

# SCOPIA ELITE 5100 Series



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# ABOUT THIS MANUAL

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The SCOPIA Elite 5100 Series platform guide provides information on the SCOPIA Elite 5100 Series platform and its components. For information and operating procedures pertaining to a specific element board or application, refer to the corresponding manual provided with the product.

## RELATED DOCUMENTATION

The SCOPIA Elite 5100 Series platform documentation set is available on the RADVISION Utilities and Documentation CD-ROM supplied with the product and includes manuals in PDF format.

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**Note** You require Adobe Acrobat Reader version 6.0 or later to open the PDF files. You can download Acrobat Reader free of charge from [www.adobe.com](http://www.adobe.com).

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## FEEDBACK

The team at RADVISION constantly endeavors to provide accurate and informative documentation. If you have comments or suggestions regarding improvements to future publications, we would value your feedback.

Please send your comments to [doc\\_comments@radvision.com](mailto:doc_comments@radvision.com).

We thank you for your contribution.



# 1

## SCOPIA ELITE 5100 SERIES PLATFORM OVERVIEW

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The SCOPIA Elite 5100 Series platform is a high performance chassis that enables scheduled and ad-hoc high definition conferencing at up to 1080p and meets a wide variety of functional and performance application requirements.

The SCOPIA Elite 5100 Series platform provides a wide range of video layouts and powerful audio and video transcoding.

The system was designed to automatically provide the best video experience for each participant according to their own capabilities, without affecting the other participants.

We describe the components of the SCOPIA Elite 5100 Series platform, in these sections:

- [SCOPIA Elite 5100 Series Chassis Main Features](#) on page 2
- [SCOPIA Elite 5100 Series Front and Back Panel Display](#) on page 3

## SCOPIA ELITE 5100 SERIES CHASSIS MAIN FEATURES

The SCOPIA Elite 5100 chassis is a 1U chassis that contains one RADVISION SCOPIA Elite Media Blade.

**Table 1-1**      *Main Features of the SCOPIA Elite 5100 Series Chassis*

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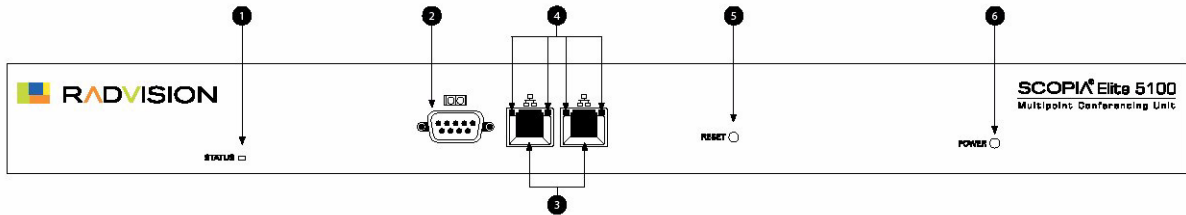
Grounding and electrostatic discharge	<ul style="list-style-type: none"><li>■ The chassis includes an external GND 4mm stud as per the TUV requirement).</li><li>■ The chassis includes 4mm banana jacks for a 4.5mm plug or a standard 0.166" plug, as per the PICMG 3.0 specification.</li></ul>
Cooling	The chassis supports a single failed fan in the fan tray.
Power supply	<ul style="list-style-type: none"><li>■ Default AC power supply as the default choice.</li><li>■ Universal 90-264 VAC power ports.AC power entry includes regular IEC320-C14 filtered AC inlet and double pole switch located in the rear.</li><li>■ Thermal shutdown if the unit heats up beyond its limits.</li></ul>

