



Alpha Eclipse™ Pure Color™ 3600C Series

Alpha Eclipse 3600 models display:

- messages (using 29 different display modes and multiple fonts)
- time
- temperature, if a Temperature Sensor is ordered.
- animations
- graphics
- day
- date

Alpha Eclipse Features:

- **Alpha Eclipse Pure Color 3600C** models can display 16.7 million colors.
- **Alpha Eclipse 3600** models have 1MB of RAM. Memory can be upgraded with standard Compact Flash memory cards.
- **Alpha Eclipse** models include **AlphaNet** software. **AlphaNet** software is described on page 7 of this document.
- **Alpha Eclipse** models have five built-in counters that count automatically up or down by minute, hour or day for display applications, such as the number of days to Christmas or the number of days since a lost time accident.
- Up to 81 messages can be stored simultaneously. Each message can be scheduled by time, day and date.

- Each **Alpha Eclipse** model will display a variety of character sizes and fonts. For more information, see page 5 of this document.
- Battery Backup - In the event of a power loss, backup batteries in the **Alpha Eclipse** provide short term power in order to retain information, such as time settings, stored messages, graphics and schedules.
- Two or more **Alpha Eclipse** signs may be configured to display the same message at the same time. This is called simultaneous messaging and is often used when signs are mounted back-to-back. The signs are connected to each other. One sign is designated as the master sign, the others are designated as slave signs.

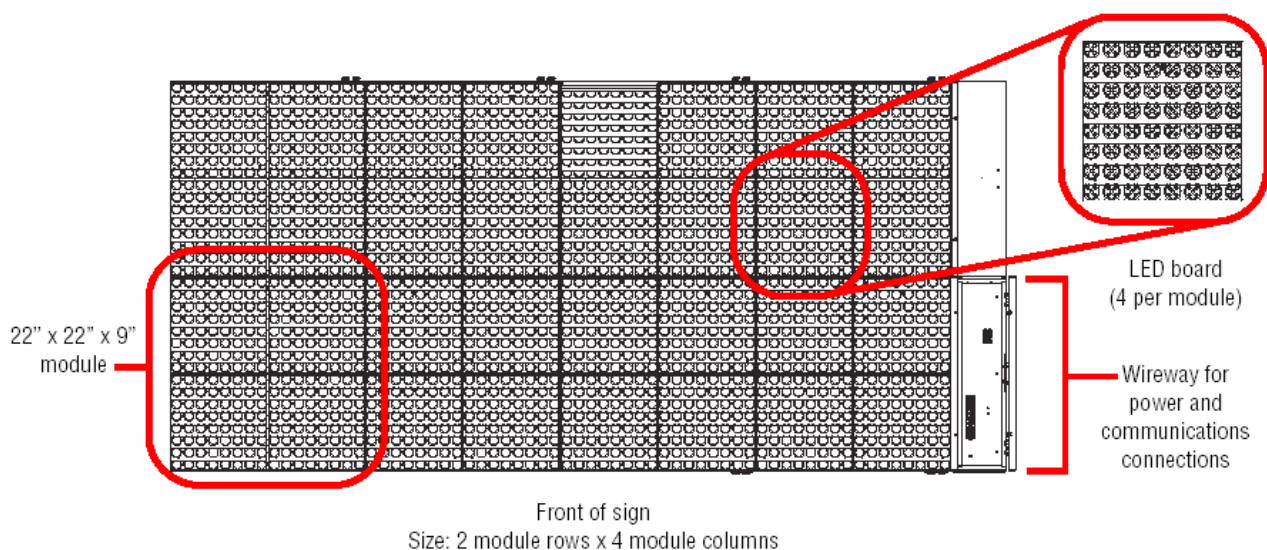
Connectivity

Alpha Eclipse models have built-in RS232 and RS485 communications for direct cable attachment to a computer. You may order a built-in modem for modem connection to a computer. You may order wireless equipment that will send messages by radio waves up to 6 miles (depending on obstructions). Ethernet solutions are also available that allow sending messages over an existing Ethernet network. For detailed information, see **Connectivity Options** on page 8 of this document.

Installation

Each **Alpha Eclipse 3600** sign is made of a variable number of 22" x 22" x 9" modules. Each module contains four LED boards with 64 pixels (8x8) on each LED board. Full color pixels have two red LEDs, two pure green LEDs and one blue LED per pixel.

The modules are supported by a steel framework which must be mounted to a separate support structure. The sign contains an easily accessible wireway for power and communications connections. This 6" wireway runs down one side of the display. The wireway is designed to simplify installation and servicing.



The steel framework of the **Alpha Eclipse 3600** is designed for lifting the sign and mounting it to the support structure. The steel framework may be welded, riveted, or bolted. It is not intended to provide any strength beyond lifting.

