

## Specifications

	NFU-7000	NFU-7000-L
Appearances		
<b>General</b>		
SLC Loops	2 loops (Default) expandable up to 6 loops	2 loops (Default) expandable up to 14 loops
Addresses per Loop	254 addresses per Loop	
Display	Large 16 by 40 Character Graphic LCD	
Network	Max. 63 fire alarm panels (Copper and/or Fiber Optic Cable)	
Annunciators	Max. 7 units (LCD type / LED type)	
Notification Appliance Circuits	4 x 1.7 A @ 24 VDC (Class A or B)	
4-Wire Power Supply	1 x 425 mA @ 22 VDC (Resettable)	
Auxiliary Power Supply	1 x 1.7 A @ 24 VDC	
Auxiliary Relays	3 relays (Common Alarm, Common Supervisory, Common Trouble)	
BACnet	1 ch (Optional)	
Graphic Monitor	1 ch (Optional)	
Printer	1 ch (Optional)	
Dimensions	H 710 x W 430 x D 146 mm	H 950 x W 795 x D 200 mm
<b>Electrical Ratings</b>		
AC Line Voltage	120 V 60 Hz / 240 V 50Hz, 4 A / 2 A (primary)	
Power Supply Ratings	12 A max. (secondary)	
For Indicating Circuits	10 A max.	
Battery	24 VDC, Gel-Cell/Sealed Lead-Acid	
Charging Capability	17 - 65 AH batteries	
Current Consumption	Standby: 310 mA, Alarm: 733 mA (in default setting, connected devices are not considered)	

Nittan implements detailed sales activities and support activities for customers in response to each individual fire prevention issue, with the establishment of 45 branch offices and service centers as well as more than 120 distributors throughout Japan.

Overseas, global coverage encompasses Europe to Africa and the Middle East to Southeast Asia, with a local subsidiary established in the United Kingdom in 1972, as well as subsidiaries in Sweden.

The Nittan brand provides security to sites using state of the art fire prevention technologies.

**Distributor**

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Products features as described above do not bind the manufacturer and may be modified without prior notice.

April 2016 Edition

# NITTAN

Network Analog Addressable

# SPERA™

## Fire Alarm System



# SPERA™

The Most Versatile and Powerful Systems in the Industry

SPERA™ is a 'next generation' modular network system that is designed for the most demanding fire protection and emergency communications applications. SPERA™ introduces an impressive new range of system configurations, including a wide array of cabinets and sizes for control and annunciation requirements.



SPERA™ is derived from the Latin word 'spera' which means hope and trust.

## OVERVIEW

### Modular System Design

SPERA™ is designed to be highly versatile and **can be customized** with a wide array of adder modules to meet various needs of applications.

Maximum **8 display/control modules and 7 loop driver cards** can be added in a single panel.

In addition, the base panel supports maximum **16 conventional circuit adder modules** such as initiating circuit module, indicating circuit module and relay circuit module.



### EVA series Detectors and Modules

SPERA™ supports Nittan's EVA series intelligent detectors and modules, which are the industry's most advanced, highly reliable devices.

EVA series smoke detectors incorporate a unique technology developed by Nittan, that is, **dual optical sensing method to reduce false alarm** and special smoke chamber to respond equally to various type of smoke from a fire.

EVA series devices employ a highly reliable communication protocol "EV" developed by Nittan, which has been used **in Europe and in marine market for many years and proved to be reliable.** EV protocol has high-level immunity against noise and large capacity to handle various information which goes through the fire alarm system. Therefore, EV protocol is very stable and reliable communication protocol to be used in life safety system.



