H): 443 x 312 x 43 mm (17.4 x 12.3 x 1.7 in), 1U
- Weight: 4.9 kg (10.8 lb), depending on options
- Shipping weight: 9.5 kg (20.9 lb)
- Shipping (L x W x H): 600 x 440 x 210 mm (23.6 x 17.3 x 8.3 in)

#### Environmental

- Operation: 0 to 50° C (32 to 122° F), 5-95% RH, non-cond.
- Storage: -20 to 67° C (-4 to 153° F), 5-95% RH, non-cond.

#### Safety

- UL 62368-1 (USA) CSA C22.2 No. 62368-1(Canada), EN 62368-1:2014 (2nd Edition) (EU), IEC62368-1, 2nd Edition, Rev. February 26, 2014 (International), CB, EAC/Customs Union (CU), KCC, BSMI, CCC

#### Emissions and Immunity

- FCC Class A (USA), CE Class A -EN 55035: 2017; CISPR 35: 2016, ICES-003 Class A (Canada), VCCI Class A (Japan), RCM (AS/NZS), EAC/Customs Union (CU), KCC, BSMI, CCC Class A (China)



## Ordering Information

| Product SKU  | Description   |
|--|---|
| NSC-TxxR-STND-yyy  | Nodegrid Serial Console - R Series - NSC xx -port unit, yyy- Power Configuration, Cisco Rolled Pinouts, 2-Cores, 4GB RAM, 32GB SSD            |
| NSC-TxxR-STND-yyy-SFP  | Nodegrid Serial Console - R Series - NSC xx -port unit, yyy- Power Configuration, Cisco Rolled Pinouts, 2-Cores, 4GB RAM, 32GB SSD, Fiber SFP |
| 'xx' - Port Configuration: 16, 32, 48, 96      'yyy' - Power Configuration: SAC (Single AC), DAC (Dual AC), DDC (Dual DDC) |   |

