

# Monster 3700 RF/IP Card User Manual

## FCC Warning

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

## FCC Radiation Exposure Statement

To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

## FCC Modular Approval Statement

This equipment is sold only to OEM integrators and must be installed by the OEM or OEM integrators under the following conditions:

- 1) The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and
- 2) The transmitter must not be co-located with any other antenna or transmitter.

## Introduction

The Monster 3700 RF/IP Card is an accessory that allows remote control and monitoring of the Monster HTUPS 3700 PowerCenter from any Internet web browser anywhere in the world. The Monster 3700 RF/IP Card utilizes Internet Protocol to connect to a central Monster server that provides the monitoring and control capability.

## Features

The Monster 3700 RF/IP Card adds the following features to the Monster HTUPS 3700:

- Remote monitoring of AC line supply voltage
- Remote monitoring of HTUPS 3700 current and power usage
- Remote monitoring of HTUPS 3700 battery voltage
- Remote control of HTUPS 3700 outlets (on / off)
- 7-day scheduling of HTUPS 3700 outlet states
- Internet Protect capability
- Alerts via Email or SMS on conditions related to power failure or battery level.

This document describes how to install the Monster 3700 RF/IP Card.

# Requirements

## Broadband connection

In order to connect the Monster 3700 RF/IP Card to the Internet, a broadband Internet connection will be required in the same facility as the HTUPS 3700 to be connected. Contact your local broadband connectivity provider to arrange for a connection to be installed if you do not have an Internet connection.

## IP infrastructure

The Monster 3700 RF/IP Card requires the following facility IP (Internet Protocol) infrastructure:

- Broadband router or modem/router with available Ethernet connection (10 Megabits/second or better) on RJ-45 jack. Any home broadband router available in most electronic stores or provided by your broadband provider will work. Some enterprise class routers may require further configuration, refer to Appendix A for information in such situations.
- DHCP (Dynamic Host Configuration Protocol) enabled in the router with IP Gateway and DNS (Domain Name System) server information must be configured. Any home broadband router will already have this service available. Some enterprise level routers will require configuration to enable this service.

## Tools

You will need a jeweller's screwdriver (#0 size) to remove and attach the HTUPS 3700 SNMP slot cover plate screws (not included).

## Connectivity Options

The Monster 3700 RF/IP Card provides two methods to connect the HTUPS 3700 to the broadband router:

1. Ethernet connection using CAT-5 Ethernet cable directly to the broadband router (or facility Ethernet infrastructure). This option requires bringing Ethernet cable directly to the location of the HTUPS 3700.
2. Wireless connection using 900MHz RF (Radio Frequency) wireless protocol to Monster Ethernet Gateway. This option is available for facilities that prefer wireless connection, or cannot be wired for Ethernet. The Monster wireless protocol is capable of covering a 5,000 square foot wood frame facility with a single Ethernet Gateway. More Ethernet Gateways may be required for larger facilities.

Select your connectivity option and make sure to have the materials available (Ethernet cable and jacks, or Ethernet Gateway) prior to installation.

## Packing List

Locate the following materials in the package:

- Monster 3700 RF/IP Card.
- Antenna and coax cable assembly.

Antenna assembly only required if the HTUPS 3700 installation uses wireless connection (with Monster Ethernet Gateway).

## Equipment Description

On the face plate of the Monster 3700 RF/IP locate the following features.

- RJ-45 Ethernet jack
  - Orange Ethernet link light
  - Green Ethernet activity light
- SMA coaxial antenna jack
- Green Connection LED
- Mounting screw holes

## Serial Code

Locate the sticker on the Monster 3700 RF/IP Card containing the serial code prior to installation. The serial code will look like the following:

MPC12345/ABCD

Write down the serial code, you will need it later when configuring the HTUPS 3700 on the Monster website.

## Installation

Install the Monster 3700 RF/IP Card into the Monster HTUPS 3700 PowerCenter prior to placing the HTUPS 3700 into a rack or closet.

### Card Installation

Use these steps to install the Monster 3700 RF/IP Card.

- Disconnect the HTUPS 3700 PowerCenter from all power.
- Ground yourself by touching the metal case of the HTUPS 3700.
- Locate the SNMP slot on the back of the HTUPS 3700. This SNMP slot is located on the left side when facing the backplate of the HTUPS 3700. The slot will be covered with a plastic cover plate.
- Using a #0 Philips head jeweller's screwdriver, remove the 2 screws holding the cover plate over the SNMP slot. Keep the screws for later use.
- Remove the cover plate.
- Inside the slot are two rails: one at the top and one at the bottom, aligned with each other and positioned towards the right side of the slot. Locate these rails by touch—they are used to position and guide the Monster 3700 RF/IP Card.
- Insert the Monster 3700 RF/IP Card into the slot, making sure to slide the card along the rails in the slot. The card should slide into the card connector at the back of the slot.

