



THE ENERGY OF THINGS

AMBR
AMATIS Border Router

User Guide

Version 4.2
October 2015

TABLE OF CONTENTS

| | |
|-----|-----------------------------------|
| 1.0 | INTRODUCTION |
| 1.1 | BEFORE YOU START |
| 1.2 | NETWORK FIREWALL REQUIREMENTS |
| 2.0 | INSTALLING AMBR |
| 2.1 | TROUBLESHOOTING AMBR CONNECTIVITY |
| 2.2 | AMBR INDICATOR LIGHTS |
| 3.0 | ENERGY DASHBOARD |
| 3.1 | REGISTRATION AND SET UP |
| 3.2 | AMATIS DASH USER GUIDE |
| 4.0 | END USER LICENSE AGREEMENT |



CUSTOMER SUPPORT
970-300-1344
info@amatiscontrols.com

1.0 INTRODUCTION

Thank you for choosing Amatis Controls. This **AMBR Installation Manual** will guide you through the process of installing AMBR. Within an hour or so your system will be reporting valuable energy data to the Amatis Energy Dashboard, which you can access online. All components must be installed correctly to ensure the overall accuracy of this kit.

1.1 BEFORE YOU START

Before beginning your installation, make sure the installation site has:

- High speed Internet connection (configured for DHCP)

- AMBR can also be configured to use a static IP address
- Ethernet and electric outlets, within 200 ft, of AMBR

1.2 NETWORK FIREWALL REQUIREMENTS

TCP 1195 outbound to vpn.amatiscontrols.com

UDP 1195 outbound to vpn.amatiscontrols.com

TCP 3306 outbound to sql.amatiscontrols.com

TCP 80 outbound to checkip.dyndns.org

TCP 80 outbound to vpn.amatiscontrols.com

TCP 80 outbound to api.amatiscontrols.com

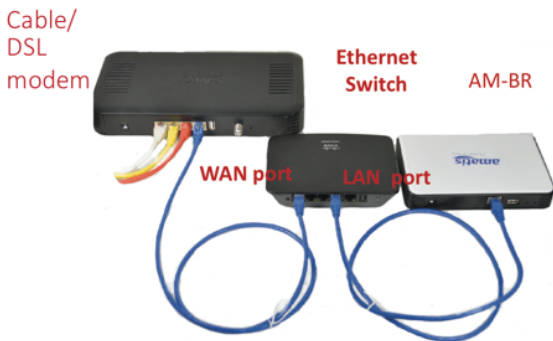
TCP 80 outbound to dash.amatiscontrols.com

2.0 **INSTALLING AMBR**

AMBR connects your Amatis system to the Internet. Follow the steps below:

1. Connect one end of the blue Cat5/Ethernet wire to the back of AMBR.
2. Connect the other end of the blue Cat5/Ethernet wire to an available Ethernet port.

NOTE: Some cable & DSL modems have only one Ethernet port. In order to connect AMBR you may need to add another Ethernet port. Ethernet Switches are available to add more Ethernet ports to the same Internet connection. One option is illustrated below:



3. Plug the barrel end of the white 5V power supply into the back of AMBR, then the plug into the wall socket.
4. Wait for 1-2 minutes while AMBR completes its **startup sequence** and connects to the Internet. The **startup LED sequence** is as follows:
 - a. red led, power GOOD
 - b. white led, AMBR started
 - c. blue led, hardware GOOD
 - d. yellow led, networking possible
 - e. green led blinking, loading software
5. On the front of AMBR a **solid green light** confirm AMBR has booted up correctly and is connected to the Internet. **Startup sequence** is complete, refer to section 2.2 for descriptions of regular LED functions.

6. If AMBR does not show a blue light after 5 minutes, you may be experiencing an Internet connectivity problem. Follow the troubleshooting steps in the next section.

2.1 TROUBLESHOOTING AMBR CONNECTIVITY

1. Restart your modem and AMBR.
 - a. Power both devices off
 - b. Power modem on
 - c. After modem reboots and shows Internet activity
 - d. Plug AMBR back in
 - e. Verify AMBR shows blue blinking light
2. Confirm your modem is configured in DHCP mode
 - a. Follow modem owner's manual directions
 - b. Contact your Internet service provider
3. Identify which AMBR indicator lights are active.

