Industrially hardened or commercial grade cyber security appliance with integrated router, firewall, terminal server, serial-to-IP conversion, legacy-protocol conversion, and VPN functionality.

Industrially Hardened Security Appliance

The BANDIT 3™, the latest addition to the Encore's BANDIT™ (Broadband Access Network Device for Intelligent Termination™) family, is an industrially hardened cyber security appliance with integrated router, firewall, terminal server, serial to IP converter, legacy protocol conversion, and VPN functionality. Ideally suited for electric, gas, oil and water utilities, AMI/AMR, transportation, green energy, and traffic control system applications, the BANDIT 3™ ensures system data and SCADA network connections directly to the Internet, secure Wide Area Network (WAN) and/or Local Area Network (LAN), or commercial cellular data IP services.

Cyber security is an urgent issue in industries where advanced automation and communications networks have mission critical applications and high reliability is of paramount importance. These industries have mandated industry specific requirements to ensure their data networking and cyber assets are reliable and secure. The BANDIT 3™ has the necessary features to comply with the most stringent security requirements.

The BANDIT 3™ supports up to 6 serial RS232 ports, integrated four port fully managed Ethernet switch, selectable power supplies and redundancy options, and an optional integrated V.92 modem. In addition, the BANDIT 3™ supports two expansion slots supporting optional digital connectivity modules such as Fiber, Ethernet DMZ, T1/E1 CSU/DSUs, 56/64K CSU/DSU, or 4 wire E&M, allowing for connectivity to microwave, satellite, IP, Frame Relay/MPLS services, analog radio and/or cellular connectivity modules allowing connectivity to public carrier secure cellular data services. Supported cellular interfaces include CDMA 1X/EVDO Rev A and GSM GPRS/EDGE/UMTS/HSDPA/HSPA.

Summary Points

- ▶ Industrial hardened cyber security appliance
- ▶ IP Sec with DES , 3DES, and AES (256)
- ▶ Manageability (Monitoring and Configuration)
- ▶ Provides connectivity over any network (MPLS/Frame Relay or IP network to include Fiber, Ethernet, VSAT)
- ▶ Cellular connectivity option
- ▶ Up to 6 serial ports for legacy traffic support
- ▶ Alarm Ports
- ▶ Legacy protocol support - serial and IP conversion

Application Example - Multi-Network
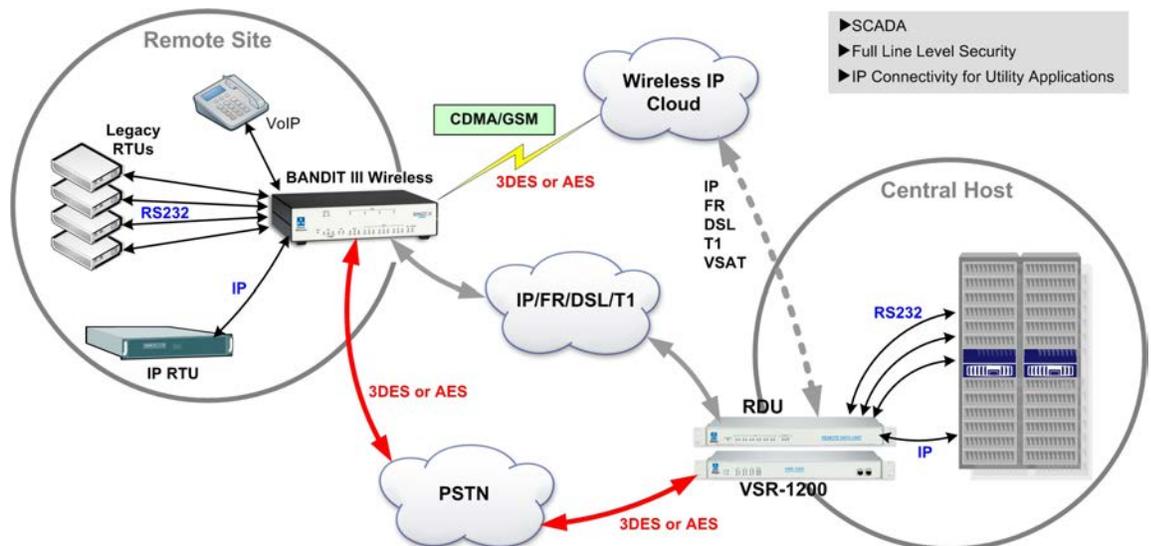
Technical Specifications

