

Smart Subscribers for Commercial Fire Alarm Systems

## 7788F/7744F Series Fire Subscribers



### Features

- AES-IntelliNet<sup>®</sup> smart mesh radio networks are self-forming, self-healing, and highly scalable
- AES-IntelliNet alarm communications technology never sunsets compared to cellular alternatives
- Each Smart Subscriber enables multiple paths to a central monitoring station
- Option to transmit full data from FACP digital dialer to AES-MultiNet receiver
- Simple and fast activation on AES-IntelliNet network

### Benefits

- Most stable and profitable fire alarm communication technology
- Network owner-operators retain virtually all RMR
- Meets UL 864 Commercial Fire Alarm requirements for primary standalone communication
- Ideal drop-in full-function replacement for phone lines
- Universal wireless Smart Subscriber Transceivers support all new and legacy FACPs

### Advanced Wireless Fire Alarm Monitoring

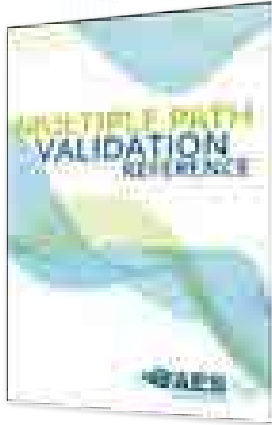
AES 7788F/7744F Series Subscribers are the ideal universal wireless communicators for any new or existing fire alarm system. AES-IntelliNet networks are built using AES Corporation's patented mesh radio communications technology. A Smart Subscriber at each alarm site acts as transmitter, receiver, and repeater of alarm signals across the network. This creates a smart long-range radio network with multiple pathways between each alarm site and the central receiver. Multiple pathways mean multiple redundancies assuring the most reliable delivery of signals and compliance with rigorous industry standards. AES-IntelliNet networks self-adjust to network changes and assure that signals automatically follow the shortest path available as the network of Subscribers grows.

### Highest Long Term Stability and Profitability

AES-IntelliNet remains the most stable and profitable fire alarm communication technology available today in the rapidly changing world of communications. AES private wireless networks never sunset compared to cellular technology and traditional phone lines. AES-IntelliNet networks maximize RMR generated from network alarm communication services because signals are delivered without the need for a costly operations center or cellular service providers.

## UL 864 Edition 9 Compliant – Primary Standalone Communicators

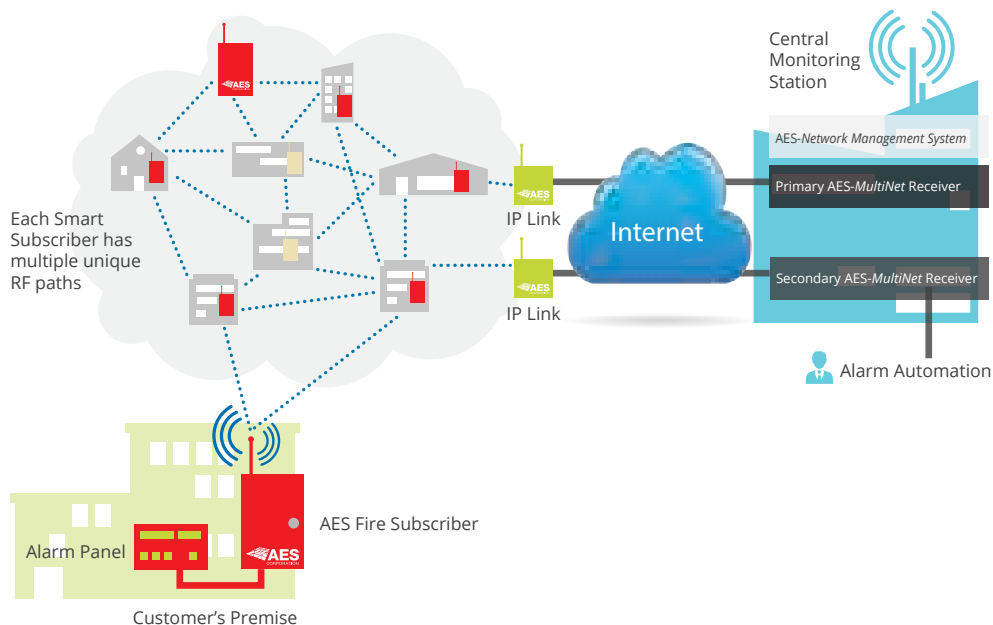
In order to meet UL approval and NFPA compliance, most fire alarm communicators require either a second communication technology or a costly service plan included with sole path cellular alternatives. With AES-IntelliNet alarm communications technology, each standalone AES 7788F/7744F Subscriber provides multiple RF pathways across the mesh radio network to the central monitoring station. To meet compliance standards, only 2 RF paths are required. Please refer to the official NFPA 72 National Fire Alarm and Signaling Code handbook, Chapter 26 (26.6.3.3.2 One-Way Private Radio Alarm Systems/Technology Reference Comparison Table A.26.6.1).



