



NSAR-850 Rugged Active RFID Reader/Writer



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Overview:

NephSystem Technologies' NSAR-850 Industrial and Rugged (IP55 rating) and long range active RFID reader/writer operates in global and open radio frequency band of 2.45GHz. It uses a built in Omni-directional antenna allowing it to identify NephSystem's NSAT series of regular active tags up to 100 meters. The reading range of the reader can also be adjusted by software to ensure reliable identification.

NSAR-850 features with high-recognition, ultra-long reading range, ultra-low power consumption, high-reliability & expandability, etc. With its compact / rugged design (water/dust proof), NSAR-850 is ideally suitable for most of applications that require contactless or wireless RFID technology, such as Personnel Tracking/Monitoring, Warehouse Management, High Value Asset Tracking, Hospital, Schools, Vehicle/Train Tracking, Parking Management, Manufacturing, Shop Floor, Toll, etc.



NSAR-850 has the built-in full function Ethernet port as well as the RS232 serial port. It is also equipped with built-in and software controllable digital dry-contact relay channels, capable of controlling other peripherals such as gates, sirens, garage doors, etc. In addition, optional wireless Wi-Fi 802.11b/g or Wiegand 26/34 interface(s) are also available upon specific requirement from different applications. NSAR-850 is also capable of writing up to 512 bytes of user data onto specific NSAT tags (Model: NSAT-701C and NSAT-706).

NSAR-850 main features of compact and modular design, rugged, water-proof and low cost capabilities make it easy to be expanded for most of applications and make it possible to provide an economical and ideal solution to a wide variety of active RFID application.

Main Features:

- Rugged and compact design
- Long reading distance up to 100 meters
- Gain adjustable through software
- Software controllable dry-contact relay channels
- Built-in Ethernet (TCP/IP) and RS232 interfaces
- Optional wireless Wi-Fi 802.11 b/g or Wiegand 26/34 interfaces
- High speed data throughput (up to 200 simultaneous tag detection)
- Water/Dust proof, IP55 rated
- CE/FCC/RoHS Certified
- Free SDK and demo utility

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Specifications:

Operating Frequency	2.400-2.4835GHz
Sensitivity	-95dBm
Communication Interfaces	1 × RS-232 port and 1 × 10/100M Ethernet (RJ45) port; Optional WiFi 802.11 b/g or Wiegand 26/34
I/O Capability	Built-in software controllable relay channel
Reading Range	Software adjustable 0 ~ 100m
Multi-Detection	Up to 200 tags per second
Identification Accuracy	>99.99%
Beep Control	Built-in software controllable buzzer
Water/Dust proof	IP55 rating
Power Consumption	300mW
Power Supply	DC5.0V
Dimensions	190mm x 120mm x 40mm (L x W x H)
Weight	0.5kg
Operating Temperature	-40°C ~ +65°C (-40°F ~ 158°F)
Storage Temperature	-40°C ~ +80°C (-40°F ~ 176°F)
Humidity	5% ~ 95% (non-condensing)
Certificates	CE/FCC/RoHS

The image shows two software windows. The top window is the 'NephSystem NSAR-800 Configuration Panel V2.0.1'. It has two tabs: 'Interface Selection' and 'Network Information'. Under 'Interface Selection', 'Serial Port' is selected with 'COM1' as the port. Under 'Network Information', the current IP address is 192.168.1.232, subnet mask is 255.255.255.0, and port number is 7086. The bottom window is the 'NSAR-800 Demo Utility V2.0.1'. It also has 'Interface Selection' and 'Tag Operations' tabs. The 'Interface Selection' tab shows 'Ethernet' selected with IP 192.168.1.232 and port 7086. The 'Tag Operations' tab shows a table of detected tags.

	Tag ID	Count	Time Stamp
1	50300077	44	11/23/2010 1:05:14 PM
2	20000292	40	11/23/2010 1:05:14 PM
3	41800013	56	11/23/2010 1:05:14 PM
4	41800012	49	11/23/2010 1:05:14 PM
5	41800014	48	11/23/2010 1:05:14 PM
6	20000245	43	11/23/2010 1:05:14 PM
7	51702268	34	11/23/2010 1:05:14 PM
8	20000293	29	11/23/2010 1:05:14 PM
9	51702243	37	11/23/2010 1:05:14 PM
10	50300076	30	11/23/2010 1:05:14 PM
11	50300078	32	11/23/2010 1:05:14 PM
12	51703728	33	11/23/2010 1:05:14 PM

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