

ALPHACallisto Discrete Input Setup Guide & User Manual



© Copyright 2018 Adaptive Micro Systems LLC. All rights reserved. Adaptive Micro Systems 7840 North 86th Street Milwaukee, WI 53224 USA 414-357-2020 414-357-2029 (fax) http://www.adaptivedisplays.com

Adaptive is a registered trademark of Adaptive Micro Systems. All other brand and product names are trademarks or registered trademarks of their respective companies.

FCC Compliance

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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



Contents

1	System Overview
	System Overview. 1-1 Configuration Overview 1-2
2	ALPHACallisto Connections
	ALPHACallisto Connections
3	Configure AlphaNET Software
	AlphaNET Site Mananger
4	Using AlphaNET
	Using Messgae Editor
5	ALPHACallisto Supervisor
	ALPHACallisto Supervisor 5-1
A	Appendix
	Triggering Messages with Binary Mode. A-1 Configuring the System to Use a Timeout Message A-2

Networking more than one Discrete Input A-5

THIS PAGE INTENTIONALLY BLANK



In order to configure the ALPHACallisto module and to download messages to the LED displays, the ALPHACallisto unit is connected to the PC via USB or RS232.

The LED displays are connected to the ALPHACallisto on a RS485 network.

The system can manage up to 32 inputs by connecting up to four (4) ALPHAallisto modules together.

Discrete inputs are dedicated for low voltage applications (12 to 36Vdc/Vac).



Figure 1.0 – System Overview for Configuration of ALPHACallisto and Transfer of Messages to ALPHA displays.

Configuration Step by Step Overview

- 1. Install the ALPHACallisto hardware modules
 - a. Connect the AlphaCallisto to signs, dry contacts and power sources.
- 2. Connect the ALPHACallisto module to the PC via USB or COM port. a. Install driver if USB is used.
- 3. Install AlphaNET software (v3.0.12 or higher) onto your PC
 - a. Using the AlphaNET Site Manager create a Site Group.
 - b. Create and Save your messages using the AlphaNET Message Editor.
 - c. Add the newly created messages to the Site Group in the AlphaNET Site Manager.
- 4. Install the ALPHACallisto Supervisor onto your PC.
- 5. Connect the ALPHACallisto module to the PC via USB or COM port.
- 6. Download the messages from AlphaNET Site Manager to the Signs.



ALPHA Callisto Connections

For this phase you'll need to have:

- ALPHA Callisto module.
- Power supply for the ALPHA Callisto (5VAC) that came packed in the box with the ALPHA Callisto.
- Power source for the switch contacts on the ALPHA Callisto (24 VAC or 18 to 36VDC) not provided by AMS.
- RS485 network running from the ALPHA Callisto to the LED display(s) not provided by AMS.
- Dry Contacts or test switches also not provided by AMS.
- Small screwdriver, not provided by AMS.

Ready?

Now, we are assuming that the ALPHA Callisto is standing upright so that the words DISCRETE INPUT are facing you at the top of the unit. Wire the RS485 cable to the one of the molex connectors from the bottom of the ALPHA Callisto. Plug the molex with the RS485 cable attached back into the Callisto.





Now it's time to wire that RS-485 Cable to the displays. *For ALPHA RGB MNS Units only

ALPHA 4080RGB 080X016 24 PRI MNS



- The Terminal from the Callisto goes to D- on the sign
- The + Terminal on the Callisto goes to D+ on the sign
- The sh Terminal on the Callisto goes to GND on the sign

Daisy Chain any remaining displays following the same wire pattern

*Connect D- to TERM only on the last sign on the RS-485 Network





And this is the RS-485 wiring for ALHPA Tri-Color displays



- A Alpha Callisto
- B 1ft. RS-485 Drop Cable (P/N 10888636LF)
- C Modular Network Adapter (P/N 43310602)
- D RS-485 Cable (P/N 7124-0203)
- E End of Line Terminator (P/N 10889107)

*connect End of Line Terminator to the last display on the network

Modular Network Adapter detail

Black - Black Red - Yellow Shield - Connect Shield wires to each other, not to wall Plate





Wire up your dry contact connections to the two large molex connectors near the middle of the Callisto Module. Please note that only one of the COM connections is needed, and that it should be wired to each contact.

At this point, all of the Molex connectors should be reconnected to the Alpha Callisto, and the dry contacts are connected and ready for testing.



Wire up the power source for the switch contacts to one of the small 3 hole molex connectors located at the top of the ALPHA Callisto Module.

Finally, plug in the small power supply into the back of the Alpha Callisto unit and power it up.



After 20 to 30 seconds you should that the LED indicators on the front of the Alpha Callisto unit flash and you'll hear a beep. Once you've heard the beep, try each dry contact closure. If we've got it all wired up correctly, as each dry contact is closed the matching LED DI indicator on the Alpha Callisto should light up.



Install AlphaNet onto your PC.

Using the Windows Device Manager – determine which COM port Windows has configured the ALPHA Callisto as. Launch the AlphaNET **Site Manager**.



Figure 1.3 – AlphaNET Site Manager

Select **Connection Device** from the **Edit** pull down menu.

