AMPLIFIED ENGINEERING

FATBOX BITNODE QUICKSTART GUIDE

VERSION 1.0

Amplified Engineering Pty Ltd
No. 5 Turner Ave, Unit 1
Bentley Technology Park
Bentley, Western Australia 6102
AUSTRALIA

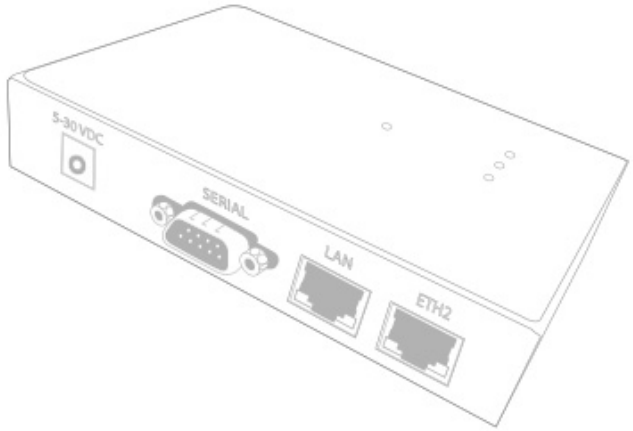
AMPLIFIED ENGINEERING

Thank you for purchasing our product. ☺
This guide will help you to quickly setup and configure your FATBOX BITNODE for Ethernet VPN/IPSEC.

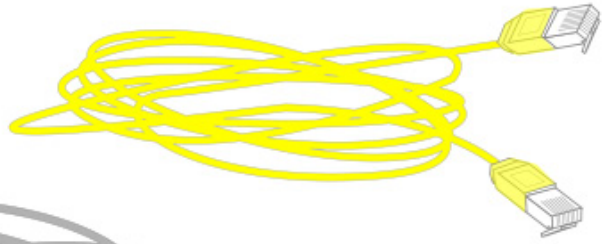
CONTACT DETAILS ON PAGE 11.

Please download latest user manuals at www.amplified.com.au

Thank you for purchasing the FATBOX BITNODE Secure Ethernet Router. Inside your FATBOX packaging, you will find:



- 1 X FATBOX™ BITNODE Router



- 1 X Yellow CAT5 LAN cable

- 1 X Serial diagnostics cable

- 1 X Appropriate power supply unit (12VDC output)

▷ IMPORTANT SAFETY NOTICE

All specialist electronic devices must be operated with due care to avoid damage or injuries and should be installed and operated by a trained personnel.

DO NOT OPERATE THIS EQUIPMENT IN ENVIRONMENTS CONTAINING POTENTIALLY EXPLOSIVE GASES OR LIQUIDS, EXAMPLE, GAS STATIONS AND CHEMICAL PLANTS AND EXPLOSIVE STORES.

1. PRODUCT SPECIFICATIONS

In a compact and robust metal chassi, the FATBOX BITNODE Secure Ethernet Router provides secure data communications via existing office/factory WAN. Its integrated software features allow quick deployment in data security applications.

LAN Interface

- Dual 10/100BaseT Ethernet port
- DHCP server on (default) for LAN side
- Connection to WWW gateway for WAN side

RS-232 Serial Interface

- Default Configuration
  115200 bps, 8 data bit, 1 stop bit, no parity, no flow

Power and Operating Conditions

- Power: 5 – 30VDC (100mA 12VDC)
- Operating Temperature: -20°C to +65°C
- Physical dimensions: 130mm x 92mm x 25mm
- Weight: 400gm

Operating System

- LINUX OS on ARM microprocessor
- Kernel and Firmware update over TCP or Serial

Networking and Management Functions

- IPSEC VPN (3DES encryption, MD5 authentication, Pre-Shared Key)
- PPTP Client VPN
- L2TP Client/Server VPN
- Quick setup webpage for fast installation

In the Box

- FATBOX BITNODE Secure Ethernet Router
- RS-232 Cable
- CAT5 LAN cable
- Regulated Power supply unit
  (100-240VAC 50/60Hz to 12VDC 1A)

1. Power up the BITNODE device using the provided power supply unit.

2. Connect the provided LAN cable (or any straight LAN cable) between LAN port of the BITNODE and your computer's LAN port. DHCP service is enabled by default on LAN port of the BITNODE. Check that your computer's LAN is setup to obtain IP address automatically or set to the following Local Area Connection Properties > Internet Protocol (TCP/IP) Properties