### Multiple RF Path Reference Guide

AES provides a *Multiple Path Validation Reference* guide detailing how to easily validate multiple RF paths at each AES 7788F/7744F Series Fire Subscriber. The guide also provides a complete listing of the codes and standards to which AES-IntelliNet products have been tested. To assist Authorities Having Jurisdiction (AHJs) with the fire alarm inspection process, the guide and other valuable installer tools are available for download from the company website. Visit our Fire Marshal Resources page at (<http://www.aes-intellinet.com/products/fire/fire-marshall-resources/>).

## AES-IntelliNet® Private Wireless Mesh Network



Each Smart Subscriber acts as transmitter, receiver, and repeater creating a smart long-range radio network with multiple pathways and multiple redundancies. The AES-IntelliNet network is self-forming, self-healing, highly scalable and assures that signals follow the shortest path available as the network expands.

## Cost Free Supervised Operation

AES Subscribers offer fully-supervised operation that includes monitoring of primary and back-up operating power as well as the radio connection to the AES-*IntelliNet* network. Each Subscriber performs “Check-ins” with the AES central station receiver at least once every 24 hours which complies with the UL 864 standard for commercial fire alarm communications. The supervision Check-in time can be set to as often as needed for the application. Because the central station owns and operates the long-range wireless network, there is no cost for air time to transmit supervisory signals. This is very different from cellular alternatives which require an aggressive supervision Check-in schedule in order to comply with UL 864 listing. The high monthly cost for cellular service fees significantly reduce RMR profit.

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Unlike cellular, there is no cost for air time to transmit supervisory signals.

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## Full Data Module Option - Ideal replacement for Phone Lines

AES Subscribers transmit consolidated alarm, trouble, and supervisory signals triggered by a FACP output relay. Subscribers with an integrated AES-*IntelliPro* Fire full data module transmit full alarm zone and event codes captured from a panel's digital communicator. Both options individually meet UL and NFPA 72 requirements. AES Fire Subscribers with built-in full data module are the ideal drop-in full-function replacement for phone lines for communicating signals from both new and existing UL commercial fire alarm systems. Replacing phone lines with AES-*IntelliNet* maximizes RMR profit with significant bottom line impact, unlike with cellular technologies that charge high monthly service fees.

## How to Order

AES Fire Subscribers	
7788F	8 Zone Fire Subscriber, 8 Supervised Zones, Red Enclosure.
7744F	4x4 Zone Fire Subscriber, 4 Reversing Polarity, 4 Supervised Zones, Red Enclosure.
7788F-ULP	8 Zone Fire Subscriber, 8 Supervised Zones, includes 7794 AES- <i>IntelliPro</i> Fire, Red Enclosure.
7744F-ULP	4x4 Zone Fire Subscriber, 4 Reversing Polarity, 4 Supervised, includes 7794 AES- <i>IntelliPro</i> Fire, Red Enclosure.
7788F-ULP-P	8 Zone Fire Subscriber, 8 Supervised Zones, includes 7795 AES- <i>IntelliPro</i> Fire, Red Enclosure. UL listed for primary standalone communication with fire radios.
7744F-ULP-P	4x4 Zone Fire Subscriber, 4 Reversing Polarity, 4 Supervised Zones, includes 7795 AES- <i>IntelliPro</i> Fire, Red Enclosure. UL listed for primary standalone communication with fire radios.
7788F-C	8 Zone Fire Alarm Subscriber. ULC listed for Canada.
7788F-C-ULP	7788F-C Fire Alarm Subscriber with AES- <i>IntelliPro</i> Fire full data module. ULC listed for Canada.
Add-on AES- <i>IntelliPro</i> Fire Modules	
7794	AES- <i>IntelliPro</i> Fire Full Data Module. UL listed for supplemental communication with fire radios.
7795	AES- <i>IntelliPro</i> Fire Full Data Module (7794) with 7762 Hardware Supervisory Module and 7740 AES Local Annunciator. UL listed for primary standalone communication with fire radios.
7742	7762 Hardware Supervisory Module and 7740 AES Local Annunciator. 7762 module provides power and supervision of the 7740 AES Local Annunciator.
AES Local Annunciator	
7740	7740 AES Local Annunciator. UL listed for use with 7795 module or 7742 module.