General Features
▶ Protocol management (spoofing) and translation
▶ NERC CIP (003, 005, 007, 009) compliant firewall security
▶ Secure Wireless Cellular connection
▶ SNMP manageability (Monitoring and Config)
▶ Operating System (OS) and Configuration Servers
▶ Disaster Recovery and Load Sharing
▶ QoS Enforcement
▶ VPN

Security Appliance Features
▶ Integrated router/firewall/VPN
▶ DMZ LAN port
▶ NAT
▶ VPN (up to 30 tunnels)
  • IP Sec (RFC 2401) with DES, 3DES and AES (256)
  • GRE (RFC 1701)
  • Internet Key Exchange - IKE (RFC 2409)
▶ Selective Layer Encryption (SLE)

Protocols
▶ **WAN**
  • Frame Relay (RFC1490)
  • Asynchronous PPP
  • Synchronous PPP
  • X.25
  • MLPPP
▶ **IP**
  • IP Routing (RIP v1/v2) or static routing
  • DHCP client/server/BootP/Relay
  • IP QoS and traffic prioritization
  • IP fragmentation/reassembly
  • IP routing over VPN
  • VRRP (RFC3768)
▶ **Ethernet**
  • 802.1q VLAN tagging
  • PPPoE

Serial Legacy Support
▶ Up to 5 DB25 ports supporting EIA/TIA RS485,RS232, RS422
▶ Supports any asynchronous or synchronous traffic over IP.
▶ Protocol support for DNP3, IEC 60870-5-101/103/104,MODBUS, CDC, S/NET, CONITEL, ABB, and most electrical industry proprietary protocols; inquire for additional protocols

Physical Ports
▶ **Serial**
  • 1 universal DB25 port (RS232)
  • Optional four DB25 ports (RS232)
  • 1 RS232 console
▶ **Modem - Optional**
  • integrated 56Kbps V.90/92 with PPP support (PAP/CHAP)
▶ **Ethernet**
  • 4 10/100 Base T - 3 switched and 1 configurable
▶ **Expansion Slot**
  • Dual Port Fiber Module – Multimode or Single Mode SFPs
  • Single T1/E1 CSU/DSU channelized/unchannelized
  • Dual T1/E1 CSU/DSU channelized/unchannelized
  • 56/64k CSU/DSU
  • Ethernet DMZ
  • Single Port High Speed Serial (V.35, RS 485, RS 422)
  • Dual Port 4 wire E&M
▶ **Alarm Port**
  • Programmable alarm indicators
▶ **Optional**
  - CDMA (1xRTT), EVDO
  - GSM, GPRS, EDGE, UMTS, HSDPA, HSPA

Electrical
▶ 10 Watts maximum
▶ DC: 12VDC, 24VDC, 48VDC, 130VDC, 250VDC
▶ AC: 100-240VAC, 50-60Hz (with external adapter)

Environmental
▶ Operating: -40°C to +85°C
▶ Storage: -40°C to +85°C
▶ Humidity: 5 to 95%, non-condensing

Mechanical
Height: 2.375" (6.0 cm)
Width: 10.375" (26.4 cm)
Depth: 7.5"   (219.1 cm)
Weight: 2.25 lb. (1.02 kg)

Standards Compliance
RoHS Compliant
EMC
  • FCC Part 15
  • EN 55011/CISPR II
  • IEC 61850-3
  • IEEE 1613
Product Safety
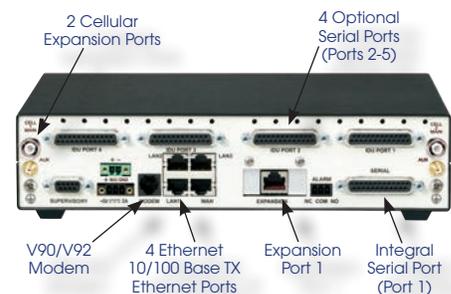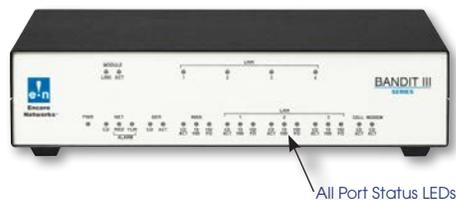 • UL/CSA 60950-1
  • CAN/CSA-C22.2 No. 60950-1-03
  • EN 60950-1
Part Number
  • B3000-0000-0000-0

BANDIT 3™
Front and Rear Views

All Port Status LEDs

2 Cellular Expansion Ports
4 Optional Serial Ports (Ports 2-5)
V90/V92 Modem
4 Ethernet 10/100 Base TX Ethernet Ports
Expansion Port 1
Integral Serial Port (Port 1)

Specifications subject to change