Press gently so that the face plate of the card touches the rim of the slot.

- If the card does not seat with gentle pressure, it may not be aligned properly. Remove the card from the slot and try again.
- Once the card is seated properly, the holes in the face plate should align with the screen holes in the slot. Use the cover plate screws to attach the card to the backplate of the HTUPS 3700.

## Connection Installation

Depending on the connectivity option chosen, use one of the following sections to connect the Monster 3700 RF/IP to the Internet.

### Ethernet Connection

Connect a CAT-5 or higher rated Ethernet cable to the RJ-45 Ethernet jack on the face plate of the Monster 3700 RF/IP card. Connect the other end of the Ethernet cable to the broadband router or to the facility Ethernet infrastructure.

### Wireless Connection

Connect the coax cable from the Antenna assembly to the coax antenna jack on the face plate of the Monster 3700 RF/IP card. Mount the Antenna on a suitable surface using the adhesive base. Ensure that Antenna is outside of any metal rack or enclosure.

Install and connect the Monster Ethernet Gateway. See the installation instructions accompanying the Ethernet Gateway for details.

### Verifying Connectivity

Connect power to the Monster HTUPS 3700 PowerCenter and turn it on. The Monster 3700 RF/IP Card will automatically attempt to connect to the Internet. The Connection LED will turn on when the card has connected to the Internet.

If the Connection LED does not turn on within 5 seconds, there is a problem. See Appendix B for connection troubleshooting steps.

## Configuration

After verifying Internet connectivity of the Monster 3700 RF/IP Card, configure the card using the monster web site. Using a web browser on an Internet connected PC or laptop, connect to the following URL:

`http://monster.arrayent.com/`

The Monster web site will present a login page. Login using a previously created user account, or create a new user account.

After entering information related to the facility, click the Setup link found in the upper right corner. Then enter the serial code previously written down for the Monster 3700 RF/IP card (for example MPC12345/ABCD) and click the Add Device button. You should also enter a label describing the purpose or location of the Monster HTUPS 3700

If the serial code is valid, the web site will add an icon for the Monster HTUPS 3700, and you can perform further monitoring and control operations. (Note: the color of the label on top of the device icon indicates if the device is connected; green: connected, red: not connected).

## **Appendix A: IP infrastructure requirements**

The Monster Internet connected products connect to the Internet using the following protocols:

- Outgoing UDP connection to destination port 80
- Outgoing TCP connection to destination port 80

No configuration is required for any home broadband router. It may be necessary to open these outgoing ports on an enterprise class router or firewall. Note that any deep packet inspection looking for HTTP content will fail, as the Internet products use an encoded Monster protocol for connectivity.

## **Appendix B: Connection troubleshooting**

Use the following steps to resolve connection problems.

### **General problems**

- Verify that the broadband and IP requirements are met.
- Check to see that a PC or laptop is able to connect to the Internet.
- Verify that the PC or laptop is using DHCP to acquire an IP address (Windows IPV4 Properties: "Obtain an IP address automatically").

### **Ethernet connectivity problems**

- Check that the orange link light is lit on the Ethernet jack of the Monster 3700 RF/IP card. If this light is not lit, then the Ethernet cable is not properly connected, or an Ethernet switch or router is not powered on.

### **Wireless connectivity problems**

- Verify that the Monster Ethernet Gateway has a connection to the Internet. Check the user manual for the Monster Ethernet Gateway for instructions.
- Check that the SMA coax antenna connector is securely fastened to the Monster 3700 RF/IP card's SMA antenna jack.
- Check that there is no large metal object between the antenna and the Monster Ethernet Gateway.
- Try moving the antenna around. Sometimes a horizontal or vertical movement of 3 or 4 feet is sufficient to escape an "RF dead spot".
- Try operating the Monster 3700 RF/IP card close to the Ethernet Gateway. This will require moving the Monster HTUP 3700 PowerCenter unit temporarily. If the Connect LED turns on when the unit is closer to the Ethernet Gateway, it is an indication of insufficient range. Find a way to move the Ethernet Gateway close to the location of the HTUPS 3700, or use the wired connectivity option.