### Expandable, Networkable Fire Alarm System

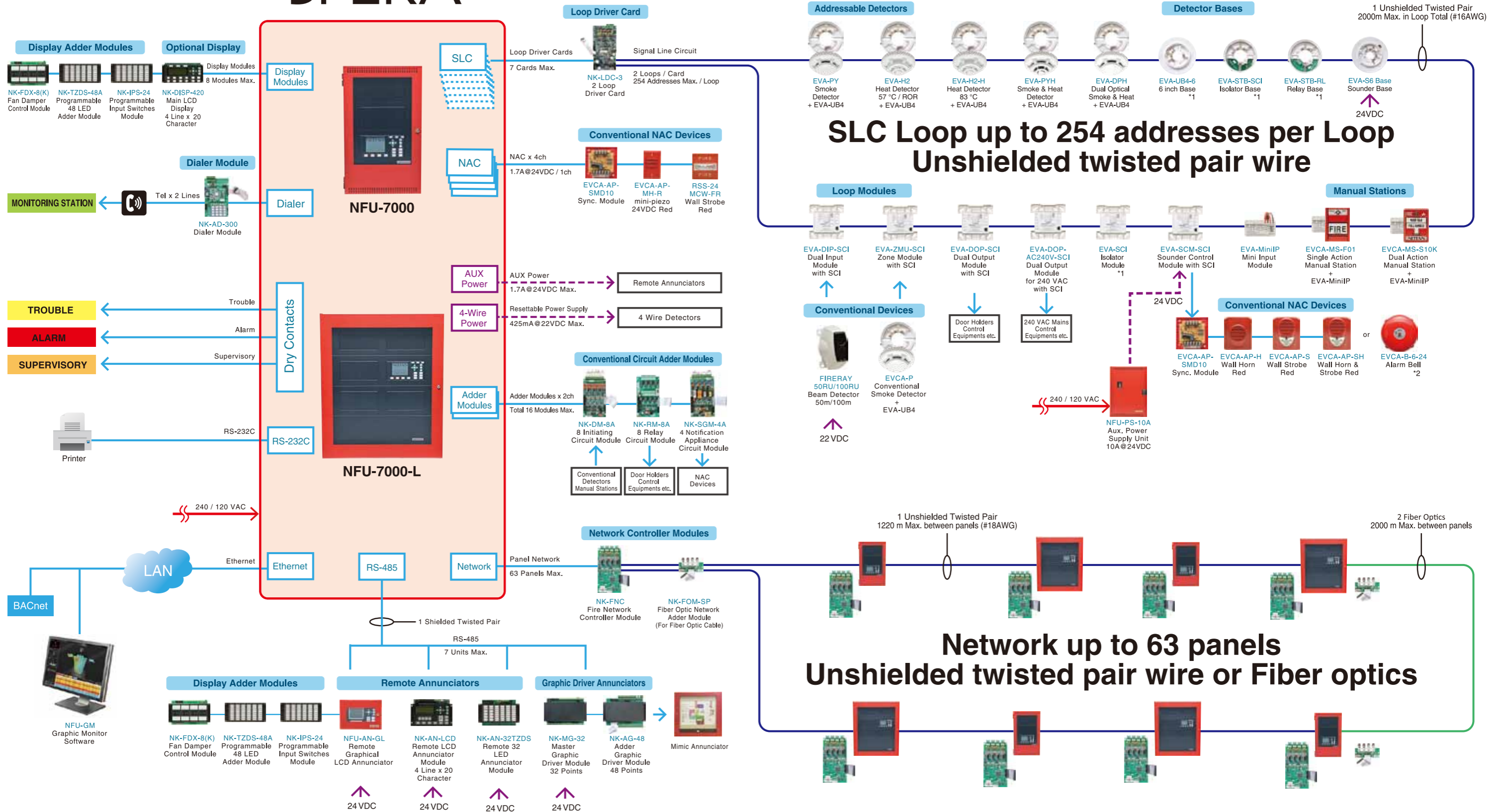
SPERA™ fire alarm panel is expandable to maximum **14 loops (7 loop cards) in a single panel.**

The network interface module allows SPERA™ to make a large peer-to-peer network fire alarm system with **maximum 63 panels**, that support **up to 224,000 addressable devices.**



For commercial building, **BACnet** interface allows SPERA™ connection to BMS. SPERA™ is an ideal fire alarm solution from a small size to a large size project with multiple buildings.

# SYSTEM CONFIGURATION



**SLC Loop up to 254 addresses per Loop**  
**Unshielded twisted pair wire**

**Network up to 63 panels**  
**Unshielded twisted pair wire or Fiber optics**

\*1 These loop devices do not have their own addresses.  
 \*2 Bells should not be mixed with other NAC devices on the same circuit.

# SYSTEM COMPONENTS

The SPERA™ intelligent network system has extensive, various range of system modules, detection devices and signaling appliances. More than an advanced network system, SPERA™ delivers a complete project solution with the support of advanced, proven and trusted Nittan's fire detection modules.

## Expandability and Flexibility

- **2 loops** equipped as **standard**
- Expandable up to **6 loops** on NFU-7000 and **14 loops** on NFU-7000-L
- One loop supports 254 addresses without any partition to allocate
- Modular system design using variable displays and adder modules
- Designed to support both conventional and addressable system
- BACnet support
- Real time 3D graphical monitoring and control available



## Networkability

- **Up to 63 panels**
- Peer-to-peer network communications by ARCNET protocol
- Mutual surveillance and 2 way control available
- Supports unshielded copper and/or fiber optic network cable



## Annunciator

- Provides the **same functions as a main display** on SPERA™ panel
- 7 annunciators available per single SPERA™ panel
- LCD and LED annunciation available
- Full network annunciation
- Enclosures selectable from 3 sizes with keylock door
- Supports many display / control modules



## Conventional Circuit Adder Modules

- Conventional Input, NAC and Relay modules **support retrofit applications**
- Removable terminal blocks for easy wiring and servicing
- Extensive transient protection on all circuits



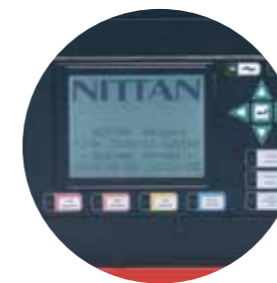
## Large System Capacity

- 12 Ampere power supply is available by one control panel
- Built-in 4 outputs for NAC devices (**1.7A@24VDC x 4**)
- Optional NAC circuit adder modules available
- NFU-7000-L has **space for 8 display modules** and **21 adder modules**



