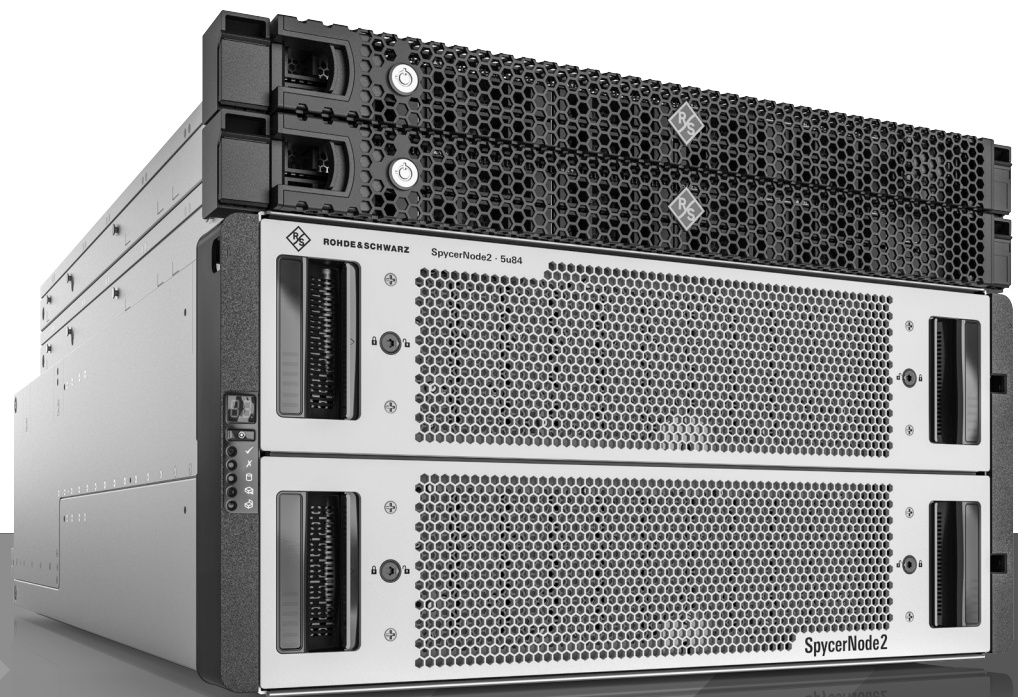


SpycerNode2

Specifications

SpycerNode2 dual head controller server

SpycerNode 5u84 storage server, JBOD unit



Data Sheet
Version 01.00

ROHDE & SCHWARZ

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CONTENTS

Definitions	3
Description	4
Key features	4
Specifications.....	4
SpycerNode2 dual head controller server	4
<i>Operating environment</i>	4
<i>Components</i>	5
<i>Regulatory compliance</i>	6
SpycerNode 5u84 storage server, JBOD unit	7
<i>System configuration</i>	7
<i>Environmental conditions</i>	7
<i>Power rating</i>	7
<i>Product conformity</i>	8
<i>Rackmounting</i>	8
<i>Dimensions and weight</i>	8
Ordering information	9
Storage bundles options	9
Service level agreements	9

Definitions

General

Product data applies under the following conditions:

- Three hours storage at ambient temperature followed by 30 minutes warm-up operation
- Specified environmental conditions met
- Recommended calibration interval adhered to
- All internal automatic adjustments performed, if applicable

Specifications with limits

Represent warranted product performance by means of a range of values for the specified parameter. These specifications are marked with limiting symbols such as $<$, \leq , $>$, \geq , \pm , or descriptions such as maximum, limit of, minimum. Compliance is ensured by testing or is derived from the design. Test limits are narrowed by guard bands to take into account measurement uncertainties, drift and aging, if applicable.



Non-traceable specifications with limits (n. trc.)

Represent product performance that is specified and tested as described under “Specifications with limits” above. However, product performance in this case cannot be warranted due to the lack of measuring equipment traceable to national metrology standards. In this case, measurements are referenced to standards used in the Rohde & Schwarz laboratories.

Specifications without limits

Represent warranted product performance for the specified parameter. These specifications are not specially marked and represent values with no or negligible deviations from the given value (e.g. dimensions or resolution of a setting parameter). Compliance is ensured by design.