The design of the support structure depends on many factors:

- mounting methods
- building codes
- foundation
- sign size
- sign weight
- sign height
- wind loading

Because every installation site is unique, there is no single, approved procedure for mounting an **Alpha Eclipse 3600** sign. Support structure design must be done by a qualified individual, such as a structural engineer. Please consult with a professional sign installer to determine the proper mounting system to comply with all applicable building codes. We are not responsible for installations or the structural integrity of support structures or connections done by others. If necessary, please contact us for a structural engineering recommendation.

Ventilation:

If the sign is mounted to a solid surface like a wall, nothing should block the space between the top, bottom, and sides of the sign and the solid surface. If there is an obstruction (as in a monument-style installation), then run duct work from the bottom of each fan cover to the side edge of the sign and to the top of the sign to exhaust hot air. The design of the duct work should not allow rain or other material to enter the sign.

Electrical Guidelines:

- Electrical installation should only be attempted by a qualified electrician.
- Electrical connection must comply with all applicable national and local codes.
- All power wiring must be from circuit breaker-protected lines.
- A two-pole disconnect device must be installed in the building wiring for each branch circuit supplying the sign.
- The disconnect device must be installed within sight of the sign.
- The sign must be properly earth grounded.
- Do not run power wires and communication wires in the same conduits.
- All electrical connections must be watertight.
- Use minimum 80° C copper wire only.

Alpha Eclipse 3600 models may be ordered with 120VAC or 220VAC power.

- 120 V AC Modules use 2.77 Amps and 60Hz.
- 240 V AC Modules use 1.39 Amps and 60 Hz.

As an outdoor sign, the **Alpha Eclipse 3600** does not ship with power cord, pigtail or plug. Your electrician must provide conduit, connectors and Romex to properly connect and seal the electrical terminals inside the sign's weatherproof power supply enclosure.

We will arrange for turnkey installation upon request. We'll need to know the installation location, the

type of installation – wall mount, pole mount (existing or new), or monument component, and we'll need to know the height of the sign off the ground. Do you want us to provide an electrician to bring power to the sign? If cabling is to be used, will a trench be required, and how far from the computer will the sign be? Will the sign need an identification panel? Will it be lighted?

Training and Support

There is no charge for training or support, and there is no annual fee required to be able to call us anytime for assistance. We are available seven days a week, all year round. When you receive your sign(s), we will assist you with the installation (or we can do the entire job), and we will train your key operators.

Warranty

A limited two-year hardware warranty is provided on **Alpha Eclipse 3600** signs and connectivity items. Defective parts may be returned for repair, and they will be repaired or replaced and returned to you at no cost. After the warranty period there will be a nominal charge for parts repair. On-site service is quoted on a case by case basis.

Ordering Information

The list price includes the **Alpha Eclipse 3600** LED modules, mounting frame, **AlphaNet** software, training, and ongoing support, but not shipping or installation.

Alpha Eclipse units are built to order. Order cancellations are subject to a cancellation charge of 35% of the List Price.

Additional Information and Literature

Visit the following web sites for the latest **Alpha Eclipse Pure Color 3600 Series** sign information:

<http://alpha-american.com/p-alpha-eclipse-3600-color.html>

<http://www.ams-i.com/Pages/eclipse.htm>

This brochure describes the **Alpha Eclipse Pure Color 3600 Series** signs.

<http://alpha-american.com/product-brochures/B-AlphaEclipse-3600-Pure-Color-Alpha-Eclipse-Outdoor-C.pdf>

The **Alpha Eclipse 3600 Installation Manual** describes the mechanical and electrical installation for the **Alpha Eclipse 3600** outdoor LED signs. Mechanical drawings are included.

<http://alpha-american.com/9711-8001.html>

The **Installer Manual for the Alpha Eclipse 3600** is written for the installer.

<http://alpha-american.com/9711-8028.html>

This document describes how LED message centers will improve your existing signage:

<http://www.alpha-american.com/product-brochures/B-Power-of-LEDs.pdf>

This document compares energy-efficient **Alpha Eclipse LED** message centers to the traditional, expensive to operate incandescent message centers.

<http://alpha-american.com/product-brochures/B-Electricity-Cost-Comparison.pdf>

Number of Characters per Line

The **Alpha Eclipse Pure Color 3600** models can display from one to thirteen rows of characters.

The maximum number of characters that can be displayed on a line is determined by the formatting instructions that you use in your message. Formatting instructions specify:

- **Font** - Serif (fancy) or San Serif (normal)
- **Character Height** - 5 pixels, 7 pixels, 8 pixels, 10 pixels, 14 pixels, 15 pixels, 16 pixels, 20 pixels, 24 pixels or 32 pixels (depending on model)
- **Proportional or Fixed Width Characters**
- **Width** - Normal, Wide or Double-Wide

The characters displayed in each font at each pixel height have different size characteristics.