Connection Device Editor	×
Default Connection Device	Add
	Edit
Available Connection Devices:	Remove
	Rename
	Make Default
	Custom
	ОК

Figure 1.4 – AlphaNET Connection Device Editor

Add Connection Device		×	
Select the connection device or connection devices to add:		OK	
Ethernet Adapter Local Wired Com 1 Local Wired Com 2 Local Wired Com 3 Local Wired Com 4 Modem on Com 1 Modem on Com 2 Modem on Com 3 Modem on Com 4	× H	Cancel	
Modem on Com 2 Modem on Com 3 Modem on Com 4	~		

Figure 1.5 – Add Connection Device window

Select one of the Local Wired Com options

Add Connection Device	X
Select the connection device or connection devices to add: Ethernet Adapter Local Wired Com 1 Local Wired Com 2 Local Wired Com 3 Local Wired Com 4 Modem on Com 1 Modem on Com 2 Modem on Com 3 Modem on Com 3	OK Cancel

Figure 1.6 – Local Wired Com selected

Click OK



Configure AlphaNET Software

Connection Device Editor			
Default Connection Device	Add		
	Edit		
Available Connection Devices:	Remove		
	Rename		
	Make Default		
	Custom		
	ОК		

Figure 1.7

Click once on the Connection Device shown in the Available Connection Devices area.

Connection Device Editor			
Default Connection Device	Add		
	Edit		
Available Connection Devices:	Remove		
	Rename		
	Make Default		
	Custom		
	ОК		

Figure 1.8

Click the Edit Button

THIS PAGE INTENTIONALLY BLANK

ຼ
ສ
Ž
کچ
<u>d</u>
ň
ш.
Z
a
<u>-</u>
<u> </u>
<
2
0
÷
2
O

General Settings		Wireless Settings
COM Port: COM1 -	Modem	Pager Header:
Data Format: 8N1 💌	Wireless TCP/IP	l Pager Trailer:
Baud Rate: 9600 💌	USB	<u>]</u>
IP Port: 3001	Hardware Flow Control	
Modem Settings	′	Include NULLs within packets
Dialing Prefix:		Packet Size: 150
Modem Init String:		Packet Delay: 2

Figure 1.9

Select the appropriate COM Port that matches the COM Port that Windows has configured the ALPHA Callisto as, then click the OK button.

If desired, you can rename the device to match the assigned COM Port by clicking on the Available Connection Device then clicking on the Rename button. Assuming that Windows assigned the COM Port 8 to the ALPHA Callisto device, a typical name for the site may be ALPHA Callisto on COM 8.

Click OK to close the Connection Device Editor.

From the AlphaNET Site Manager – select New Site from the File pull down menu.

Site Editor	3		
Site Info Sign Info Group Info Advanced			
Site Description			
Site Name:			
Compatibility: Alpha 3.0 🔽 🔲 Use as an Editor transmit site			
Network Configuration			
Connection Device: Local Wired Com 1			
Phone Number: Cap Code:			
Enable error checking Data Compress			
OK Cancel Apply Help			

Figure 1.10 - Site Editor

Enter in a name for this site.

If you are connecting to an Alpha 4080 MNS unit, select Alpha 3.0 for Compatibility. Otherwise, use Alpha 1.0 (EZ95)

Click the Use as an Editor transmit site.

Select the Connection Device you created in the previous step.

Click on the Advanced tab on the top right of the Site Editor window.

Site Editor			
Site Info Sign Info Group Info Advanced			
Offsets Time Zone: 100:00 • Temperature: N/A • Memory Configuration	Delayed Send Options Use Send Times After: 12:00 AM v Before: 12:00 AM v	Dimming Options ✓ Photocell Enabled Brightness %: 50 ▼ Dim On Time: Dim Off Time: Never ▼	
Strings "A" - "Z"	iory Partitions Re	Configure as ticker site	
Strings "a" - "z" Configure for ALPHA Callisto			
Configuration:			
OK Cancel Apply Help			

Figure 1.11 – Advanced options of the Site Editor window

Click on the Configure for ALPHA Callisto to ensure that it has a check mark in the box next to it. Click on OK.



Figure 1.12 – AlphaNET Site Manager with a Site / Group defined for use with an ALPHA Callisto device.



Using the Alphanet Message Editor to Create Messages.

AlphaNET Message Editor - Alpha1	
Eile Edit Modes Characters Options Snippet View Window Help	
🗅 🚅 🖬 👗 🛍 🚳 🖶 🍕 D D D D D 🛛 🕈	
🔁 Alpha1	
Ready	ine:1 Col:1

From the AlphaNET Site Manager, click the Pencil from the ribbon bar or select Edit from the Messages pull down menu.

Figure 2.1 – AlphaNET Message Editor window

A message or alarm is comprised of a series of commands that will be sent to the LED display along with the actual text that you want shown on the face of the display when the message or alarm is activated. These commands include how and where you want the text shown, what font, what color, etc.

A 4080 RGB MNS-O LED display is capable of showing one single line of 4" high text, or two lines of 2" high text. For this message, we're going to show how to create a two line message that displays a notice on the top line and scrolls important information to the viewer on the bottom line of the display.