## Serviceability

- **Large LCD Display** with 16 lines x 40 alphanumeric characters
- Interlocking simulation and Manual activation from control panels
- Built-in **One Man Walk Test** operation
- Multiple group bypass function on every nodes, outputs, zones, relays, devices, and circuits
- 6,000 event-logs; 1,000 for alarm related events and 5,000 for all events
- Capable to store up to 3 configuration data
- **'Hot swap' function** allows to change configurations without panel off-line



## Loop Modules

- Simple lineup with Zone, Input and Output modules
- Loop powered
- Up to 127 modules per loop
- Freely addressable within 254
- **Short Circuit Isolator equipped as standard** (except for EVA-MiniIP)
- 'Subtype' setting available for various operation of Zone/Input modules



## Intelligent Detectors

- **Omniview360°** visible indicator
- Responds well to both black and white smoke (Nittan PY chamber)
- Low-profile stylish design
- Drift compensation function against dust accumulation
- Capability to **adjust smoke sensitivity levels**
- Dual-photo Smoke Detector EVA-DPH **distinguishes the smoke and steam**
- Freely addressable within 254



## Graphic Monitor Software

- Centralized and integrated graphical building monitoring system
- **3D visualization**
- Real-time reports of all events
- Custom event messaging
- Custom color graphical icons depict up to **500,000 addressable devices**
- **500,000 event log capacity**
- Upload/download configuration files without taking the whole system off-line
- Monitors remote sites from multiple workstations or smart phones located anywhere in the world.



# APPLICATIONS

Hotel



Shopping mall



Factory



Office Building



Hospital



University



## Applications

SPERA™ is built to meet the latest building code requirements and offers an extensive range of panels, modules and devices for any retrofit upgrade or new construction project.

- COMMERCIAL TOWER
- HOSPITAL
- UNIVERSITY / CORPORATE CAMPUS
- LARGE HOTEL
- LARGE SHOPPING MALL
- FACTORY
- HIGH-RISE RESIDENTIAL APARTMENT
- BANK
- STADIUM
- AIRPORT

## Hotel and Hospital

Intelligent Dual Optical Smoke/Heat Detector, model **EVA-DPH can distinguish** the particle sizes between **smoke and steam** by using both IR and Blue LEDs. This patented, **award winning technology** provides an excellent solution for Hotels and Hospitals to **reduce false alarms** caused by hot showers and hot-water dispensers.

A large capacity of 14 loops with 3,500 addresses per single panel will contribute to the management of applications with many rooms.



## Factory and University

SPERA's network system using **ARCNET protocol** is ideal for large-area applications such as factory and university.

SPERA™ control panel can monitor and control other panels on the same network. In addition, annunciator has the same functions. Thus, building management staff can check other panels' status by the panel in their own area. Furthermore, optional **Graphic monitor software** and LED modules for mimic annunciators are useful for the management of multiple buildings.



# INITTAN PROJECTS

Nittan provides the most suitable fire prevention systems in response to conditions, location and size of buildings and spaces, as well as the requirements of customers.

Delivery destinations range from private residential buildings and condominiums to office buildings, government agencies, hospitals, universities, factories and plants, as well as such diverse locations as tunnels, aircraft and passenger ships, which provide support for the establishment of a safe and secure society that is robust to fire disaster.

The fact that our products are accepted in such a diverse range of fields proves the competence of Nittan.

The company responds to the expectations of customers and keeps watch over society round the clock, every day of the year.

## Buildings, Hospitals, Hotels



Canon Sales Headquarter (Japan)



Tokyo Bay La-La Port Shopping Complex (Japan)



King Phumiphol Royya Hospital (Thailand)

## Government offices and public facilities



Tokyo Metropolitan Government Buildings (Japan)



Ministry of Public Security Head Office (Vietnam)



Japan Rail Tokyo Station (Japan)



Vung Tau International Exhibition & Conference Center (Vietnam)



Matsumoto Civic Art Hall (Japan)



Ho Chi Minh State Bank (Vietnam)



Namihaya Dome (Japan)



Nissan Stadium (Japan)

### Major projects

- Central joint government building, Tokyo
- Japan mint, Osaka
- Tokyo Metropolitan Art Museum
- National Archive Center, Vietnam
- Foreign Ministry of China
- World Health Organization, Philippines



Bella Hotel (Denmark)



Taipei 101 (Taiwan)

### Major projects

- Roppongi Hills, Tokyo
- Sapporo City general Hospital
- Yangon Sakura Tower, Myanmar
- Bangkok Bank Head Office, Thailand
- Thailand National Institute of Health
- HH4 Song Da Twin Tower, Vietnam

## Factories and Others



P.T. Astra Honda Motor (Indonesia)



P.T. Yamaha Motor (Indonesia)

### Major projects

- Tokyo University
- Kasetsart University, Thailand
- Thammasat University, Thailand
- Can Tho University, Vietnam
- University of Gadjah Mada, Indonesia
- GM Indonesia
- Toyota Motor Thailand
- Thai Isuzu Motor Factory, Thailand
- Batangan Power Plant, Philippines
- Honda Vietnam



Aerospace



Queen Mary II