Examples:

7-pixel San Serif

The following characters are 5 pixels wide when displayed using the **7-pixel, San Serif** font:

**A B C D G H J K M N O P Q R S T U V W X Y Z a b d e f g h j
k m n o p q r s u v w x y z 2 3 4 5 6 7 8 9 0 / ? " + _ @ # \$ % ¢ &**

These characters are 4 pixels wide: **E F L 1 c t =**

These characters are 3 pixels wide: **I i l , . ; ' [] { } () - ! * < > space**

The colon : is the narrowest character, 2 pixels wide.

Characters are separated by one blank pixel in this font.

5-pixel San Serif

The following characters are 4 pixels wide when displayed using the **5-pixel, San Serif** font:

A B C D E F G H J K L N O P Q R S U 1 2 3 4 5 6 7 8 9 0 ? " @ ¢]

These characters are 3 pixels wide: **I , . : ; ' [] { } () - ! < > = space**

These characters are 5 pixels wide: *** # / + \$ % & M T V W X Y Z**

The underscore character **_** is 6 pixels wide.

Characters are separated by one blank pixel in this font. Upper case characters are substituted automatically for lower case characters.

TABLE: Number of Characters per Line

The numbers of characters shown in the following table are based on the size of the most typical character width for that font and character height combination. The calculations assume normal width characters and proportional spacing.

Font	Height in Pixels	Alpha Eclipse Width in Pixels												
		32	64	80	96	112	128	144	160	176	192	208	224	240
Serif	5	6	12	16	19	22	25	28	32	35	38	41	44	48
San Serif	7 or 8	5	10	13	16	18	21	24	26	29	32	34	37	40
Serif	7 or 8	3	7	8	10	12	14	16	17	19	21	23	24	26
San Serif	10	6	12	16	19	22	25	28	32	35	38	41	44	48
Serif	10	3	7	8	10	12	14	16	17	19	21	23	24	26
San Serif	14	5	10	13	16	18	21	24	26	29	32	34	37	40
Serif	14	3	7	8	10	12	14	16	17	19	21	23	24	26
San Serif	15 or 16	4	8	10	12	14	16	18	20	22	24	26	28	30
Serif	15 or 16	2	5	6	8	9	10	12	13	14	16	17	18	20
Serif	20	3	7	8	10	12	14	16	17	19	21	23	24	26
San Serif	24	3	7	8	10	12	14	16	17	19	21	23	24	26
Serif	24	2	4	6	7	8	9	11	12	13	14	16	17	18
San Serif	32	3	7	8	10	12	14	16	17	19	21	23	24	26
Serif	32	2	4	6	7	8	9	11	12	13	14	16	17	18

This document lists the number of characters that each model will display:

<http://www.ams-i.com/Media/characters.doc>

AlphaNet Software

Alpha Eclipse 3600 models are programmed with **AlphaNet** messaging software and **Paint Shop Pro** animation and graphics software to program the display of text, variables, BMP graphics and animated GIF graphics. **AlphaNet** is included at no extra charge. **AlphaNet** software:

- allows you to compose and save your messages as files.
- allows you to schedule messages by day and time and date.
- supports the counter feature.
- has multiple sites that can be used to store different lists of messages files and their schedules. has an emulator that shows exactly how the message will display on any Alpha sign model.
- allows you to recall a message and format that you have created previously and modify it to create a new message in that same format.
- supports the widest variety of connectivity methods -- direct cable connect using RS232 and RS485 on COM1 to COM4, wireless transceivers on COM1 to COM4, Ethernet adapters using an IP address, or dial up modem on COM1 to COM4.
- allows you to send your own bitmap graphics (.bmp) and animated gifs to your sign.
- comes with graphics and animations programs that allow you to create those graphics and animations.
- has features that allow you to integrate into your messages real-time data from appropriately-configured third party hardware and software applications.

You may read about **AlphaNet** and see all of the **AlphaNet** screens by visiting our web site at <http://www.alpha-american.com/p-alphanet.html>.

You may also download **AlphaNet** software for evaluation purposes. The graphics and animation programs that come with the **Alpha Eclipse** are not included with the download. To download **AlphaNet**:

1. Click <http://www.alpha-american.com/p-alphanet.html>.
2. Click **Download the AlphaNET V3 Demo**.
3. Save the **alphanet3.exe** file in a directory on your computer.
4. Click **alphanet3.exe** to install the program and documentation.
5. Setup instructions are provided in the manual, or you may call us for assistance at 800-223-4636.

The **AlphaNet** manual is included with the evaluation software. You may download the **AlphaNet** manual by clicking <http://alpha-american.com/9708-8081.html>.