For our first message, I'd like to show you how to create a message that shows ATTENTION on the top line of the display and a scrolling message asking the viewer to evacuate the building on the bottom of the sign.

A typical message should always start with a MODE. Using the Modes pull down menu, select HOLD from the pull down menu.

Hold		×
Line Position	C <u>M</u> iddle C <u>B</u> ottom C <u>B</u> ight	OK Cancel

Figure 2.2 – Hold Mode Position Options

The Hold Line Position options tell the sign how and where to display the information. The modes that are relevant to the 4080 RGB MNS-O unit are outlined below.

Fill

The sign will fill all available lines on the sign, centering the text vertically. This mode is typically used when you want to show a 4" message on the display, or you want to show two lines of text on the display and both lines of text will fit on the display.

Тор

The display will position the text on the top line centered across the face of the display. This mode is typically used when you want to show a 2" status message on the top line of the display while scrolling a longer message on the bottom line of the display.

Bottom

The display will position the text on the bottom line centered across the face of the display. This mode is typically used further down inside a message to display text on the bottom line of the sign.

Select **TOP** on the Hold mode position window then click OK.

Next you would normally put a command here to select which font we want the text displayed in, but I know that the display defaults to a 2" high character (7 row normal) so I'm having you skip that command for this message.

Click on the RGB color option by clicking on the CHARACTERS pull down menu, then the COLOR then the RGB option





Select the color you want the text on the top line to be shown in then click OK.





Type the word ATTENTION in all capitals.

🛃 AlphaNET Message Editor - Alpha1	- • - • ×
Eile Edit Modes Characters Options Snippet View Window Help	
C Alpha1	- • •
Top Mold Color ROBATTENTION	•
Ready Line:1 Col:12	

Figure 2.5

That's all the text we want to show on the top line, and we want to show a scrolling message on the bottom line of the sign, so we're going back to the MODES menu to select a new mode.

Select Rotate then Standard from the MODES menu.

4

Hold		×
Line Position © Eil © Iop © Left	C <u>M</u> iddle C <u>B</u> ottom C <u>B</u> ight	OK Cancel

Figure 2.6

Select Bottom.

Rotate	×
Line Position C <u>Fill</u> C <u>M</u> iddle C <u>I</u> op (• <u>Bottom</u> i C <u>L</u> eft C <u>R</u> ight	OK Cancel

Figure 2.7

Click OK.

😰 AlphaNET Message Editor - Alpha1	
File Edit Modes Characters Options Snippet View Window Help	
Top Hold Color ROBATIENTION Bottom Rotate	
Ready	Line:1 Col:13

Figure 2.8

From the Characters menu, select COLORS then Amber.





Hit your CAPS LOCK on your keyboard and then type in the following phrase: AN EMERGENCY HAS BEEN REPORTED EVACUATE THE BUILDING

(YOU CAN TURN OFF YOUR CAPS LOCK)

💋 AlphaNET Message Editor - Alpha1	↔ - • ×
Eile Edit Modes Characters Options Snippet View Window Help	
□	
🔁 Alpha1	
Top Hold Color RGBATTENTION Bottom Rotate Color Amber AN EMERGENCY HAS BEEN REPORTED EVACUATE THE BUILDING	•
Ready Line: 2 Col: 9	

Figure 2.10

Go ahead and Save the message. Give it a message name that will remind you of what the message is (or more importantly why it will be shown).

Click once on the FILM STRIP on the top ribbon bar. The system should show you a new window that shows what the message is going to look like. Sorta. Right click on any area within the display area of the simulator and select CHANGE DISPLAY from the pop up menu. Select Alpha 4080 RGB from the option list, then click OK.



Now the simulator should match what we are going to see on the sign when we finally get around to transferring these messages to the display(s).

Create another message in the message editor. I'm going to give you a sequence of commands I'd like you to enter but I'm going to do it in short hand now that you're a little more familiar with our message editor.

Modes->Rotate->Standard->Fill Characters->15/16 Row Normal Characters->Color->RGB (Please select White or Blue) (CAPS LOCK AGAIN) SYSTEM TEST IN PROGRESS.

😰 AlphaNET Message Editor - Alpha3 🔅 📼 🔍 📼 🔍
Eile Edit Modes Characters Options Snippet Yiew Mindow Help
D 🛥 🖬 ⋨ 📾 🔀 😝 🛿 📢 역 및 명 및 🧣
Alpha3
Fill Rotate 15/16 Row Color ROB SYSTEM TEST IN PROGRESS.
Ready Line: 1 Col: 2

Figure 2.11

Save the message with a new file name. Again, try to make it meaningful. (SYSTEM TEST comes to mind for me) Now I've got a homework assignment for you. I want you to create an additional six (6) messages that would be used as alarms or fault messages when activated by a dry contact, and one more message that will be the default message that is shown on the LED display when there is not an active dry contact. Remember that you can now see what the message is going to look like by simulating it.

