

## RF7300 Radio Network Receiver



**K**eltron's extensive experience with alarm monitoring and receiving systems enabled the development of a unique radio life safety event monitoring system that is fast, scalable, reliable and cost-effective. It enables instantaneous emergency response capability for any size facility or municipality, with better supervision than digital alarm transmitters (DACTs) provide.

Keltron's RF7300 is the receiver for the two-way radio-based alarm and data transport system - the central command location for all life safety events and responses. The system's smart transceivers dynamically adapt themselves to changes in the network, continually optimizing the system. Unique technology ensures that reliable communication paths are always available and even overlaid networks do not conflict. The receiver acknowledges all transmissions ensuring that the message was received and decoded correctly.

### RF7300 benefits

- High performance** - dynamic, self-routing and healing network ensures instant monitoring
- Fast ROI** - eliminates monthly telephone line costs and reduces service calls
- Reliability** - retries and sophisticated error checking protocols ensure reliable data delivery
- Versatility** - provides a private active radio network

### RF7300 features

- Controls two-way radio-based alarm and data transport
- UL-listed for fire alarm systems
  - Central station
  - Remote station
  - Proprietary supervising station
- Easy-to-use interface facilitates operation
- Provides fault indicators
- Self-routing and healing
- Provides extensive status information to the technician or installer
- Active or Standby mode switch
- Both hot and cold redundant system configurations available
- Supports both small and large applications
- Central transceiver shares common components with remote subscriber units

Keltron is a single point supplier that provides all products and services including system design, technical support, parts, radio transceivers/subscriber units, antennas and accessories.

Keltron develops and manufactures universally-compatible, UL listed life safety event management systems for the municipal and proprietary markets. Solutions include Ethernet signaling systems, active network radio systems, distributed multiplex systems, digital communicator/receiver systems, and direct wire systems. This document is not intended for installation or maintenance purposes. All specifications are subject to changes without notice. For more information visit [www.keltroncorp.com](http://www.keltroncorp.com) or contact us at 781-894-8710.

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## RF7300 Hardware

The system provides extensive status information to the installer/technician. For properly trained service personnel, this saves valuable time and effort by facilitating isolation and correction of faults in the network or equipment.

The front panel has five sections containing the various LEDs and switches. These provide an easy-to-use interface to the RF7300 and the installer/operator. The DMP703 or equivalent provides additional communication and status information.

A switch places the RF7300 in either active or standby mode as indicated by the corresponding LED.

The transmit LED is on when the associated RF7830 central radio transceiver is transmitting. The receive LED is on during the reception of signals. The wait LED lights if the RF7300 is waiting acknowledgement by the DMP703 of the last data transmission from the RF7300.

The receiver LED lights for a problem internal to the RF7300 or with the optional external printer. The computer LED on means the DMP703 is improperly connected. The CPU LED lights when the RF7300 processor has reset. The transceiver LED is on if a tamper condition exists at the RF7830 radio transceiver as well as for power or connection problems.

## NFPA configurations\*

### TWO-WAY INSTALLATIONS

**Type 5** requires one radio receiving site. This requires a single RF7300/RF7830 combination and one DMP703.

**Type 4** requires two radio receiving sites. This requires dual RF7300/RF7830 units feeding a single DMP703. One RF7300 must be in the STANDBY condition ready to be made ACTIVE.

**Redundant two-way:** a second DMP703 is added to the type 4 configuration.

The PY LED on means that input power is applied. This can be a DC input or, if a proper UPS is available, an AC input. The DC LED is on if internal DC is correct.

The alert section contains two momentary push button switches silence and acknowledge and a single LED. The alert section is active when either of two particular faults occur. One is a RF7300 CPU fault which also causes illumination of the CPU fault LED and the other is a failure of the RF7300 to receive an acknowledgement from the DMP703 which also lights the computer LED in the fault detection section. For these, the alert LED lights and the RF7300 sounding device activates. Depressing the silence switch silences the sounder whereas the acknowledge switch also turns off the LED until the fault recurs.

The RF7300 provides a port to which a PC running NET7K software must be connected for network maintenance and status information. A parallel input printer such as the Epson EX300 must be connected for diagnostic purposes.

Power is derived from a UL-listed, class 2, 24VDC, 1A power source such as the 40PS300 or PS740-3 from Keltron. If a UPS is available, power may be derived from a UL-listed AC adapter like the AMSECO p/n XP-1640 rated at 16.5 VAC, 40VA.

### ONE-WAY INSTALLATIONS

**Type 6** requires two repeaters plus one radio receiving site. This is fulfilled by a single RF7300/RF7830 combination and one DMP703.

**Type 7** requires two repeater sites and two radio receiving sites. This requires dual RF7300/RF7830 units feeding a single DMP703. One RF7300 must be in the STANDBY condition ready to be made ACTIVE.

**Redundant one-way:** A second DMP703 is added to the Type 7 configuration.

For either **Redundant one-way or two-way** installations, the second DMP703 can be arranged in either a hot redundancy status or in standby, ready to be put in service within 30 seconds. Hot redundancy means that both DMP703s are active and equal. If one becomes inoperative, it is reported by the other which continues operation with no delay or switchover time.

\*For all of the NFPA configurations above, refer to the appropriate table in NFPA 72 for allowable subscriber unit capacity. Exact capacity varies for each subscriber unit layout. The system can be used with confidence in all situations as it meets or exceeds the code requirements in NFPA 72.

## Dimensions of major assemblies

DMP703 (rack mount)	7" H x 19" W x 21" D
RF7300 (rack mount)	3.5" H x 19" W x 9.2" D
RF7830 radio (Nema 4)	12.25" H x 10.25" W x 5.25" D
10R0479 - bandpass cavity	10.5" W x 10.5" D x 16" H or 21" H brackets
PS740-3 (rack mount) <sup>1</sup>	5.25" H x 19" W x 12" D

<sup>1</sup>Two of these power supplies may be required, although a smaller power supply may be used to power the RF7300.

