



Introduction

The Cygnus® communicates over DeviceNet, Profibus-DP, or Ethernet/IP using an HMS AnyBus-S Slave interface card. For DeviceNet, Polled I/O data is used. For Profibus-DP, Cyclic I/O data is used. For Ethernet IP, data may be accessed using the GetAttributeSingle service.

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Periodically there will be updates to this manual. The latest version is available on our website or by calling your regional office listed on the back page of this publication.

Setup

Install the fieldbus specific HMS interface card into the Cygnus (see Cygnus Instruction Manual 850A295 for installation instructions). The switch settings for each fieldbus card are described in Chapter 3 of the fieldbus appendix for the specific interface card, or are available from the HMS website: <http://www.anybus.com>

Product	Anybus Part No.	Appendix file
AnyBus-S DeviceNet	AB4004	DeviceNet PDF file https://www.anybus.com/support/file-doc-downloads/anybus-master-slave-specific/?ordercode=AB4004
AnyBus-S Profibus-DP	AB4005	Profibus PDF file https://www.anybus.com/support/file-doc-downloads/anybus-master-slave-specific/?ordercode=AB4005
AnyBus-S Ethernet/IP+IT	AB4173	Ethernet/IP PDF file https://www.anybus.com/support/file-doc-downloads/anybus-master-slave-specific/?ordercode=AB4173

The EDS and GSD configuration files are also available on the same web page.

DeviceNet EDS file: AnyBus-S DeviceNet Parallel

Profibus-DP GSD file: AnyBus-S Profibus-DP

Fieldbus communications

The input/output data area size is 16 bytes. The data area consists of 4 fields:

Message identifier field	The message identifier is a unique number used to distinguish a new message. Each time the fieldbus sends a new message it must generate and send a different message identifier.
Parameter identifier field	The parameter identifier is the parameter number of the data the fieldbus is reading from or writing to the Cygnus.
Read/write control field	The read/write control tells whether this message is “a read from the Cygnus” or “a write to the Cygnus.”
Parameter data field	The parameter data field contains the data read or written message. The parameter data field consists of three variables one for each data type: unsigned short, integer, and float data. The data type area used is determined by the specific parameter selected.

Notes

- All data, both read and written, must be presented in the current Cygnus Unit system. To enter data using a different unit system, the unit system must be changed prior to changing or reading the data.
- All setup selectable data, both read and written, must be related to the current Cygnus setup number. To change parameters in another setup, the system must be changed to the desired setup number prior to changing or reading the data.
- The Cygnus considers the entire message to be valid when it detects that the message_ID has changed.
- Numbers are hexadecimal if they start with 0x, and decimal if not.

Message byte encoding

The Cygnus reads and writes multi-byte data in big endian format. Big endian format has the most significant byte first (at the lowest address). Little endian format has the least significant byte first.

For an integer of 16 bits (2 bytes) the number 0x1234 is shown here in the two formats.

	Big endian	Little endian
Byte 1	0x12	0x34
Byte 2	0x34	0x12

For an integer of 32 bits (4 bytes) the number 0x12345678 is shown here in the two formats.

	Big endian	Little endian
Byte 1	0x12	0x78
Byte 2	0x34	0x56
Byte 3	0x56	0x34
Byte 4	0x78	0x12

Depending on your fieldbus or the master controller, byte swapping may be required to read and write data properly to the Cygnus. See chart at right.

Fieldbus	Endianness
DeviceNet	Little endian
Profibus	Big endian
Ethernet/IP	Little endian

Message structure

	DeviceNet	Profibus-DP	Ethernet IP
message_ID	UINT	unsigned16	16-bit unsigned integer
parameter_ID	UINT	unsigned16	16-bit unsigned integer
read/write_control	UINT	unsigned16	16-bit unsigned integer
parameter data - unsigned short	UINT	unsigned16	16-bit unsigned integer
parameter data - integer	DINT	integer 32	32-bit signed integer
parameter data - float	REAL	float	32-bit IEEE 754 single floating-point

Beginning of Input/Output area

Offset	Field	Length
0x00	message_ID	2-bytes
0x02	parameter_ID	2-bytes
0x04	read/write_control	2-bytes
0x06	parameter data - unsigned short	2-bytes
0x08	parameter data - integer	4-bytes
0x0C	parameter data - float	4-bytes

Read/write control

0x0000 = Read, read data from Cygnus

0x0001 = Write, write data to Cygnus

Read message

To read a parameter from the Cygnus, the programmer fills in the message_ID, parameter_ID, and sets read/write_control to READ. The Cygnus responds with a message that has the same message_ID. The parameter_ID of the response is the same if there were no errors; otherwise, the parameter_ID contains the error number. The read/write_control of the response is set to WRITE. The appropriate data field of the response contains valid data if there were no errors.

Write message

To write a parameter to the Cygnus, the programmer fills in the parameter_ID, sets read/write control to WRITE, and fills the data field appropriate for the parameter. Then the programmer fills in a message_ID that is different than the last message_ID. Upon detecting the changed message_ID, the Cygnus will execute the write. The Cygnus responds with a message that has the same message_ID. The parameter_ID of the response will contain an Acknowledge code if the write was accepted by the Cygnus; otherwise, it will contain an error code. The read/write_control of the response is set to WRITE.