Creating a Message List with the AlphaNET Site Manager

Wow. You sure got through creating those extra 7 messages pretty quick. You feeling like a seasoned professional now with the message editor? Let's move on to getting the messages ready to be used on the sign(s) ...

In the AlphaNET Site Manager, click once on the Site/Groups folder we created earlier.

The Sitebase32.dat - AlphaNET Site Manager			- • ×
Eile Edit Messages View Help			
🔁 📽 🖿 📽 🛢 🕒 🖻 🐘 🕄 🖻 🖻	/ 🗧 🕈		
Sites / Groups	Message Name	Start Day / Time	Stop Day / Time Label
ALPHA Callisto on COM 8			
Durch	1		ALL MERCACES

Figure 3.0 – AlphaNET Site Manager

Click on the White Paper with the + symbol on the ribbon bar, or select Add from the Messages menu.

Look nr.
Name Date modified Type 11.minv 6/3/2017-8/0 AM AlphaVet Message 22.minv 6/3/2017-8/0 AM AlphaVet Message 23.minv 6/3/2017-8/0 AM AlphaVet Message 24.minv 6/3/2017-8/0 AM AlphaVet Message 25.minv 6/3/2017-8/0 AM AlphaVet Message 25.minv 6/3/2017-8/0 AM AlphaVet Message 25.minv 6/3/2017-8/0 AM AlphaVet Message 26.minv 6/3/2017-8/0 AM AlphaVet Message
B /mw 8/02017-80 AAA ApphaViet Message B /mw 8/02017-80 AAA AphaViet Message B /max 8/02017-80 AAA AphaViet Message
Damw B/2021 8.0 AM Alphahlet Message
B Amaw B / 2021 # 80 AM AlphaNet Message B Amaw B / 2021 # 80 AM AlphaNet Message D Amaw B / 2021 # 80 AM AlphaNet Message D Amaw B / 2021 # 80 AM AlphaNet Message D Amaw B / 2021 # 80 AM AlphaNet Message D Amaw B / 2021 # 80 AM AlphaNet Message D Amaw B / 2021 # 80 AM AlphaNet Message D Amaw B / 2021 # 80 AM AlphaNet Message D Amaw B / 2021 # 80 AM AlphaNet Message D Amaw B / 2021 # 80 AM AlphaNet Message
© Arnive B/J20217-830 AAA Alphahiet Message 35.mmw B/J20217-830 AAA Alphahiet Message © 6.mmv B/J20217-830 AAA Alphahiet Message © 7.mmv B/J20217-830 AAA Alphahiet Message © 8.mmv B/J20217-830 AAA Alphahiet Message © 8.mcv B/J20217-830 AAA Alphahiet Message © 8.ACK/ROUND.msv B/J20217-830 AAA Alphahiet Message
B smaw B/20217-830 AM Alphabiet Message B smaw B/20217-830 AM Alphabiet Message D smaw B/20217-830 AM Alphabiet Message
© 6minw 8/2/2017-830 AAA Alphahiet Message D mnw 8/2/2017-830 AAA Alphahiet Message B mnw 8/2/2017-830 AAA Alphahiet Message D EACKGROUND msw 8/3/2017-830 AAA Alphahiet Message
©7 mw B/J202178-00 AM AlphaNet Message ® Emin BJ202178-30 AM AlphaNet Message © BACKGROUND.msw B/J202178-30 AM AlphaNet Message
Blucktike B
C2 BACKGROUND miser 8/3/2817-8/0 AM AlphaNet Message
· · · · · · · · · · · · · · · · · · ·
Rie gane: Qpan
Res of tope: AphaNIT Map Press

Figure 3.1 – Add Messages window

Browse to the folder you saved the messages in, and select them all by clicking on the first message and then holding down the shift key and clicking on the last message (assuming they're all in a row), or click on the first message then hold down the CTRL key and click on the rest.

Click the OPEN button.

Sitebase32.dat - AlphaNET Site Manager			↔ <u> </u>
File Edit Message View Hele			
The got messages view nep			
	/ 😌 X		
Sites / Groups	Message Name	Start Day / Time	Stop Day / Time Label
ALPHA Callisto on COM 8	1.msw	Always	A
	2.msw	Always	В
	3.msw	Always	с
	1 4.msw	Always	D
	5.msw	Always	E
	6.msw	Always	F
	17.msw	Always	G
	1 8.msw	Always	н
	Dackground.msw	Always	'
	1		
	1		
	1		
	·		
	1		
	1		
	1		
	1		
	1		
Ready			ALL MESSAGES

Figure 3.2 – AlphaNET Site Manager

Now, I forgot to give my messages meaningful names when I saved them so I don't remember what each message is for. I go back to the message editor by clicking on each message once then clicking on the pencil on the ribbon bar. This time I scribble a note to myself on paper of what each message is going to be used for.

We're basically going to associate each message with one of the eight dry contacts that are available to us with the ALPHA Callisto module. "When dry contact #X is activated, I want Message X to be displayed." I find it easier to keep the messages in label order that is going to match the contact number later one. Label A is used by Contact #1, Label B is used by Contact #2, etc. Finally the last label is going to be used as our background message.

