

Nodegrid Serial Console (R Series)

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



Nodegrid Serial Console – R Series

Benefits

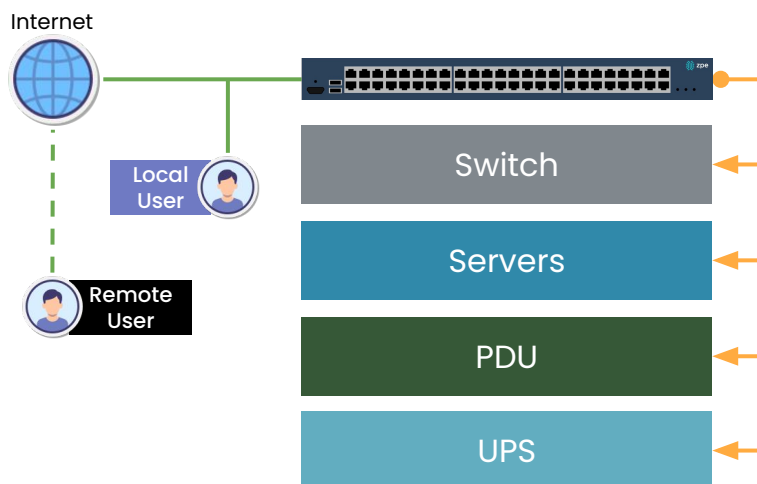
- **Reduce CAPEX and OPEX expenses** with consolidated extensible solution and automated management.
- **Reduce downtime** and trips to the data center with instant access.
- **Minimizes MTTR, downtime and expenses** with secure, centralized remote device access & control
- **Increase Site Reliability** 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 serial 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.

Technical Specifications

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, offline 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 and 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)

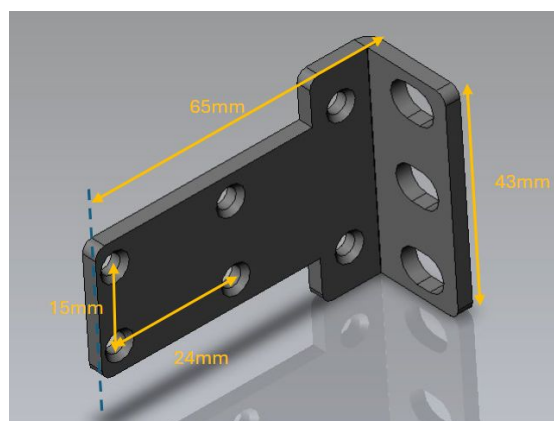


Ordering Information

Channel SKU	Description	Power
NSC-T16R-STND-SAC	ZPE Systems Nodegrid Serial Console - R Series - 16 Port - Single AC.	Single AC
NSC-T16R-STND-DAC	ZPE Systems Nodegrid Serial Console - R Series - 16 Port - Dual AC.	Dual AC
NSC-T16R-STND-DDC	ZPE Systems Nodegrid Serial Console - R Series - 16 Port - Dual DC.	Dual DC
NSC-T32R-STND-SAC	ZPE Systems Nodegrid Serial Console - R Series - 32 Port - Single AC.	Single AC
NSC-T32R-STND-DAC	ZPE Systems Nodegrid Serial Console - R Series - 32 Port - Dual AC.	Dual AC
NSC-T32R-STND-DDC	ZPE Systems Nodegrid Serial Console - R Series - 32 Port - Dual DC.	Dual DC
NSC-T48R-STND-SAC	ZPE Systems Nodegrid Serial Console - R Series - 48 Port - Single AC.	Single AC
NSC-T48R-STND-DAC	ZPE Systems Nodegrid Serial Console - R Series - 48 Port - Dual AC.	Dual AC
NSC-T48R-STND-DDC	ZPE Systems Nodegrid Serial Console - R Series - 48 Port - Dual DC.	Dual DC
NSC-T48R-STND-SAC-SFP	ZPE Systems Nodegrid Serial Console - R Series - 48 Port - Single AC. With SFP+	Single AC
NSC-T48R-STND-DAC-SFP	ZPE Systems Nodegrid Serial Console - R Series - 48 Port - Dual AC. With SFP+	Dual AC
NSC-T48R-STND-DDC-SFP	ZPE Systems Nodegrid Serial Console - R Series - 48 Port - Dual DC. With SFP+	Dual DC
NSC-T96R-STND-SAC	ZPE Systems Nodegrid Serial Console - R Series - 96 Port - Single AC.	Single AC
NSC-T96R-STND-DAC	ZPE Systems Nodegrid Serial Console - R Series - 96 Port - Dual AC.	Dual AC
NSC-T96R-STND-DDC	ZPE Systems Nodegrid Serial Console - R Series - 96 Port - Dual DC.	Dual DC
NSC-T96R-STND-SAC-SFP	ZPE Systems Nodegrid Serial Console - R Series - 96 Port - Single AC. With SFP+	Single AC
NSC-T96R-STND-DAC-SFP	ZPE Systems Nodegrid Serial Console - R Series - 96 Port - Dual AC. With SFP+	Dual AC
NSC-T96R-STND-DDC-SFP	ZPE Systems Nodegrid Serial Console - R Series - 96 Port - Dual DC. With SFP+	Dual DC

