

iNET300/iNET900

Wireless IP/Ethernet Connectivity



The iNET300/iNET900 is a long-range, high-speed, industrial, wireless IP/Ethernet solution. It allows customers to bring business information over Ethernet or a serial gateway and onto IP based networks. This includes mission-critical, revenue-generating data from fixed assets such as oil and gas wells, compressor stations, pipelines, fluid storage tanks and utility meters. It also enables mobile network access for vehicle based operation.

The iNET300/iNET900 uses advanced 340/900MHz FHSS technology for license-free operation in the 336-344/902-928MHz ISM band. It is capable of up to 512Kbps/1Mbps over-the-air data rate communications.

This product is available for use in Class 1, Division 2, Groups A,B,C&D hazardous locations.¹

WHY USE AN iNET WIRELESS NETWORKING SOLUTION?

Longest range industrial product in its class. Providing lowest cost of ownership.

Secure wireless operation with multiple layers of protection, including a 340/900MHz physical layer, RADIUS authentication and AES-128 data encryption with automatic key rotation.

Reliable - Designed and built for low failure rates and reduced maintenance costs.

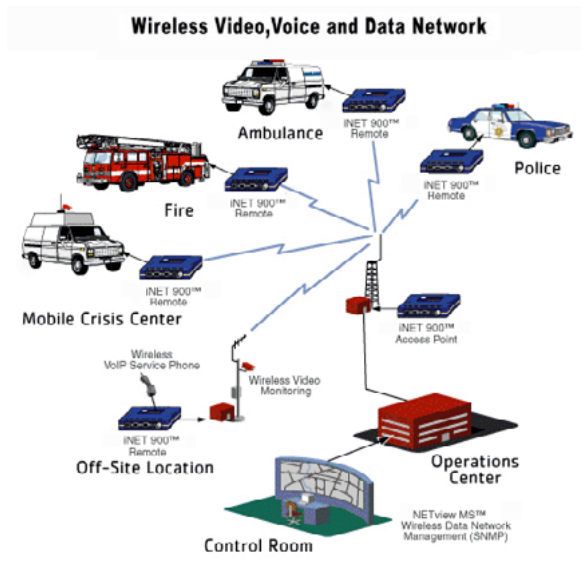
Reliable - The P21 protected Access Point (a chassis housing two radios in a cold standby configuration) increases the availability of mission-critical point-to-multipoint networks. P21 Remote stations can also be used to form protected point-to-point links.

Flexible - The iNET supports multiple users connecting to multiple applications via multiple protocols on the same iNET unit or the same network - simultaneously!

Future proof - The iNET adheres to open standards, allowing it to interface with a wide range of external devices enabling both new and old technologies to communicate.

Comprehensive Network Management - Compatible with NETview MS™ and any standard off-the-shelf SNMP management system.

- High speed - Up to 512Kbps(iNET300)
Up to 1Mbps(iNET900)
- Secure - multiple layers of cyber-security including:
 - AES-128 encryption
 - RADIUS authentication
- Ethernet and serial interfaces allow migration of existing serial devices to IP networks
- Industrial grade performance - UL Class 1 Div 2¹ & extended temperature range for extreme environments
- License free - deploy immediately
- Plug and play connectivity - configuration requires virtually no setup
- VLAN capability(802.1Q)allows multiple segregated data flows over a single radio
- Long range wireless Ethernet
- Gateway for serial/legacy networks and/or devices to IP network
- Video and/or voice-over-IP
- Mobile network access for vehicle based operation



iNET300/iNET900 SPECIFICATIONS

General

Data Rate: 256Kbps/512Kbps(iNET300)
512Kbps/1Mbps(iNET900)
user configurable air link
1,200-115.2 bps serial ports

Frequency Band:
336-344 MHz ISM band(iNET300)
902-928 MHz ISM band(iNET900)

Spreading Mode: DTS/FHSS

Range(iNET300-256Kbps):
Typical fixed range: 2.5 miles
Maximum fixed range: 9.0miles
Typical mobile range(parked): 8miles
Typical mobile range(moving): 5miles

Range (iNET300-512Kbps):
Typical fixed range: 1.5 miles
Maximum fixed range: 2.5miles