If you need to change the messages around to get them in the proper sequence, click once on the message name to select it, then use the UP or DOWN papers on the ribbon bar to move the message up or down in the sequence. You're going to want to know which label corresponds to which message in the next few steps.

All finished? Excellent. Let's put this stuff into action...

4



ALPHA Callisto Supervisor

The Alpha Callisto Supervisor software is used to configure and manage the Alpha Callisto module.

The Alpha Callisto unit should be plugged in and have a red light in the PWS indicator on the front of the unit near the bottom.

Using a USB Cable, connect your PC and the ALPHA Callisto module.

Load the Alpha Callisto Supervisor software.



Figure 4.1

There's a good chance that the software is in French instead of English. Let's fix this first.

Click on the Options button.







Figure 4.3

Click on the Preferences tab.

Options -	Nouvelle cor	nfiguration	x
6			
Retour			000
A propos	Préférences	Communication	2
🛛 🎑 Pa	ays		
Lar	ngage:	Francais	
			2
			2
			2
			2
			1
			20
0.0.0	0.0.0.0.	0.	0.00

Figure 4.4

Click on the drop down language and select English.

ALPHACall	isto Supervisor - Information	x
1	Redémarrer l'application pour valider le nouveau langage	
	ОК	

Figure 4.5

Believe it or not, that's a silly little message stating that we have to reload the software to change languages. Click OK, the exit out of the Alpha Callisto Supervisor software by clicking the X's in the upper corner of each window.

I swear to you – we will be in English from this point forward.

Reload the Alpha Callisto Supervisor software.



Figure 4.6

If this is your first time in the English version of the software, we'll have to create a new configuration.

Click on the Options button.

Options - New configur	ation	
About Preferences Co	mmunication	0000000000000
24	ALPHACallisto Configurator	ALPHACallisto Module
Version:	2.0.4	
Date:	09/2008	
ADA Adaptive Micro	Systems Europe	
25, rue lrène Joliot Cu	rie - ZI les Ruires	
38320 EYBENS - Tel: 33(0)476147600	FRANCE Fax: 33(0)476147570	WWW ams-e com

Figure 4.7

Click on the Communication tab. Select the appropriate COM Port that matches the COM Port that Windows has configured the ALPHA Callisto as, then close the window by clicking on the Back button.

4 ALPHACallisto	o Supervisor - New configuration				
New	Open	Options	Receive All	Send All	System Configuration
*	INPUTS	<u></u>	8	OUTF	PUTS 😣
	Master CPU			S	ligns
74	Discrete		ABC 0,981	Message	s & Variables
ſŎŢ	Analogs		¢∖	R	elays
	Industrial Networks		₫*	Bu	Izzers
e n'n'n'n'n'n'		a a a a a a	00000	and a a a	ana ana ana ana



Click on the RECEIVE ALL OPTION.

When the Receive all window closes, the system should take you to the New Configuration option screen.





5

Click on the Inputs tab.

Discrete Inputs C	onfiguration	- New co	nfigurat	tion						
G Back	Save		Send Send		G Scan		INP	JTS	√ 1.1- √ 1.5-	-1.4: Trigger Outputs -1.8: Trigger Outputs
Description In	puts Trigge	er Outputs	Upda	ate Varial	ble C	ounters	Codec	i Wheel	Chrono	meter
Module: Reading cycle	(ms):	1	L (M) ·	•						
🌍 Configurati	on	.1	.2	.3	A	.5	.6	.7	.8	Turn over the following board to configure the inputs to NPN or PNP:
Enable:		V	V	V	V	V	V	V	V	
Rising edge:	₀ ∕ ^{−1}	۲	۲	۲	۲	۲	۲	۲	۲	
Falling edge:	Ŀ	0	0	0	۲	0	۲	۲	0	IX IX
Scanned		0	0	0	0	0	0	0	۲	
0.000	1000	1000	1212	100	11	1111	110	1212	0.0.0	

Figure 4.10

Click on the Trigger Outputs tab

Enable the Background Message option.

This one we're going to work with for a bit.

Make sure that the Enable Mode option is checked.

24 Discrete Inputs Configuration - New configuration

Save

The last active input adds to the previous ones

The last active input replaces the previous ones

The last active input cancels the previous ones

Soecial

Standard

Outputs

Targets

Send

Description Inputs Trigger Outputs Update Variable Counters Coded Wheel Chronometer

Acknowledge all triggered inputs

V Message

HERE

Alas [B]:

Sign(s)

[GP]:Sign group (1)

Auto configuration.

A)³

Mode

None

Sign(s)

None

•

Buzzer

6

Back

Inputs

1.2 1.3

1.4

1.5 1.6

1.7 1.8

Figure 4.11

Enable mode Operating

In the Drop down menu below Background Message Enable – select the FILE LABEL from Alphanet Site Manager of the message that you want to be the background message.

Background messag

RECOR

Alias

[A]:

Sign(s)

None

Ŧ

Þ

Relay

Module (address.output)

÷

Enable

- Ін.н

MSGA

Іж.н

The Operating is typically either the first or the second option. Click on Inputs 1.1.

Click on Standard.