Fieldbus message examples

Example: Read the RollWidth (parameter number 47)

Fieldbus sends read message:

message_ID	= 1
parameter_ID	= 47
read/write_control	= 0
data – unsigned short	= undefined
data – integer	= undefined
data – float	= undefined

Cygnus Normal response:

message_ID	= 1
parameter_ID	= 47
read/write_control	= 1
data – unsigned short	= undefined
data – integer	= undefined
data – float	= RollWidth value

Cygnus Error response:

message_ID	= 1
parameter_ID	= Error_message_number
read/write_control	= 1
data – unsigned short	= undefined
data – integer	= undefined
data – float	= undefined

Example: Set UserConfigMassUnits (parameter number 1) to kilograms

Fieldbus sends write message:

message_ID	= 2
parameter_ID	= 1
read/write_control	= 1
data – unsigned short	= undefined
data – integer	= 3 (kilograms)
data – float	= undefined

Cygnus Normal response:

message_ID	= 2
parameter_ID	= 0xFFFF (Acknowledge)
read/write_control	= 1
data – unsigned short	= undefined
data – integer	= undefined
data – float	= undefined

Cygnus Error response:

message_ID	= 2
parameter_ID	= Error_message_number
read/write_control	= 1
data – unsigned short	= undefined
data – integer	= undefined
data – float	= undefined

Fieldbus Parameters

Parameter types

INT = 4 byte signed integer
FLOAT = 4 byte floating point
UNSIGNED_SHORT = 2 byte unsigned integer

Parameters 0 through 499 are allocated as Setup Selectable parameters

<u>Number</u>	<u>Description</u>	<u>Type</u>	<u>Read/Write</u>
0	UserConfigLanguageType 0=English, 1=French, 2=German, 3=Italian, 4=Spanish	INT	Read/Write
1	UserConfigMassUnits 0=ounces, 1=pounds, 2=grams, 3=kilograms, 4=newtons, 5=ounces per inch 6=pounds per inch, 7=grams per millimeter, 8=kilograms per centimeter, 9=newtons per centimeter	INT	Read/Write
2	UserConfigLengthUnits 0=inches, 1=feet, 2=millimeters, 3=centimeters, 4=meters	INT	Read/Write
3	UserConfigVelocityUnits 0=inches per minute, 1=feet per minute, 2=millimeters per minute, 3=centimeters per minute, 4=meters per minute	INT	Read/Write
4	UserConfigTimeUnits 0=seconds, 1=minutes, 2=hours	INT	Read/Write
5	UserConfigInertiaUnits 0=pounds*feet ² , 1=kilograms*meter ²	INT	Read/Write
6	AutoManualState 0=Automatic, 1=Manual	INT	Read/Write
7	HoldLevelChangesWith 0=None, 1=Output, 2=Tension, 3=Diameter, 4=Diameter and Tension	INT	Read/Write
8	InertiaAccelState 0=Off, 1=On	INT	Read/Write
9	InertiaCompState 0=Off, 1=On	INT	Read/Write
10	NewRollFeature 0=No, 1=Yes	INT	Read/Write
11	SpliceFeature 0=No, 1=Yes	INT	Read/Write
12	SystemType 0=Unwind, 1=Rewind, 2=Type 1, 3=Type 2, 4=Type 3, 5=Type 4	INT	Read/Write
13	TaperOnOffState 0=Off, 1=On	INT	Read/Write
14	TensionAlarmState 0=Off, 1=On	INT	Read/Write
15	AutoTuneControlType 0=PI, 1=PID, 2=I only	INT	Read/Write