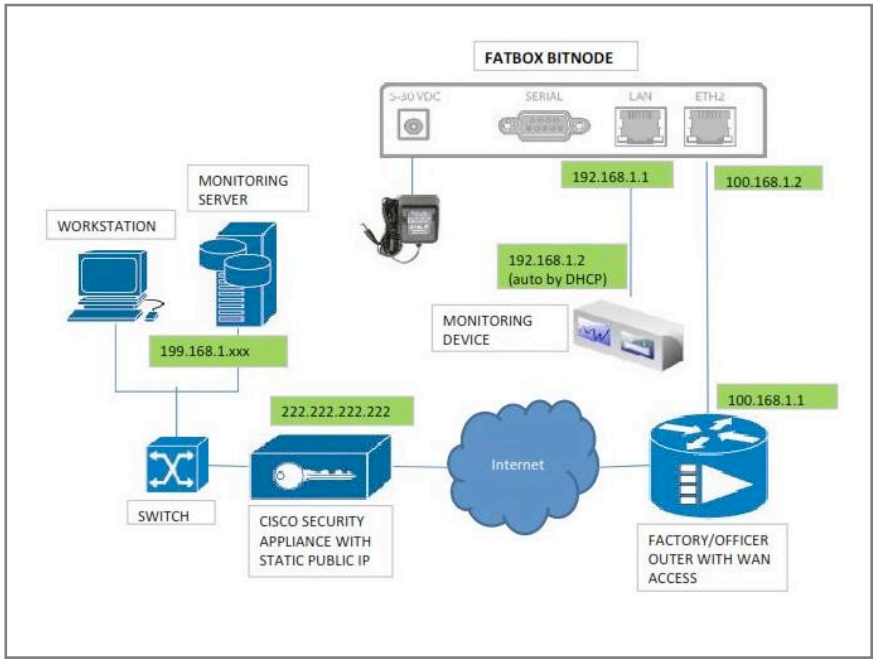
   IP Address: 192.168.1.xxx (xxx=2 to 254)
   Subnet Mask: 255.255.255.0
   Default Gateway: 192.168.1.1

3. Launch your internet browser (IE,Firefox) and enter http://192.168.1.1 at the address bar. This is the default IP address for the BITNODE's LAN port.

4. Enter the default username/password.
   Username: admin
   Password: 12345

5. Setup the "Quick Start Configure" parameters in order for your BITNODE to connect to VPN/IPSEC server via your existing WAN.

6. Select to enable IPSEC VPN and select mode as "Ethernet IPSEC VPN". Refer to below sample network diagram for the configuration.



Quick Setup

Enable IPSEC VPN	☑
IPSEC VPN Mode	Ethernet IPSEC VPN

Ethernet port configuration	
LAN(eth1) IP	192.168.1.1
Subnet Mask	255.255.255.0
Enable DHCP(eth1) Server	☑
DHCP Start IP	192.168.1.2
DHCP End IP	192.168.1.254
DHCP Subnet Mask	255.255.255.0
ETH2(eth0) IP	100.168.1.2
Subnet Mask	255.255.0.0
Gateway	100.168.1.1
Enable DHCP(eth0) Server	☐

IPSEC Configuration	
Tunnel Name	ipsecvpn
Enable PFS	☐
Local Subnet	10.1.2.0
Local Subnet Mask	255.255.255.0
Opposite Gateway	222.222.222.222
Opposite Subnet	199.168.1.0
Opposite Subnet Mask	255.255.255.0
PSK	secretkey12345

SAVE & REBOOT DEFAULT

7. After completely fill up ALL the required parameters, press “Save & Reboot” to write the parameters to the BITNODE’s flash memory and then it will reboot by itself.

8. Connect an Ethernet cable between the Monitoring Device’s LAN port and BITNODE’s LAN port. Check that the Monitoring Device’s LAN is setup to obtain IP address automatically or refer to step 2 for manual IP address setup.