Move over to the right and make sure that there is a checkmark in the Message option.

Ŀ

Below the Message option is the drop down to select which FILE LABEL from the Alphanet Site Manager message you would like activated when the contact is engaged.

From the Sign(s) list select [GP] Sign group (1) from the list.

Click on Inputs 1.2, enable the message option, select the file label to activate, and make sure the SG 1 is selected. Repeat for each of the Inputs.

Click the Back button to return to the Alpha Callisto Supervisor window.

ALPHACallisto Supervisor

Click on the Signs option on the right hand side of the Alpha Callisto Supervisor window.

Sign Configuration - New configuration	n	
	🌢 🛅 着	
Back Save	Send Receive Send	
Signs Sign Groups Diagnostic		
List:		
Sign (1)	Properties	
Sign (2)	Name:	Sign (1)
Sign (3)		
Sign (4)	Address:	1 Hex:
Sign (5)		
Sign (6) Sign (7)		Start: Stop:
Sign (8)	Sleep mode	12:00:00 A 🚔 12:00:00 A 🔤
Sign (9)		
Sign (10)	Synchronize date and time ex	ach day
Sign (11)		(a)
Sign (12)		
Sign (13)		
Sign (15)		
Sign (16)		

Figure 4.12

For now we're going to cheat and set the address of the first sign to be a global address that will send to all ALPHA displays on the network. Change the Name to Global Broadcast (00) and then Change the Address to 0.

Click on the Sign Groups tab.

2 Sign Configuration - New configuration		
Back Bave Diagnostic	Receive Send	
List: Sign group (1)	Properties	
Sign group (2) Sign group (3) Sign group (4)	Name: Sign group (1) Available signs:	Content:
	<pre><02> Sign (2) <00> Sign (3) <04> Sign (4) <05> Sign (5)</pre>	
	<06> Sign (6) <07> Sign (7) <08> Sign (8) <09> Sign (9)	
	<0A> Sign (10) <0B> Sign (11) ~	



Click once on the Available signs - <00> Global Broadcast and then click on the arrow pointing to the right which moves the sign definition to the Content side of the screen.

5-8



Figure 4.14

Click on the Back button once more to return to the Alpha Callisto Supervisor window.

Click on the Save button. Follow the prompts to save the configuration file.

Click once more on the Master CPU button.

A Master CPU Configuration - New configuration	
Back Save	
Date & Time Countdown Time zones Saints Other	
((P) A TDF Antenna	
Enable	
NT-C Del Ter Club DTD	
Keal Time Clock - RTC	CHT
Local time zone:	
Winter/Summer time changing period	None
None	
Synchronize from TDF	
Synchronize from the PC after each connection	nchronize now
Literal date Alias: None	
Format: Sign(s):	
Day of week	

Figure 4.15

Click on the OTHER tab.

5

G Back	Save
Date & Tim	e Countdown Time zones Saints Other
Run Se	equence initialization
N	ot initialized
) In	itialized to
Seria O D O D	al RJ12 operating irected toward the sign irected toward the PC or other system
rest ↓ ↓	Hhrough mode
	character table
ISO-	8859-1 (Western Europe)

Figure 4.16

Click on the ENABLE button to enable Pass-through mode.

Switch back to the Alphanet Site Manager window.

Sitebase32.dat - AlphaNET Site Manager	() A4	
<u>File Edit M</u> essages <u>V</u> iew <u>H</u> elp		
🗀 📽 🖿 📽 🐮 🖻 b 🛄 🕄 P 🖻 🌶	1 🗧 😨	
Sites / Groups	Message Name	Start Day / Time Stop Day / Time
ALPHA Callisto on COM 8	Message Name	Start Day / Time Stup Day / Time
Ready		

Figure 4.17

Click once on the Site Group for the group we created previously.





Click once on the Lightning Bolt on the ribbon bar.

Transmit	
 Transmit Options All Sites Sites in List Selected Sites 	Cancel

Figure 4.19

Make sure that Selected Sites is selected, then click OK.

Once the Alphanet program has finished communication with the sign (COMMGR will no longer be loaded – typically less than a 30 seconds) Return to the Alpha Callisto Supervisor Window.

5

Go Image: Back Image: Back Image: Back Image: Back	
Date & Time Countdown Time zones Saints Other	
Run Sequence initialization	
 Not initialized 	
Initialized to	
Serial B.112 operating	
Directed toward the sign	
 Directed toward the PC or other system 	
Fassthrough mode ↓	
Enable Disable	
ISO character table	
ISO-8859-1 (Western Europe)	

Figure 4.20

100

Click on the Disable button to disable the pass-through mode, then click Back.

4 ALPHACallisto	Supervisor - New configuration	mana			
New	Open	Options	Receive All	Send All	System Configuration
-	INPUTS		8	OUTF	UTS 😵
	Master CPU			S	ligns
74	Discrete		ABC 0,981	Messages	s & Variables
ſĊı	Analogs		\$\$	R	elays
·····	Industrial Networks		۵ 🕰	Bu	Izzers
1 11 11 11 11 11		Sa a a a a a	0.0000	0.0.0.0.0	a da a da a da a

Figure 4.21

Click on the Send All button on the top of the window.