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## SCOPIA ELITE 5100 SERIES FRONT AND BACK PANEL DISPLAY

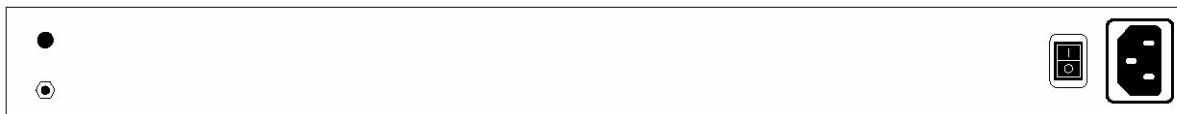
**Figure 1-1** Chassis Front Panel



**Table 1-2** SCOPIA Elite 5100 Series Panel Features

Component	Description
1 STATUS LED	Lights green to indicate normal operation. Lights red to indicate that an error has occurred and that the Media Blade requires resetting.
2 Serial connector	A DB-9 connector that allows you to connect a PC terminal for local configuration, maintenance and debugging.
3 100/1000 BASE-T Ethernet connectors	RJ-45 connectors that provide the primary LAN connection for the IP network port.
4 Ethernet connector Link/Activity LEDs	The top part of each Ethernet connector contains two LED indicators. The right LED lights green when the local IP network link is active. The left LED lights green if the connection speed reaches 1000 Mbps, and lights orange if the connection speed reaches 100 Mbps.
5 Reset Button	Enables you to reset the MCU manually.
6 Power LED	Lights green to indicate that the power is turned on.

*Figure 1-2 Chassis Rear Panel*



# 2

## CABLE CONNECTIONS AND PIN-OUTS

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- [9-Pin Serial Port Terminal Cable](#) on page 5
- [RJ-45 8-Pin IP Network Port](#) on page 6

### 9-PIN SERIAL PORT TERMINAL CABLE

Table 2-1 describes the pin-to-pin configuration of the RS-232 terminal cable provided with the SCOPIA Elite 5100 Series.

**Table 2-1** RS-232 9-pin D-Type Serial Port Pin-out

Pin	Function	I/O
1	NC	
2	RXD	Input
3	TXD	Output
4	NC	
5	GND	
6	NC	
7	NC	
8	NC	
9	NC	

## RJ-45 8-PIN IP NETWORK PORT

- [100 Mbps Ethernet](#) on page 6
- [1 Gbps Ethernet](#) on page 6

### 100 MBPS ETHERNET

[Table 2-2](#) describes the pin-out configuration of the 100 Mbps RJ-45 Ethernet connector.

**Table 2-2** *Pin-out Configuration of the 100 Mbps RJ-45 IP Ethernet Connector*

Pin	Function	I/O
1	TXD+	Output
2	TXD+	Output
3	RXD+	Input
4	NC	
5	NC	
6	RXD-	Input
7	NC	
8	NC	

### 1 GBPS ETHERNET

[Table 2-2](#) describes the pin-out configuration of the 1 Gbps RJ-45 Ethernet connector.

**Table 2-3** *Pin-out Configuration of the 1 Gbps RJ-45 IP Ethernet Connector*

Pin	Name	Function	I/O
1	BI_DA+	Bi-directional pair A +	I/O
2	BI_DA-	Bi-directional pair A -	I/O
3	BI_DB+	Bi-directional pair B +	I/O
4	BI_DC+	Bi-directional pair C +	I/O

<b>Pin</b>	<b>Name</b>	<b>Function</b>	<b>I/O</b>
5	BI_DC-	Bi-directional pair C -	I/O
6	BI_DB-	Bi-directional pair B -	I/O
7	BI_DD+	Bi-directional pair D +	I/O
8	BI_DD-	Bi-directional pair D -	I/O

## RJ-45 8-Pin IP Network Port

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## SAFETY

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This section describes safety procedures and requirements for operating the SCOPIA Elite 5100 Series platform.

- [Installation Safety](#) on page 9
- [Electrical Safety](#) on page 10
- [Operation Safety](#) on page 11

### INSTALLATION SAFETY

Read the installation instructions before connecting the system to the power source.

To avoid an electric shock or damage to the SCOPIA Elite 5100 Series platform, servicing should be performed by qualified service personnel only.

Do not operate without covers. To avoid electric shock or fire hazard, do not operate this product with any removed enclosure covers or panels.

To avoid the risk of electric shock do not operate in wet, damp, or condensing conditions.

To avoid electrical hazards (heat shock and/or fire hazard), do not make connections to terminals outside the range specified for that terminal. See the [Cable Connections and Pin-outs](#) chapter for correct connections.

To avoid the risk of electric shock, always make connections to a grounded main when supplying power to the system. Do not operate in wet, damp, or condensing conditions.

## ELECTRICAL SAFETY

To reduce the risk of damaging power surges, RADVISION recommends installing an AC surge arrester in the AC outlet from which the SCOPIA Elite 5100 Series platform is powered.

A readily accessible listed branch circuit over current protective device rated 20 A must be incorporated in the building wiring.

- [Grounding](#) on page 10
- [ESD Procedures](#) on page 11

## GROUNDING

This SCOPIA Elite 5100 Series platform must be grounded. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available.