# Technical Specifications

## 7788F/7744F

### Dimensions

- 13.25"H x 8.5"W x 4.3"D  
(34cm H x 21.5cm W x 11cm D)

### Weight

- Approx. 7 pounds (3.2 kilograms),  
excludes battery

### Radio Frequency

- Standard Frequency Range: 450-470MHz  
(others available in 400-512MHz range)
- Output Power – 2 Watts and 5 Watts

### Antenna

- Included 2.5 db tamper resistant antenna  
mounts on enclosure
- Multiple remote antenna options available

### Power Input

- 16.5VAC, 40VA transformer (not included)  
(AES 1640, ELK TRG1640, MG Electronics  
MGT1640 – UL Listed for use)

### Backup Battery

- Will charge 12V battery up to 7.5 - 12 AH,  
• Requires 12VDC 7.5 AH battery for UL 864

### Alarm Signal Inputs (subscriber)

- 7788F – 8 individually programmable zones
- 7744F – 4 individually programmable  
zones and 4 reverse polarity inputs

### UL Standards

- UL 864 Edition 9 – Standard for  
Control Units and Accessories for Fire  
Alarm Systems
- UL 365 – Standard for Police Station  
Connected Burglary Alarm Units  
and Systems
- UL 1681 – Standard for  
Central Station Burglary Alarm Units

### Antenna Cut/Communication Trouble Output

- Form C relay; fail secure; rated for  
24 VDC 1A resistive

### Reset Button

- Located on main circuit board

### Operating Temperature

- 0° to 50° C (32° to 122°F)

### Storage Temperature

- -10° to 60° C (14° to 140°F)

### Relative Humidity

- 0 to 85% RHC, Non-Condensing

## 7794

- Transmits full data to AES-*MultiNet*  
receiver using Contact ID or Pulse formats
- Formats Supported: Contact ID, Pulse  
3+1, Pulse 4+1, Pulse 4+2, Modem IIe,  
and Modem IIIa2

### Input/Output Connections

- AES Subscriber – data and power
- Handheld/PC programming port
- Plain Old Telephone Service (POTS)  
incoming phone line
- Phone output connection from  
alarm panel
- Trouble output (form C relay)

### Size

- 4.875" x 5" (12.3cm x 12.7cm)

### Power Requirements

- 12 VDC nominal, primary and backup  
power provided by the AES RF  
Transceiver Unit

### Current Consumption

- 350 mA nominal

## 7795

- P/N 40-7795 is a kit that includes 7794  
module and 7762 Hardware Supervisory  
module. For 7794, please see Technical  
Specifications above

## 7762

- Hardware Supervisory Module

### Input/Output Connections

- J1 - AES 7794 (J2) or Subscriber  
(J1) - data and power
- Input for Subscriber J4 Output
- Input for AES 7740 Local  
Annunciator - data and power
- AES 7740/AES 7794 Trouble  
Output to Subscriber input zone

### Size

- 2.5" x 4.9375" (6.3cm x 12.5cm)

### Power Input

- 12VDC nominal, power supplied  
from AES 7794 module or AES  
7788F/7744F Subscribers

### Current Consumption

- 40 mA average; 100 mA peak

Specifications Subject to Change Without Notice



## About AES Corporation

Established in 1974, AES Corporation empowers companies to grow profitable alarm monitoring businesses, and government agencies to enhance security anywhere in the world. By providing the industry's only patented owner operated and controlled private wireless mesh networks, AES ensures superior reliability, low Total Cost of Ownership (TCO) and optimal Recurring Monthly Revenue (RMR) while reducing dependence on service provider infrastructures. The company's flagship AES-*IntelliNet*® systems are deployed in over a half million locations worldwide.

For more information, go to [www.aes-corp.com](http://www.aes-corp.com) or call  
**(800) 237-6387** or contact us at [sales@aes-corp.com](mailto:sales@aes-corp.com)

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