Click on the SEND ALL button to transmit the new configuration from the PC to the Callisto module. When the Communication window closes, exit out of the Alpha Callisto Supervisor window and also shut down the Alphanet Site Manager.

As you activate any contact, the message should appear on the LED displays almost instantaneously.

Thanks for following along. Please feel free to contact your Adaptive Sales Rep with any questions you may have.



Triggering Messages with Binary Mode

The Alpha Callisto Module has the ability to be used as a simple message activation system. In the mode previously discussed, each Alpha Callisto module could be used to activate 1 to 8 different messages, and the messages can be "stacked" so that the display can show multiple alarm messages at once – alternating between each message. In this configuration a maximum of four (4) Alpha Callisto modules can be daisy chained together allowing for up to 32 different messages to be triggered by contacts.

As an alternative solution to that – a single Alpha Callisto module has the ability to be configured to display any one of up to 99 different messages based on the same contact closures – but only one message can be displayed at a time. This is done by using the value of the contact rather than acting as just a simple switch. In this configuration the contacts connected to the Callisto take on the following values:

Contact Values:

Contact #:	1	2	3	4	5	6	7	8
ON:	1	2	4	8	16	32	64	128
OFF:	0	0	0	0	0	0	0	0

Using this configuration – the individual messages can be activated by adding the values of the contacts together. If both contact #1 and #2 are enabled the system automatically adds the associated value for the contacts (1+2) and triggers message #3. If contacts #1, #2 and #4 are enabled the system automatically adds the associated values for the contacts (1+2+8) together and triggers message #11. Using this method, and Alphanet 3.1.13 to transmit the messages to the displays – it is possible to control up to 99 different messages from a single Alpha Callisto module.

This is accomplished by assigning the inputs to the CODED WHEEL and configuring the Coded Wheel to be in BCD format.

iscrete Inputs Con	figuration - New configuration	
	H K G	INPUTS I.1-1.4: Coded Wheel
Back S	ave Send Scan	▼ 1.5-1.8: Coded Wheel
Description Input	s Trigger Outputs Update Variable Counters	Coded Wheel Chronometer
Concernation Finable mod		
Format	-	Range
BCD	Hexadecimal	Min: 0 Max: 99
Byte 1 Byte 2	b7 b6 b5 b4 b3 b2 b1 b0 1.8 1.7 1.6 1.5 1.4 1.3 1.2 1.1	Start message: (A): (0) -> [A]: (1) -> [B]: (2) -> [C]: (3) -> [D]:
Byte 3 Byte 4		Target [GP]:Sign group (1)



Configuring the System to Use a Timeout Message

With the release of Alphanet 3.0.14, Adaptive has implemented a way to have the display show a timeout message when there is no 485 activity for X seconds. To use this feature, you must create a message in Alphanet with what message you want to be displayed on the sign when the display has not received a "heart beat" for a particular duration. Then you must edit the Site in the Alphanet Site Manager. On the Advanced tab, you select "Configure for ALPHA Callisto" then select the Timeout Msg as well as set the Timeout period.

Site Editor				
Site Info Sign Info G	roup Info Advanced			
Offsets Time Zone:	Delayed Send Options Use Send Times After: 12:00 AM	Dimming Options Photocell Enabled Brightness %: 50		
Temperature:	Before: 12:00 AM	Dim On Time: Dim Off Time: Never		
Assign Fixed Memory Partitions Keyboard File Size: 10				
✓ Strings "A" - "Z" ✓ Strings "a" - "z" ✓ Strings "1" - "9"				
Configuration: ABL00500000BBL00500000CBL00500000DBL00500000EBL005000				
Configure for ALPHA Callisto				
Timeout Msg C:\Users\kmboltz.AMS-I\Documents\COM TImeout (s): 10				
OK Cancel Apply Help				

Figure 4.22 – Alphanet Site Editor – Advanced Tab showing a selected Timeout Msg and a 10 second timeout.

Once you have transmitted the messages to the display, you must then configure the Alpha Callisto unit to actually begin transmitting the heartbeat. This is done from the MASTER CPU option on the ALPHACallisto Supervisor software. Once you are on the Master CPU Configuration screen in the ALPHACallisto Supervisor software click on the COUNTDOWN tab.



Appendix

Back	Configuration - CALLISTO CONFIGURAT		
Date & Time	Countdown Time zones Saints Other		
🔽 Enable	e mode		
Target Thurso	nine Date: Jay , January 02,2020 ▼	Target Hour: 12:33:12 PM	
		0 <mark>. 981</mark> 8. 981	Output variable
1	Years	None	Ŧ
4	Months	None	Ŧ
	Days 📃	None	Ţ
	Hours	None	Ŧ
(Minutes	None	v
	Seconds	[\$]:	•
	Sign(s): [GP]:Sign group (1)	•	

Figure 4.23 – Master CPU Configuration – Countdown tab

Click Enable mode to turn this feature on, then set a target date that is significantly in the future. Enable Seconds by checking the option and select an output variable for the timer to be transmitted to. Click Save.