The SCOPIA Elite 5100 Series platform can become dangerous if you interrupt any of the protective conductors (grounding) or disconnect any of the protective earth terminals.

The SCOPIA Elite 5100 Series platform must be installed according to the latest version of the country national electrical codes. For North America, equipment must be installed in accordance to the applicable requirements in the US National Electrical Code and the Canadian Electrical Code.

The power cable of the SCOPIA Elite 5100 Series platform should only be connected to a power outlet that has a protective earth contact. Do not use an extension cord that does not have a protective conductor (ground).

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**Caution** For North American installations, select a 3-conductor (18 AWG) power supply cord that is UL listed and CSA certified. The cord must be terminated in a molded-on plug cap rated 125V/5A, with a minimum length of 1.5m (6 feet) and no longer than 4.5m (approximately 14 feet).

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**Caution** This is a class I unit. In Denmark, use this unit with an AC cord suited to Danish specifications. The cord should include an earthing conductor. Plug the unit into a wall socket outlet which is connected to the protective earth contact. Do not use socket outlets which are not connected to a protective earth contact!

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**Varoitus** Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan.

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**Advarsel** Apparatet må tilkoples jordet stikkontakt.

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**Warning** Apparaten skall anslutas till jordat uttag.

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## ESD PROCEDURES

To prevent damage to RADVISION element boards by random electrostatic discharge (ESD), the use of wrist straps is highly recommended.

## OPERATION SAFETY

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**Warning** To prevent the SCOPIA Elite 5100 Series platform from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of 113°F (45°C). To prevent airflow restriction, allow at least 3 inches (7.6 cm) of clearance around the ventilation openings.

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Microprocessor heatsinks may become hot during normal operation. To avoid burns, do not allow anything to touch processor heatsinks.

When removing the fan tray, keep your hands and fingers away from the spinning fan blades. Let the fan blades completely stop before you remove the fan tray.

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**Warning** There is a danger of explosion if the ATCA board battery is incorrectly replaced. Replace with the same type, or an equivalent type recommended by the manufacturer. Dispose of used batteries only according to manufacturer instructions.

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Ultimate disposal of this product should be handled according to all national laws and regulations.

Cables for connecting to the unit RS-232 and Ethernet interfaces must be UL certified type DP-1 or DP-2 (when residing in a non-LPS circuit).



# 4

## COMPLIANCE AND CERTIFICATIONS

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This section provides certifications that have been approved for the SCOPIA Elite 5100 Series platform.

- [Safety Compliance](#) on page 13
- [EMC](#) on page 13
- [Environmental Compliance](#) on page 14

### SAFETY COMPLIANCE

This section lists the safety standards supported by the SCOPIA Elite 5100 Series platform.

- IEC 60950-1 2nd Edition
- UL 60950-1 2nd Edition
- CAN/CSA C22.2 No. 60950-1 2nd Edition
- EN 60950-1 2nd Edition
- AS/NZS 60950-1 2nd Edition

### EMC

This section lists the EMC compliance for the SCOPIA Elite 5100 Series platform.

- FCC Part 15, Subpart B, Class A
- ICES-003
- EN 55022, Class A
- EN 55024
- EN 61000-3-2
- EN 61000-3-3

## Environmental Compliance

- AS/NZS 3548, Class A
- VCCI, Class A
- CISPR22, Class A

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**Warning** This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

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## FCC PART 15 NOTICE

This section provides RF interference information for the user.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at one's own expense.

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**Warning** Changes or modifications to the device that are not approved by the party responsible for compliance could void the user's authority to operate the equipment.

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## ENVIRONMENTAL COMPLIANCE

RADVISION complies with the following EU Directives:

- Restrictions on the Use of Hazardous Substances (RoHS) Directive 2002/95/EC
- Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC



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#### About RADVISION

RADVISION (NASDAQ: RVSN) is the industry's leading provider of market-proven products and technologies for unified visual communications over IP and 3G networks. With its complete set of standards based video networking infrastructure and developer toolkits for voice, video, data and wireless communications, RADVISION is driving the unified communications evolution by combining the power of video, voice, data and wireless – for high definition video conferencing systems, innovative converged mobile services, and highly scalable video-enabled desktop platforms on IP, 3G and emerging next generation networks. For more information about RADVISION, visit [www.radvision.com](http://www.radvision.com)

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