

KM-Ringer, Ringer-2000, Ringer-2200N

DC Feed and Ring Power Supplies for Voice/Fax Modules



- DC power supplies for Kilomux-2100 voice/fax modules
- DC feed (battery) and ringing voltages for connected telephones
- -48 VDC for E&M interfaces

Ringers are DC power supplies for the Kilomux-2100/2104 voice/fax modules that require loop-current feed (battery) and ring DC voltages.

A Ringer is needed when a voice module is equipped with FXS-type interface for direct connection to a telephone set. Power is then required to provide the following functions:

- DC feed (battery) voltage (-24 or -48 VDC) for the connected telephones
- High DC ring voltage (+72 VDC by AC-powered models or +60 VDC by DC-powered models) for conversion by the voice module to a 20 Hz AC ringing signal.

Voice modules with E&M interfaces for connection to PBXs, may also require the -48 VDC voltage for some signaling standards or long line applications.

Note: Internal -12 VDC provided by the chassis is sufficient for most PBXs.

KM-RINGER PLUG-IN MODULE

The KM-Ringer module is a 3U-high plug-in module for the KM-2100 chassis, occupying three I/O slots. The module is completely encased, enabling it to also operate externally, placed outside the chassis. KM-Ringer features a single DC-output connector on the panel and supports up to 32 voice channels.

Each KM-Ringer module is supplied with a splitter cable (CBL-RINGER-2) for connecting to two voice modules. If more than two modules need to be connected, additional cables can be ordered with up to six connectors (see *Ordering*).

Cables can be connected to one another, enabling a single KM-Ringer to be connected to multiple Kilomux voice modules (not to exceed the total of maximum supported channels).

RINGER-2000 STANDALONE UNIT

The Ringer-2000 standalone unit provides DC power for up to 60 voice channels. Ringer-2000 provides all voltages required by the voice modules: -48 VDC for feed, and +72/+60 VDC for ring signal.

Ringer-2000 is a 1U-high standalone unit that can be installed in 19" racks. The unit has ten 3-pin DC-output connectors on the rear panel. The voltages are passed from the Ringer-2000 DC-output connectors to the DC-input connector of each voice module via the connector ring signal cables (see *Ordering* for cable information).

Ringer-2000 is available with a number of feed and ring voltage output ordering options. The options without ring voltage (Ringer-2000/48/115 or Ringer-2000/48/230) provide only -48 VDC for the DC feed. These options are suitable for E&M modules, or for FXS modules that do not require ring signal voltages.



KM-Ringer, Ringer-2000, Ringer-2200N

DC Feed and Ring Power Supplies for Voice/Fax Modules

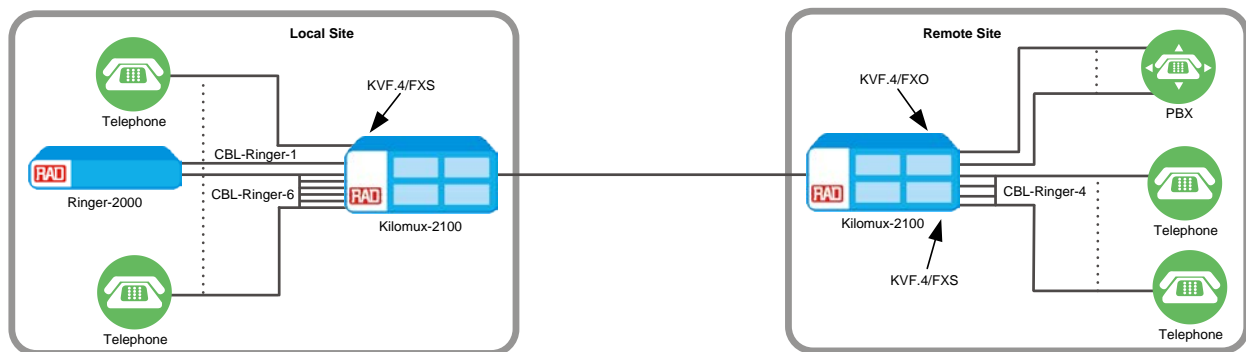
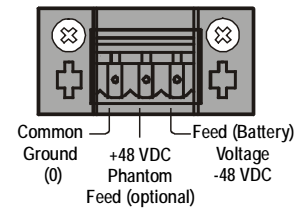
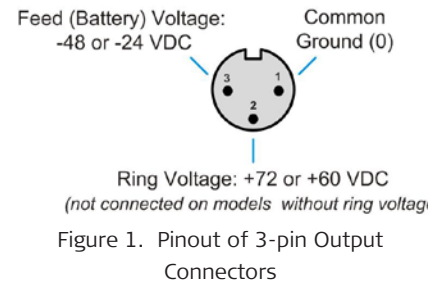
RINGER-2200N STANDALONE UNIT

The Ringer-2200N standalone unit provides DC power for up to 120 voice channels. Ringer-2200N provides a -48 VDC output for feed and ring signal. Optionally, a +48 VDC output is also available.

Ringer-2200N is a 1U-high standalone unit that can be installed in 19" racks. The unit has four 3-pin TB output connectors on the rear panel.

The **CBL-RINGER2200N-1/OPEN** cable is available for converting between the Ringer connectors and the 3-pin input connectors of the Kilomux modules/splitter cables.

To conform to both ANSI and ETSI rack mounting standards, Ringer-2200N features LED indicators on both front and rear panels. Thus, the indicators are always viewable, whether the unit is mounted with the cable connectors to the front or rear of the rack.