Appendix

ALPHACallisto	Supervisor - CALLI	STO CONFIGU	IRATION WITH CO	MM LOSS.xml			
New	Open	Save	Options	Receive All	Send All	System Configu	ration
*	INPU	TS	<u>.</u>	8	OUTF	PUTS	8
	Master	CPU			5	Signs	
77	Discrete			ABC 0,981	Messages & Variables		
ſŌŢ	Analogs			\$~	Relays		
	Industrial N	Vetworks		A* [Bu	uzzers	
00000		00000	and and a second	00000		000000	2000

Figure 4.24 – ALPHACallisto Supervisor – Main Screen

Once you have done that be sure to click the SEND ALL button on the ALPHACallisto Supervisor software to enable this feature. Once you have done this, you should see the SIGN led on the Callisto unit begin flashing roughly every second as it transmits the variable to the sign – acting as a heartbeat for the display.

You can test the overall functionality of the display's Timeout Message by disconnecting the 485 cable from the sign. Within the timeout period you set in the Alphanet Site Editor, the display should begin displaying the time out message you had previously defined in the Site Editor.



Networking more than one Discrete Input

Caillisto units are networked togegther with a ribbon cable. See the photo below. Up to 4 Callistos can be networked this way.



The ribbon cable supplies communications and 5vdc power to the slave Callistos from the master Callisto. Connect the master and slave Callistos together with the ribbom cable and apply 5vdc power only to the master Callisto. A jumper may need to be installed into each Callisto if all slave units do not power up. The following photos show how to install this jumper if it is missing.

See these photos for details on opening the Callistos to install this jumper.



See these photos for details on opening the Callistos to install this jumper.



Remove 2 Screws

Spread the case sides

Slide the internal assembly out





Addressing the Callisto Units

The master and slave units need to addressed in order to operate together. Addressing is done with the following procedure. It is recommended that you label the master and slave Callistos to identify them as Master, Slave 1, Slave 2, and Slave 3.

Connect the master and slave Callistos together with the ribbon cable.

Connect 5vdc only to the master Callisto.

Wait for all units to power up and beep.

Connect a USB cable from your PC to the master Callisto.

Launch the AlphaCallistoSupervisor software and click on 'System Configuration'.



Click on the 'List View' tab and then the 'Receive' button.



The window should now list the master unit. Click the + to add each slave unit.



Click 'Valid configuration'. The new addressing will be shown. Click 'Flash Addr.'.



Address Flashing

The Flash addesses window should appear. It should list the address for the master unit.



Disconnect the ribbon cable from all Callisto units and click the 'Flash' button. The system will report that the master unit address has been flashed. Click OK.

The window will now show the address for a slave unit.

Move the USB cable and power cable from the master unit to the slave unit. Wait for the slave unit to fully power up and beep and then click the 'Flash' button again.



The system will report that the slave unit address has been flashed. Click OK.

Repeat the above steps if additional slave units need to be addresssed.

The system will then report the that all address flashing is done. Click OK.

Re-assemble and apply 5vdc to the complete Callisto system. The slave units should now have their PC LEDs flashing to indicate the communication to the master unit. The PC LED on the master unit will not flash unless there is USB commincation to your PC.



Appendix

Enabling the slave unit inputs.

The discrete inputs of the added slave units need to be enabled after the slave units are addressed. Click the 'Discrete' button on the main AlphaCallistoSupervisor window and then select the Trigger Outputs tab.



The inputs for the master unit will be shown by default. Scroll down the INPUTS menu in the upper right corner of the window and enable the inputs for the slave unit.

Ij Discrete Inputs Configuration - Hex configuration	A Discrete Inputs Configuration - New configuration			
South South South P 1.1-1.4: Trigger Outputs Bask South South T	a bek 2mt. 2mt 2mt 7 2.1-2.4: Telegger Outputs a Set 2mt 2mt 2mt 2mt 2mt 2mt 2mt 2mt 2mt 2m			
Description Inputs Trgger Outputs Update Variable Countiers Costed Wheel Overviewereter	Description Inputs Trigger Dutputs Update Verifitier Country Coded Wheel Overvaneter			
F Grable mode	P Enable mode			
C peeding Take a data in the provides ones C The last adduer input cancels the provides one C The last adduer input cancels th	C The last addres input address the previous area C. The last addres input address the previous area C. The last address input address the previous area C. The last address input address the previous area			
1.1 Special Special Special 1.2 Special Torm Torm	Indati 1.5 Be C Special Educerindge attraggened report			
1.4 Savdard 👷 Auto configuration	1.6 R Santud & Auto configuration			
Conjusto Resage	1.7 2.0 Chitputs Image Image <td< td=""></td<>			
y Tergets Sprit Sp	2.6 2.7 2.7 Torgets Spok Torgets Torgets Torgets Point Advanced (

The slave unit inputs can now be used just like inputs on the master unit.

ALPHACallisto Discrete Input PN E2805610000 REV D.



Adaptive Micro Systems LLC. 7840 North 86th Street Milwaukee, WI 53224 USA 414.357.2020 www.AdaptiveDisplays.com