Typical data (typ.)

Characterizes product performance by means of representative information for the given parameter. When marked with $<$, $>$ or as a range, it represents the performance met by approximately 80 % of the instruments at production time. Otherwise, it represents the mean value.

Nominal values (nom.)

Characterize product performance by means of a representative value for the given parameter (e.g. nominal impedance). In contrast to typical data, a statistical evaluation does not take place and the parameter is not tested during production.

Measured values (meas.)

Characterize expected product performance by means of measurement results gained from individual samples.

Uncertainties

Represent limits of measurement uncertainty for a given measurand. Uncertainty is defined with a coverage factor of 2 and has been calculated in line with the rules of the Guide to the Expression of Uncertainty in Measurement (GUM), taking into account environmental conditions, aging, wear and tear.

Device settings and GUI parameters are designated with the format “parameter: value”.

Non-traceable specifications with limits, typical data as well as nominal and measured values are not warranted by Rohde & Schwarz.

In line with the 3GPP standard, chip rates are specified in million chips per second (Mcps), whereas bit rates and symbol rates are specified in billion bit per second (Gbps), million bit per second (Mbps), thousand bit per second (kbps), million symbols per second (Msps) or thousand symbols per second (ksps), and sample rates are specified in million samples per second (Msample/s). Gbps, Mcps, Mbps, Msps, kbps, ksps and Msample/s are not SI units.

Description

The SpycerNode2 consists of two 1U single-socket controller servers in combination with the proven and successful 5u84 disk system. Featuring the AMD EPYC processor, each controller unit supports the PCIe 4.0 standard for I/O. With up to 128 PCIe lanes and NVMe drive options, the external controller form factor introduces greater flexibility with future-proofing and is ideal for modern multiform workflows.

Key features

Combining performance and flexibility, the SpycerNode2 dual head controller server is perfect for production services of all sizes. The server offers high-performance features required in the media and entertainment industry. Outstanding reliability, availability, serviceability and high-efficiency design will improve your storage environment and can help save operational costs. Advanced Cloud integration increases the flexible workflow integration possibilities.

Continuing with the “no single point of failure” design, advanced data security and support for dual-ported NL-SAS and dual-ported SSD drives, the SpycerNode 5u84 JBOD unit fulfills a wide range of applications:

- Software defined storage system
- Up to 3 additional JBOD's (4 in total) for greater expansion
- Dynamic media cache ready (NVMe upgrade kit required)
- 28 disk drive bundles (maximum 3 per 5u84 chassis)
- Single namespace
- Scalable data and hardware architecture
- Advanced erasure coding data protection
- Advanced 12 Gbit/s SAS implementation

Specifications

SpycerNode2 dual head controller server

Operating environment

Input voltage		200 V to 240 V
Current		4.1 A
Environmental temperature	operating	+10 °C to +35 °C (+50 °F to +95 °F); The maximum ambient temperature decreases by ±1 °C for every 300 m (984 ft) and increases in altitude above 900 m (2.953 ft).
Environmental temperature	off	+5 °C to +45 °C (+41 °F to +113 °F)
Environmental temperature	shipment/storage	−40 °C to +60 °C (−40 °F to +140 °F)
Maximum altitude		3.050 m (10.000 ft)
Relative humidity (noncondensing)		8 % to 80 %, max. dew point +21 °C (+70 °F)
Heat output		3197 BTU/h (max.), 937 W
Noise emissions	operating	43 dBA (typ.)
	idling	41 dBA (typ.)
Vibration	operating	0.21 g (RMS) at 5 Hz to 500 Hz for 15 min across 3 axes
	non-operating	1.04 g (RMS) at 2 Hz to 200 Hz for 15 min across 6 surfaces
Shock	operating	15 g for 3 ms in each direction (positive and negative X-, Y- and Z-axes)
	non-operating (12 kg to 22 kg)	50 g for 152 in/s velocity change across 6 surfaces