Range (iNET900-512Kbps):
Typical fixed range: 2.5 miles
Maximum fixed range: 9.0miles
Typical mobile range(parked): 8miles
Typical mobile range(moving): 5miles

Range (iNET900-1Mbps):
Typical fixed range: 1.5 miles
Maximum fixed range: 2.5miles

Available Configurations:
Access point/remote dual gateway - serial and ethernet

Remote Ethernet Bridge - Ethernet Only
Remote Serial Gateway - serial only
P21 protected station - tow radios in one chassis(cold stangby)

Radio

iNET 300

System Gain:150dB @ 256 Kbps
140dB @ 512 Kbps

Carrier Power:0.5 to 5 / 5 to 25 watt

Output Impedance:50 Ohms

Occupied Bandwidth:316.5kHz

Modulation:CPFSK(continuous phase FSK)

Receiver
-101dBm @ 256 Kbps with 10⁻⁶BER
-97dBm @ 512 Kbps with 10⁻⁶BER

iNET900

System Gain:139dB @ 512 Kbps
134dB @ 1Mbps

Carrier Power:0.1 to 1 / 1 to 15 watt

Output Impedance:50 Ohms

Occupied Bandwidth:600 kHz

Modulation:CPFSK(continuous phase FSK)

Receiver Sensitivity:
-97dBm @ 512 Kbps with 10⁻⁶BER
-92dBm @1Mbps with 10⁻⁶BER

Physical Interfaces

Ethernet:10BaseT,RJ-45

Serial:COM1:RS-232/485/V.24,DB-9F,DCE
COM2:RS-232/485/V.24,DB-9M,DCE

Antenna:TNC connector(female)

LEDs:Lan,Com1,Com2,power,link

Protocols

Wireless:CSMA/CA(Collision Avoidance)

Ethernet:IEEE 802.3. Ethernet II,Spanning Tree(Bridging),IGMP

TCP/IP:DHCP,ICMP,UDP,TCP,ARP,Multicast,SNTP,TFTP

Serial:PPP,Encapsulation over IP(tunneling) for serial async multidrop protocols including Modbus.DNP3.DF1,BSAP

Optional:Allen- Bradley EtherNET/IP* - Modbus/TCP

Cyber Security Suite,Level 4

Encryption:AES-128 with automatic key rotation

Authentication:802.1x,RADIUS,EAP/TLS.
PKI,PAP,CHAP

Management:SSL,SSH,HYPS

Traffic Segregation:802.1Q VLAN

Management

HTTP,HTTPS,SSH,TELNET,local console

SNMPv1/v2/v3,MIB II,Enterprise MIB

SYSLOG

NETview MS™

Environmental

Temperature:-40°C to +70°C (-40°F to +158°F)

Humidity:95% at 40°C (104°F) non-condensing

Electrical

iNET 300

Input Voltage: 10.5-16Vdc

Current Consumption(nominal):

Mode	13.8Vdc
Transmit	1.2A(5W RF Output) 5.0A(25W RF Output)
Receive	203mA

iNET 900

Input Voltage: 10.5-30Vdc(1W), 10.5-16Vdc(15W)

Current Consumption(nominal):

Mode	13.8Vdc	24Vdc
Transmit	510mA 5.0A(15W RF Output)	290mA(1W)
Receive	200mA	120mA

Mechanical

Case Die Cast Aluminum

Dimensions:
iNET 300
3.8H x 20.3W x 10.2D cm(5W)
5.0H x 20.3W x 10.2D cm(25W)
iNET 900
3.15H x 17.2W x 11.2D cm(1W)
5.0H x 20.3W x 10.2D cm(15W)

Weight:
iNET 300
1kg(5W),1.2kg(25W)
iNET 900
908g(1W),1.2kg(15W)

Mounting Options:Flat surface mount brackets.DIN rail,19' rack tray

P21 Option:
Case Steel(rack mountable 2U)
Dimensions:8.9H x 48.3W x 35.6D cm
(3.5H x 19W x 14D in)
Weight:7.6kg,(14.7lbs)with transceivers

Agency Approvals

FCC Part 15.247

UL/CSA Class 1 Div.2¹

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