NOTE: When AMBR is connected to power, all lights turn on, then turn off, then turn back on one-by-one. Indicators can be diagnosed in the table below:

2.2 AMBR INDICATOR LEDES

| LED | Flashing | Solid | Off |
|--------|---|---|-------------------------------------|
| Green | Processor boot-up SUCCESS | Processor boot-up SUCCESS | Processor ERROR |
| Orange | | Off Line data logging SUCCESS | Off line logging ERROR |
| Blue | Data logging and configuration enabled SUCCESS | Data logging enabled SUCCESS | Internet connection ERROR |
| White | | | Normal operation |
| Red | | Power connection SUCCESS | Power connection ERROR |

NOTE: this table is only valid after AMBR's **startup sequence** AND the green led is solid.

5.0 AGENCY CERTIFICATIONS

Operating Requirements and Conditions

The design of AMBR complies with FCC and IC safety levels of radio frequency (RF) exposure for Mobile devices.

Mobile Device RF Exposure Statement

RF Exposure - This device is only authorized for use in a mobile application. At least 20 cm of separation distance between the AMBR device and the user's body must be maintained at all times.

Caution Statement for Modifications

CAUTION: Any changes or modifications not expressly approved by *Amatis Controls, LLC* could void the user's authority to operate the equipment.

FCC Notices

AMBR has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in an installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning AMBR off and on the user is encouraged to try to correct the interference by one or more of the following measures:

- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer for help.

OEM Labeling Requirements

WARNING! The Original Equipment Manufacturer (OEM) must ensure that FCC/IC labeling requirements are met. This includes a clearly visible label on the outside of the final product enclosure that displays the contents shown below.

FCC:

Contains FCC ID: 2ADDY-BR1

The enclosed device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. this device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation

IC:

Contains Model AMBR, IC:20256-BR1

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

1. this device may not cause interference, and
 2. this device must accept any interference, including interference that may cause undesired operation of the device
-

Exigences et conditions de fonctionnement:

La conception de AMBR est conforme aux limites d'exposition aux Fréquences Radio définies par les normes IC et FCC pour les appareils mobiles.

Déclaration d'exposition aux fréquences radio d'appareil mobile

Exposition fréquences radio - Cet appareil est seulement conçu pour usage mobile. Au moins 20 cm de séparation doit être maintenue à tout instant entre l'appareil AMBR et l'utilisateur.

Déclaration de mise en garde concernant les modifications

ATTENTION: Tous changements ou modifications qui ne sont pas expressément approuvés par *Amatis Controls, LLC* sont

susceptibles de révoquer les droits d'utilisation de cet équipement.

Avis IC

AMBR a été testé et entre dans la catégorie des appareils numériques de Classe B, selon la Section 15 de la réglementation de la IC. Ces limites ont été conçues pour protéger les installations domestiques contre les interférences néfastes. Cet équipement génère, utilise et émet de l'énergie sous forme de fréquences radio et, en cas de non-respect des instructions d'installation et d'utilisation, risque de provoquer des interférences radio. Il n'existe cependant aucune garantie contre ces interférences.

En cas d'interférences radio ou télévisuelles, pouvant être vérifiées en allumant, puis en éteignant l'équipement, l'utilisateur est invité à essayer de résoudre le problème de l'une des façons suivantes :

- Eloigner l'équipement du poste de réception ;
- Brancher l'équipement sur une prise appartenant à un circuit différent de celui du récepteur ;
- Demander de l'aide auprès du revendeur ou d'un technicien radio/TV

Exigences en matière d'étiquetage OEM :

ATTENTION! Le fabricant d'équipement d'origine (OEM) doit veiller à ce que les exigences en matière d'étiquetage de la FCC / IC soient respectées. Cela comprend une étiquette clairement visible sur l'extérieur de l'enceinte du produit final qui affiche le contenu ci-dessous.

IC:

Contient le model AMBR, IC:20256-BR1

Cet appareil respecte le(s) standard(s) RSS de l'Industry Canada sans license. Pour cela le sujet doit respecter les deux conditions suivantes:

1. cet appareil ne doit pas causer des interférences, et
2. cet appareil doit supporter toute interférence, incluant des interférences pouvant déclencher des fonctionnements indésirables de l'appareil

3.0 END USER SOFTWARE LICENSE AGREEMENT

1. USER NOTICE

Please read this End User Software License Agreement (“License Agreement”) carefully before using your Amatis product. By installing and registering an Amatis device you hereby agree with the terms of this License Agreement. If you do not agree with the terms of this License Agreement, do not use the Amatis Product and Amatis Software.