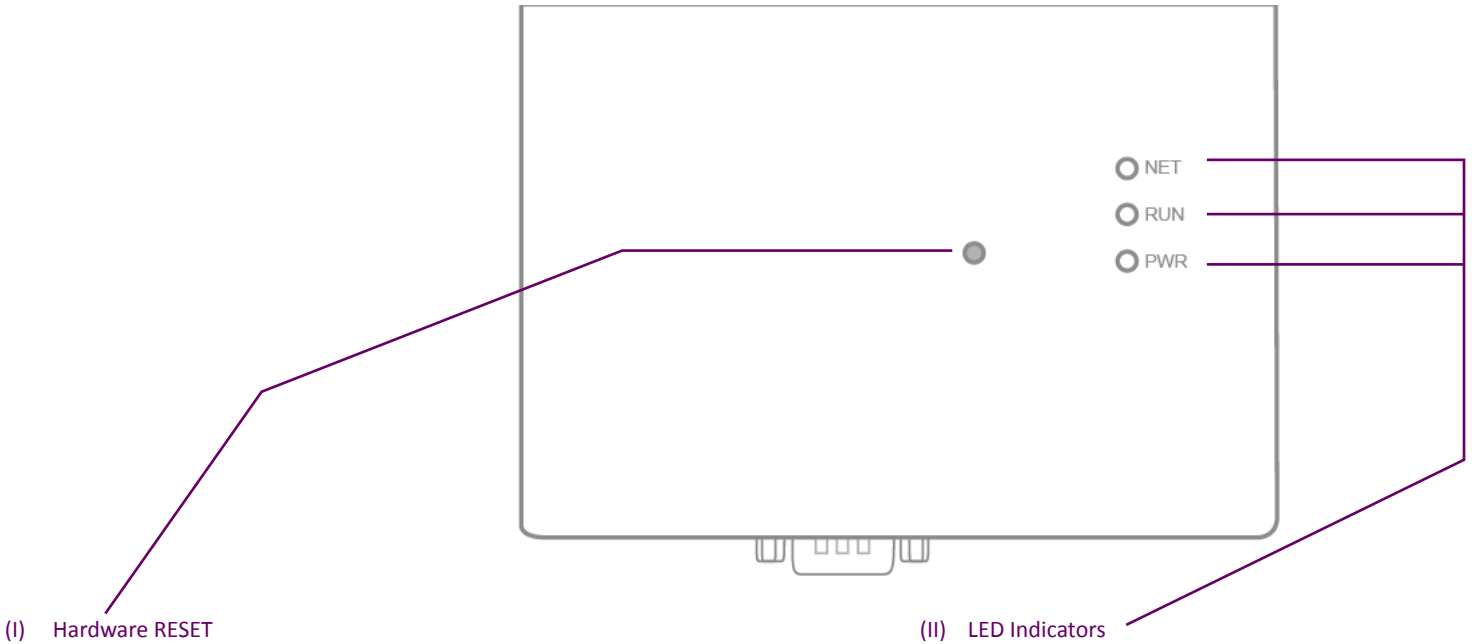
9. Connect an Ethernet cable between the office/factory router’s LAN port and BITNODE’s ETH2 port.

10. The BITNODE will attempt to connect to the remote VPN gateway via the existing office/factory’s LAN connection to WAN. You can use the provided serial cable to view the debug log using Hyperterminal software or monitor the ‘NET’ LED for the VPN connection status.

11. CISCO Security Appliance setup information:

    Using IKE
    Exchange Mode: Main Mode
    Remote Identity Type: IP Address

    Using Pre-Shared Keys (PSK)
    Encryption Algorithm: 3DES-MD5
    Configurable MTU, SA and IKE Lifetime
    Enable/Disable PFS
    Enable/Disable DPD with DPD action: clear/hold/restart



Press 1 – 9 Seconds	Soft Reset
Press >10 Seconds	Revert configuration to Factory Settings

The FATBOX BITNODE LEDs are useful indicators of the unit's current operating status and should be used for initial setup and troubleshooting of the router.