Accessories

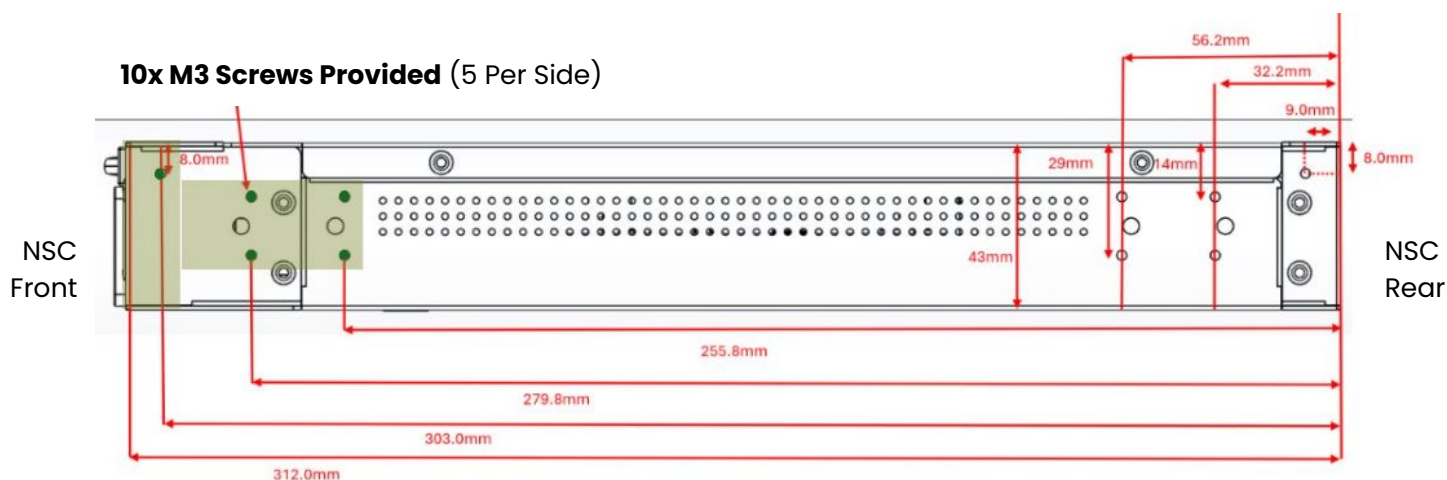
Channel SKU	Description	Photo
ZRMK-A	Rack Mount Kit for Nodegrid Serial Console (Legacy) Includes (2) Brackets & (10) M3 Screws	



Rack Mount Kit Specifications

- For Nodegrid Serial Console (Legacy)
- For 19" wide Racks
- Weight: 103.4g (51.7g per mounting ear)

10x M3 Screws Provided (5 Per Side)



NOTE: For more information, please contact ZPE Systems Sales: sales@zpesystems.com