Components

Form factor		space-saving 1 unit form factor
Processor		AMD EPYC
Memory		128 Gbyte DDR4 RDIMM
Memory protection		ECC
Disk drives		2 x M.2 SSD, 480 Gbyte
Storage controller		onboard, RAID 1
Power supply		2 x 750 W (200 V to 240 V), redundant hot-swap power supply, titanium certification
Ports	front	2 x USB 3.1 Gen.1 (5 Gbyte/s) ports
	rear	<ul style="list-style-type: none"> • 2 x USB 3.1 Gen.1 (5 Gbyte/s) ports • 1 x VGA video port • 1 x DB-9 serial port • 8 x mini-SAS HD SFF8644, 12 Gbyte SAS
Ethernet		<ul style="list-style-type: none"> • 2 x 100 Gigabit Ethernet QSFP56 • 2 x 10GBASE-T • 2 x 1 Gigabit Ethernet RJ-45 • 1 x 1 Gigabit Ethernet RJ-45 system management port
Cooling		<ul style="list-style-type: none"> • 7 x N+1 redundant dual-rotor hot-swap 40 mm fans • one fan integrated in each power supply
Video		<ul style="list-style-type: none"> • onboard graphics with 512 Mbyte memory with 2D hardware accelerator, integrated in the ASPEED AST2500 BMC management processor • maximum resolution 1920 x 1200 pixel at 60 Hz, 32 bpp
Hot-swap parts		power supplies, fans
System management		<ul style="list-style-type: none"> • integrated service processor (baseboard management controller, BMC) which provides advanced control, monitoring and alerting functions • remote server management is provided through industry-standard interfaces • remote connectivity is provided by a dedicated 1 Gigabit Ethernet management port
Security features		<ul style="list-style-type: none"> • power-on password • administrator password • lockable front security bezel
Operating system		Linux
Rack type		<ul style="list-style-type: none"> • IEC standard compliant • square or round mounting holes • distance between front and rear mounting flanges: 610 mm to 864 mm (24 in to 34 in)
Dimensions	W x H x D	440 mm x 43 mm x 755 mm (17.3 in x 1.7 in x 29.7 in)
Weight		19.2 kg (42.3 lb) (max.)

Regulatory compliance

Standards		Energy Star 3.0
		FCC, part 15, class A
		IEC 60950-1 (CB certificate and CB test report)
	Canada	ICES-003, issue 6, class A
	US and Canada	UL 60950-1
	Europe and Argentina	IEC 60950-1
	North America	<ul style="list-style-type: none"> • CSA C22.2 No. 60950-1 • FCC, part 15, class A
	Mexico	NOM-019
	Japan	VCCI, class A
	Australia, New Zealand	<ul style="list-style-type: none"> • AS/NZS CISPR 32, class A • AS/NZS 60950.1
	China	<ul style="list-style-type: none"> • CCC (GB4943.1) • GB9254 class A • GB17625.1
	Taiwan	<ul style="list-style-type: none"> • BSMI CNS13438, class A • CNS14336-1
	Korea	<ul style="list-style-type: none"> • KN32, class A • KN35
	Russia, Belarus and Kazakhstan	EAC: <ul style="list-style-type: none"> • TP TC 004/2011 (for safety) • TP TC 020/2011 (for EMC)
	Europe	CE mark: <ul style="list-style-type: none"> • EN 55032 class A • EN 60950-1 • EN 55024 • EN 61000-3-2 • EN 61000-3-3
	India	BIS certification
	EMC	CISPR 32, class A
		TUV-GS: <ul style="list-style-type: none"> • EN 60950-1/IEC 60950-1 • EK1-ITB2000
	RoHS	EN 63000:2018

SpycerNode 5u84 storage server, JBOD unit

System configuration

Controller		dual JBOD storage bridge bay (SBB) 2.1 compatible I/O modules per enclosure
Host/expansion interface		three universal x4 12 Gbyte mini-SAS connectors (SFF-8644) per I/O module
Management/status reporting		CLI via RS-232 and 100BASE-T port, SCSI enclosure services (SES) via SAS SFF-8644 ports
Maximum system configuration		dual host-connected enclosure with a maximum expanded configuration of four enclosures for a total of 336 drives
Disk drives types supported		dual ported 12 Gbyte/s SAS
Maximum drives per enclosure		84 (for a full list of supported drives, contact your account or sales manager)
Hot-swappable components		disk drives, power supply units (PSUs), cooling modules, side planes and SBB I/O modules