2. TERMS

The terms of this License Agreement are applicable to anyone who uses Amatis Controls Software and Firmware included in a product purchased from Amatis and/or Amatis partners. This license does not permit the use of the Amatis Software in any other product. Amatis Controls reserves the right to take legal action against anyone else using, selling or distributing the software. By using the Amatis Product and Amatis Software, you agree to the terms of this License Agreement.

3. LICENSE

Amatis Controls grants a single, non-sublicensable, non-exclusive, non-transferable license to use the Amatis Software solely as part of products obtained from Amatis and/or any Amatis partner for which applicable fees have been paid. Except for the limited license rights expressly granted in this License Agreement, Amatis Controls reserves all rights in and to the Amatis Software and any modifications or copies thereto.

4. GENERAL RESTRICTIONS

In exchange for the license, you agree not to: decompile, disassemble, or reverse engineer the Amatis Software; alter, modify or create any derivative works based on the Amatis Software; use, copy, sell, sublicense, lease, rent, loan, assign, convey or otherwise transfer the Amatis Software except as expressly authorized in writing by Amatis Controls; distribute, disclose, or allow use of the Amatis Software, in any format, through any timesharing service, service bureau, network or by any other means; allow any service provider or other third party, with the exception of Amatis Controls authorized resellers, distributors, and their designated employees who are acting solely on behalf of and for the benefit of the end user, to use or execute any software commands that cause the Amatis Software to perform functions that facilitate the maintenance or repair of any product.

5. DISCLAIMER OF WARRANTIES

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, AMATIS CONTROLS PROVIDES THE AMATIS SOFTWARE “AS IS” AND “AS AVAILABLE” WITH ALL FAULTS AND WITHOUT WARRANTY OF ANY KIND. AMATIS CONTROLS HEREBY DISCLAIMS WITH RESPECT TO THE AMATIS SOFTWARE ALL WARRANTIES AND CONDITIONS, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING BUT NOT LIMITED TO ANY (IF ANY) WARRANTIES OR CONDITIONS OF OR RELATED TO: NON-INFRINGEMENT, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, LACK OF VIRUS, ACCURACY, OR COMPLETENESS OF RESPONSE.

6. TERMINATION

If you breach the license limitations or restrictions in this License Agreement, Amatis Controls may, with immediate effect, terminate the software licenses granted in this License Agreement without prejudice to any available rights and remedies. Upon termination or expiration of the license for any reason, you shall immediately return the Amatis Software and any copies to Amatis Controls, or, at Amatis Controls' discretion, you shall permanently destroy all copies of the Amatis Software and any related materials in your possession or

control. Inadvertent copies of the Amatis Software and any related materials remaining in the possession of the End User subsequent to termination or expiration shall not be implied or construed as Amatis Controls consenting to transfer ownership of the software and any related materials to the End User.

7. LIMITATION OF LIABILITY

TO THE EXTENT NOT PROHIBITED BY APPLICABLE LAW, IN NO EVENT SHALL AMATIS CONTROLS BE LIABLE FOR ANY CONSEQUENTIAL, INDIRECT, SPECIAL, EXEMPLARY, OR PUNITIVE DAMAGES WHATSOEVER (INCLUDING BUT NOT LIMITED TO DAMAGES FOR: LOSS OF PROFITS, LOSS OF CONFIDENTIAL OR OTHER INFORMATION, BUSINESS INTERRUPTION) ARISING OUT OF OR IN ANY WAY RELATED TO THE USE OF OR INABILITY TO USE THE AMATIS SOFTWARE, EVEN IF AMATIS CONTROLS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

8. COMPLIANCE

Amatis Controls will have the right to inspect your compliance with these License Agreement terms.

9. GOVERNMENT END USERS

The Amatis Software is classified as “commercial computer software” and the Documentation is classified as “commercial software documentation” or “commercial items.” Any use, modification, reproduction, release, performance, display or disclosure of the Amatis Software or Documentation shall be governed solely by the terms of this License Agreement and shall be prohibited except to the extent expressly permitted.

10. APPLICABLE LAWS

This License Agreement will be governed by and construed in accordance with the laws of the United States. Severability in the event that any part or parts of this agreement shall be held illegal or null and void by any court or administrative body of competent jurisdiction, such determination shall not affect the remaining parts of this agreement, and they shall remain in full force and effect as if such part or parts determined illegal or void had not been included.