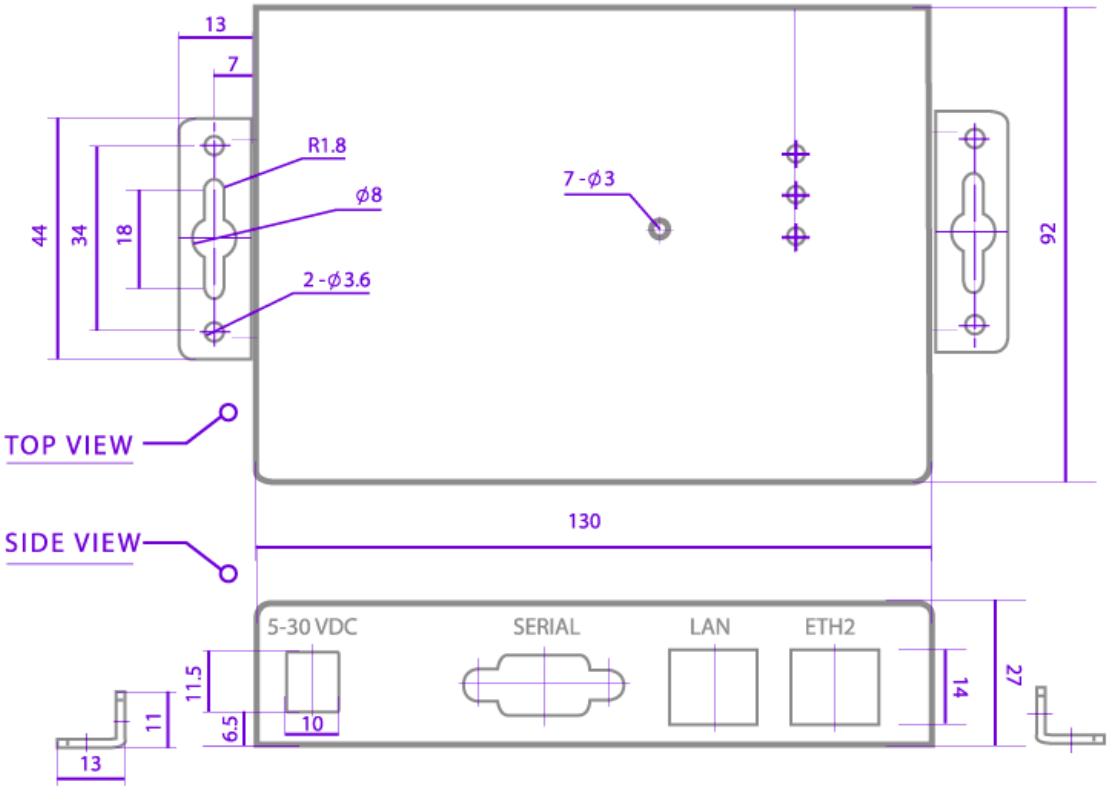
LED	Indication of	LED Status	Router Status
PWR	Power Supply	LED ON	Power is supplied to router
RUN	Startup Stage	Flash Once every 3 Seconds	Router Initializing
		Flash Twice every 3 Seconds	Router failing Initialization
	Network Connection	Flash Once every 1 Second	PPP dialing
		LED ON	PPP online
		LED OFF	PPP offline
NET	Network Type	GREEN	2G (GPRS/EDGE) network
		RED	3G/HSDPA network
	Signal Strength	ON	Signal is strong
		Flash Once every 3 Seconds	Signal is normal
		Flash Twice every 3 Seconds	Signal is weak

The case of the BITNODE is made with sheet steel that provides sturdy protection for the electronics and serves as an EMR Shield at the same time. The removable "L" mounting plates should be used to mount the router to a secure structure or a mounting plate within an electronic enclosure.

∴ Installation Orientation: For most efficient cooling, the router should be mounted vertically with the antenna-side facing up to allow for natural convection.

∴ Antennas must be mounted external of any shielded metal enclosure and secured to a large metal plane for best performance. A good example is the middle of a vehicle's metal roof.

∴ Vibration – in conditions where strong vibrations are expected (for example in locomotives) the FATBOX should be mounted with a vibration dampening material in between the box and the mounting surface. This isolation helps to dampen the transmission of shocks that may otherwise damage the device over time.



Your first call for support should be your local FATBOX solutions partner. If that fails to solve your problems or answer your queries, please contact us via support@amplified.com.au and we will get back to you latest the next business day.

Amplified Engineering Pty Ltd
No. 5 Turner Ave, Unit 1
Bentley Technology Park
Bentley, Western Australia 6102
AUSTRALIA