Connectivity Options

There are several connectivity options that can be used for communicating messages between your messaging PC and the **Alpha Eclipse** displays:

- **RS232** - When you have a single **Alpha Eclipse** display, you may run an RS232 cable up to 50 feet from the display to the messaging PC.
- **RS485** - When you have multiple **Alpha Eclipse** displays or a single **Alpha Eclipse** display that is more than 50 feet from the messaging PC, you may run twisted pair cabling up to 4,000 feet from your **Alpha Eclipse** display(s) to a messaging PC.
- **Modem** - You can use a modems and phone line to program the **Alpha Eclipse** display remotely over phone lines.
- **Ethernet** - You may install an Ethernet Adapter in the **Alpha Eclipse** display and send messages over your local area network.
- **Wireless** - You may order wireless transmission equipment and communicate by radio waves from the messaging PC to the **Alpha Eclipse** display(s).
- **Message Loader** - You may transmit messages from your messaging PC to an **Serial Message Loader**, and then walk to the **Alpha Eclipse**, connect the Infrared Message Loader to the **Alpha Eclipse**, and press **Send** to transfer the messages into the **Alpha Eclipse** display.

RS232 and RS485 Connectivity Items

Alpha Eclipse displays have RS232 and RS485 adapters built in. This means that you can use an RS232 cable to connect the **Alpha Eclipse** display to your messaging PC, or you can use RS485 attachment items to connect the display to your messaging PC.

RS232 Items Needed

RS232 cabling may be used when you only have one **Alpha Eclipse** display, and the **Alpha Eclipse** display is less than 50 feet away from the messaging PC. An RS232 cable up to 50 feet long is provided at no charge, if you are using RS232 connectivity.

RS485 Items Needed

RS485 connectivity is used when you have a total cable distance of more than 25 feet. RS485 allows cable distances up to 4,000 feet, and even farther, if you use a repeater or a lower baud rate to transmit messages.

For RS485 connectivity, the following components are used:

- one **Type A9 RS232 Cable** (part number 1088-8634).
- one **RS232 to RS485 Converter Box** (part number 1088-1111).
- a length of **RS485 Network Cable** (part number 7120-0204 for 100 feet).

Modem

Alpha Eclipse displays can be programmed by modem. You can order a modem to be installed in the **Alpha Eclipse**. Messages are sent from the messaging PC via modem and phone line to the **Alpha Eclipse**. **AlphaNet** makes the connection automatically, transmits the message, verifies that the message was sent and received correctly, and disconnects when the transmission is complete.

Ethernet Adapters

Alpha Eclipse displays can also be adapted to TCP/IP using one of several Ethernet Adapters and Serial Servers that are available.

We offer two Ethernet Adapters for the **Alpha Eclipse**:

- The **MSS100** kit is a 100 Base T device, and it has its own power supply.
- The **Alpha Ethernet Adapter** is a 10/100 Base T device. It must be connected to power within the **Alpha Eclipse 3600**.

For additional information on these devices, click:

<http://alpha-american.com/p-alpha-ethernet-adapter.html>

Wireless Solutions

Wireless Transceivers send messages without cabling. One Wireless Transceiver connects to the serial port of your messaging PC, and one Wireless Transceiver is installed inside the **Alpha Eclipse** master display. Depending on obstructions, and building walls, messages may be broadcast to **Alpha Eclipse** displays up to six away with this solution. You may purchase a 2 watt system, a 5 watt system or a 25 watt system. With the 5 watt system, you must purchase an FCC site license for \$150. With the 25 watt system, you must purchase an FCC site license for \$400.

Message Loader

The **Message Loader** is an option to consider if you want to avoid pulling cabling or using a phone line, Modems, Wireless Transceiver, or Ethernet adapter. Here is the procedure:

1. Use your messaging PC, **AlphaNet** and its Emulator to compose and debug your messages.
2. Connect the **Message Loader** to the messaging PC using a special RS232 cable.
3. Transmit your list of messages from the messaging PC into the **Message Loader**.
4. Walk to the **Alpha Eclipse**, connect the **Message Loader** to the **Alpha Eclipse** with a special cable, and press the **Send** button to transfer the messages into the **Alpha Eclipse**.

Additional information on the **Message Loader** brochure may be found at:

<http://alpha-american.com/p-alpha-message-loader.html>

To read more about **Alpha Eclipse** connectivity options, you may download the **Networking Alpha Signs** manual by clicking <http://www.alpha-american.com/9700-0112.html>.

- **RS232** information is on pages 8, 10, 17, 23, 32, 35, 37, 42, 45, 46, 53, 54, and 78.
- **RS485** information is on pages 6, 8-11, 14, 18, 22, 30, 33, 34, 36, 40, and 61.
- **Modem** information is on pages 6, 16-19, 39, and 50.
- **Ethernet** information is provided on pages 4, 12-14, and 25-27.

Disclaimer

Due to continuing product innovations, all specifications and prices are subject to change without notice.