Specifications

DC-Output Connectors

KM-Ringer: one 3-pin female connector (see *Figure 1*)

Ringer-2000: ten 3-pin female connectors (see *Figure 1*)

Ringer-2200N: four 3-pin terminal block connectors (see *Figure 2*)

Power

See *Table 1*.

Physical

KM-Ringer

3U-high module occupies three I/O slots of Kilomux-2100 chassis

Ringer-2000

Height: 4.4 cm / 1.7 in (1U)

Width: 48 cm / 19.0 in (including integral rack-mount brackets)

Depth: 31 cm / 12.2 in

Weight: 2.1 kg / 4.6 lb

Ringer-2200N

Height: 4.4 cm/1.7 in (1U)

Width: 43 cm/17.0 in

Depth: 31 cm/12.2 in

Weight: 2.1 kg/4.6 lb

Indicators

KM-Ringer, Ringer-2000

RING VOLTAGE (green): lights when ring voltage is within the normal range

BATTERY VOLTAGE (green): lights when feed voltage is within the normal range

Ringer-2200N

LEDs are repeated on both front and rear panels:

-48V (green): lights when -48 VDC output voltage is within the normal range

+48V (green) *optional*: lights when +48 VDC output voltage is within normal range

Table 1. Power Specifications

Model (according to operating voltage option)	Input Voltage	DC (Feed) Output Voltage	Ring Output Voltage
KM-Ringer			
AC	115 to 230 VAC $\pm 10\%$, 50/60 Hz	-48 VDC $\pm 5\%$, 0.6A max	+72 VDC $\pm 5\%$, 0.5A max
-24 VDC	-24 VDC (-18 to -36 VDC)	-24 VDC $\pm 5\%$, 0.6A max	+60 VDC $\pm 5\%$, 0.5A max
-48 VDC	-48 VDC (-36 to -72 VDC)	-48 VDC $\pm 5\%$, 0.6A max	+60 VDC $\pm 5\%$, 0.5A max
Ringer-2000			
115 or 230 VAC with -48/+72 VDC output	115 or 230 VAC ($\pm 10\%$), 50/60 Hz	-48 VDC ($\pm 5\%$), 3.0A max	+72 VDC ($\pm 5\%$), 0.7A max
-48 VDC	-48 VDC ($\pm 5\%$)	-48 VDC ($\pm 5\%$), 3.0A max	+60 VDC ($\pm 5\%$), 0.85A max
Ringer-2200N			
115 or 230 VAC with -48 VDC output ordering option (no ring voltage)	115 or 230 VAC ($\pm 10\%$), 50/60 Hz	-48 VDC ($\pm 5\%$), 6.0A max	none
115 or 230 VAC with -48/+48 VDC output ordering	115 or 230 VAC ($\pm 10\%$), 50/60 Hz	-48 VDC ($\pm 5\%$), 4.0A max	+48 VDC ($\pm 5\%$), 1.4A max

KM-Ringer, Ringer-2000, Ringer-2200N

DC Feed and Ring Power Supplies for Voice/Fax Modules

Ordering

RECOMMENDED CONFIGURATIONS

KM-RINGER/AC

Power supply module for Kilomux chassis with 115 to 230 VAC operating voltage

RING2000/48/72/230

Standalone power supply unit with 230 VAC operating voltage and -48/+72 VDC output voltage

RINGER-2200N/110

RINGER-2200N/230

Standalone power supply units with 110 or 230 VAC operating voltage and -48 VDC output voltage

SPECIAL CONFIGURATIONS

Please contact your local RAD partner for additional configuration options

SUPPLIED ACCESSORIES

AC power cord

CBL-RINGER-2

Splitter cable for connecting a Ringer 3-pin DC-output connector to up to two modules

Note: Supplied with KM-Ringer

CBL-RINGER2200N-1/OPEN

Cable with stripped ends (no connector) for connecting to a Ringer-2200N 3-pin TB DC-output connector

Note: Supplied with Ringer-2200N

KM-2004/RM

Hardware for mounting the Ringer-2000 unit in a 19-inch rack

RING-2200-RM

Hardware kit for mounting the Ringer-2200N unit into a 19-inch rack

OPTIONAL ACCESSORIES

CBL-RINGER-1

Cable for connecting a KM-Ringer or Ringer-2000 3-pin DC output connector to a single module

CBL-RINGER-4

Splitter cable for connecting a KM-Ringer or Ringer-2000 3-pin DC output connector to up to four modules

CBL-RINGER-6

Splitter cable for connecting a KM-Ringer or Ringer-2000 3-pin DC output connector to up to six modules

420-118-10/15 specifications are subject to change without prior notice. © 1988-2015 RAD Data Communications Ltd. RAD products/technologies are protected by registered patents. To review specifically which product is covered by which patent, please see <http://rad.com>. The RAD name, logo, logo type, and the product names MIND, Optimux, Alimux, and Pnux, are registered trademarks of RAD Data Communications Ltd. All other trademarks are the property of their respective holders.

International Headquarters

24 Raoul Wallenberg Street
Tel Aviv 69719, Israel
Tel. 972-3-6458181
Fax 972-3-6498250, 6474436
E-mail market@rad.com

North America Headquarters

900 Corporate Drive
Mahwah, NJ 07430, USA
Tel. 201-5291100
Toll free 1-800-4447234
Fax 201-5295777
E-mail market@radusa.com

www.rad.com

Order this publication by Catalog No. 800752



Your Network's Edge