Environmental conditions

Temperature	operating temperature range	+5 °C to +35 °C (derates by ± 5 °C above 2.133 m (7.000 ft))
Humidity		10 % to 80 % noncondensing
Altitude	operating	-100 m to 3.000 m (-330 ft to 10.000 ft)
	non-operating	-100 m to 12.192 m (-330 ft to 40.000 ft)
Vibration	random, operating	0.21 g (RMS), 5 Hz to 500 Hz
	random, non-operating	1.04 g (RMS), 2 Hz to 200 Hz
	relocation, swept sine	0.3 g (RMS), 2 Hz to 200 Hz
Shock	operating	5 g, 10 ms half sine (Z-axis), 20 g, 10 ms half sine (X- and Y-axes)
	non-operating, random	30 g, 10 ms half sine
Acoustics	operating sound power level	sound power operating ≤ 8.0 Bels LWAd at +23 °C

Power rating

Rated voltage		200 V to 240 V AC
Rated frequency		50 Hz/60 Hz
Power conversion efficiency		94 % at 240 V (50 % load)

Product conformity

Product safety	The product(s) meet(s) the requirements of the Low Voltage Directive (LVD) 2014/35/EU by application of the following standards:	<ul style="list-style-type: none"> • EN 62368-1:2014+A11:2017 - Audio/video, information and communication technology equipment - Part 1: Safety requirements (IEC 62368-1:2014, Modified) • EN 62368-1:2020+A11:2020 - Audio/video, information and communication technology equipment Part 1: Safety requirements
Electromagnetic compatibility (EMC)	North America	<ul style="list-style-type: none"> • CFR 47 part 15, subpart B, class A • ICES-003 class A
	Europe	<ul style="list-style-type: none"> • EN 55022 class A • EN 55032 class A • VCCI V-3, AS/NZS CISPR 22 • EN 55024 • EN 61000-3-2 class A • EN 61000-3-3 • EN 61000-4-2 • EN 61000-4-3 • EN 61000-4-4 • EN 61000-4-5 • EN 61000-4-6 • EN 61000-4-8 • EN 61000-4-11 • SANS 22 • KN35
Approvals	North America	<ul style="list-style-type: none"> • FCC • UL • cUL • ICES/NMB-003 class A
	Europe	CE
	China	CCC (PSU only)
	Taiwan	BSMI
	Korea	MSIP (formerly KCC)
	Japan	VCCI
	Australia/New Zealand	RCM (formerly C-tick)

Rackmounting

Rails		universal rackmounting kit
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Dimensions and weight

Dimensions	W x H x D	48.3 cm x 22.0 cm x 93.3 cm (19 in x 8.65 in x 36.75 in)
Weight	including drives (no rails kit)	135 kg (298 lb) (max.)

Ordering information

Designation	Type	Order No.
SpycerNode2 dual head controller server	R&S®SNO-SRV01	2902.2060.02
SpycerNode 5u84 storage server, JBOD unit	R&S®SNO5U84	2902.6407.02

Storage bundles options

Options	Number of disks	Order No.
5u84 expansion licenses and HDD set, 224 Tbyte	28	2902.6159.02
5u84 expansion licenses and HDD set, 448 Tbyte	28	2902.6165.02
5u84 expansion licenses and HDD set, 560 Tbyte	28	2902.6171.02
5u84 expansion licenses and SSD set, 26 Tbyte	28	2902.6194.02
5u84 expansion licenses and SSD set, 53 Tbyte	28	2902.6207.02
5u84 expansion licenses and SSD set, 107 Tbyte	28	2902.6213.02
5u84 expansion licenses and SSD set, 215 Tbyte	28	2902.6220.02

Service level agreements

Service level agreement	Designation	Order No.
SpycerNode2 SLA basic, 1 year	R&S®SB1SNMK2	2902.5717.02
SpycerNode2 SLA advanced, 1 year	R&S®SA1SNMK2	2902.5717.08
SpycerNode2 SLA premium, 1 year	R&S®SP1SNMK2	2902.5717.14

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