<u>Number</u>	<u>Description</u>	<u>Type</u>	<u>Read/Write</u>
16	DA_SensorPositiveBias	INT	Read/Write
17	DA_SensorNegativeBias	INT	Read/Write
18	DA_ADC_Reference	INT	Read/Write
19	Not Used	---	----
20	GainSchedulingFlag 0=Off, 1=On	INT	Read/Write
21	CalibrationTensionBin	INT	Read/Write
22	OutOfRoundCompFlag 0=Off, 1=On	INT	Read/Write
23	Not Used	---	----
24	SensorOffset	INT	Read/Write
25	Not Used	---	----
26	DiameterCalibrationType 0=Single Point, 1=Two Point	INT	Read/Write
27	CalibrationOptimizeMethod 0=PI, 1=PID	INT	Read/Write
28	CoreDiameter	FLOAT	Read/Write
29	DisplayRate	FLOAT	Read/Write
30	FullRollDiameter	FLOAT	Read/Write
31	BargraphDisplayRate	FLOAT	Read/Write
32	HoldLevelPercentage	FLOAT	Read/Write
33	HoldMultiplier	FLOAT	Read/Write
34	InertiaAccelTime	FLOAT	Read/Write
35	InertiaCoreDiameter	FLOAT	Read/Write
36	InertiaDecelTime	FLOAT	Read/Write
37	InertiaOfCore	FLOAT	Read/Write
38	InertiaRollDiameter	FLOAT	Read/Write
39	InertiaRollWeight	FLOAT	Read/Write
40	InertiaRollWidth	FLOAT	Read/Write
41	InertiaThresholdPercent	FLOAT	Read/Write
42	InertiaVelocity	FLOAT	Read/Write
43	ManualPercentage	FLOAT	Read/Write
44	ManualLevel	FLOAT	Read/Write
45	NewRollDiameter	FLOAT	Read/Write
46	RollDiameter Use FieldbusDiameterIn to set Diameter from the Fieldbus	FLOAT	Read Only
47	RollWidth	FLOAT	Read/Write
48	Setpoint	FLOAT	Read/Write
49	SpliceMultiplier	FLOAT	Read/Write
50	StartTime	FLOAT	Read/Write
51	StopMultiplier	FLOAT	Read/Write
52	StopTime	FLOAT	Read/Write
53	TaperCoreDiameter	FLOAT	Read/Write
54	TaperFullRollDiameter	FLOAT	Read/Write
55	TaperPercentage	FLOAT	Read/Write
56	TensionAlarmDelay	FLOAT	Read/Write
57	TensionAlarmLevel	FLOAT	Read/Write
58	AutoTuneDiameter	FLOAT	Read/Write
59	AutoTuneDisturbancePercentage	FLOAT	Read/Write
60	AutoTuneOutOfRoundGain	FLOAT	Read/Write
61	AutoTuneRPM	FLOAT	Read/Write
62	CalibrationInverseDiameterGain	FLOAT	Read/Write
63	CalibrationInverseDiameterOffset	FLOAT	Read/Write

<u>Number</u>	<u>Description</u>	<u>Type</u>	<u>Read/Write</u>
64	CalibrationTension	FLOAT	Read/Write
65	CalibrationMaxVelocity	FLOAT	Read/Write
66	CalibrationMinVelocity	FLOAT	Read/Write
67	CalibrationScalingTension	FLOAT	Read/Write
68	CalibrationVelocity	FLOAT	Read/Write
69	DerivativeTime	FLOAT	Read/Write
70	DerivativeTimeCore	FLOAT	Read/Write
71	DerivativeTimeFullRoll	FLOAT	Read/Write
72	DiameterCore	FLOAT	Read/Write
73	DiameterFullRoll	FLOAT	Read/Write
74	ErrorLimitPercentage	FLOAT	Read/Write
75	IntegratorTime	FLOAT	Read/Write
76	IntegratorTimeCore	FLOAT	Read/Write
77	IntegratorTimeFullRoll	FLOAT	Read/Write
78	InverseDiameterCore	FLOAT	Read/Write
79	MaxTension	FLOAT	Read/Write
80	OutOfRoundGain	FLOAT	Read/Write
81	OutOfRoundMaxRPM	FLOAT	Read/Write
82	OverallGain	FLOAT	Read/Write
83	ProportionalGain	FLOAT	Read/Write
84	ProportionalGainCore	FLOAT	Read/Write
85	ProportionalGainFullRoll	FLOAT	Read/Write
86	ReferenceTension	FLOAT	Read Only
	Use for reading the present Tapered reference tension in User units		
87	UltimateGain	FLOAT	Read/Write
88	UltimateGainCore	FLOAT	Read/Write
89	UltimateGainFullRoll	FLOAT	Read/Write
90	UltimatePeriod	FLOAT	Read/Write
91	UltimatePeriodCore	FLOAT	Read/Write
92	UltimatePeriodFullRoll	FLOAT	Read/Write
93	CalibrationDiameterEditSetpoint	FLOAT	Read/Write
94	CalibrationDiameterEstimatedCurrent	FLOAT	Read/Write
95	CalibrationDiameterVoltageCurrent	FLOAT	Read/Write
96	CalibrationDiameterVelRPMCurrent	FLOAT	Read/Write
97	CalibrationDiameterEstimatedSingleMeasured	FLOAT	Read/Write
98	CalibrationDiameterEstimatedSingleSetpoint	FLOAT	Read/Write
99	CalibrationDiameterEstimatedSmallMeasured	FLOAT	Read/Write
100	CalibrationDiameterEstimatedSmallSetpoint	FLOAT	Read/Write
101	CalibrationDiameterEstimatedLargeMeasured	FLOAT	Read/Write
102	CalibrationDiameterEstimatedLargeSetpoint	FLOAT	Read/Write
103	CalibrationDiameterVoltageSingleMeasured	FLOAT	Read/Write
104	CalibrationDiameterVoltageSingleSetpoint	FLOAT	Read/Write
105	CalibrationDiameterVoltageSmallMeasured	FLOAT	Read/Write
106	CalibrationDiameterVoltageSmallSetpoint	FLOAT	Read/Write
107	CalibrationDiameterVoltageLargeMeasured	FLOAT	Read/Write
108	CalibrationDiameterVoltageLargeSetpoint	FLOAT	Read/Write
109	CalibrationDiameterVelRPMSingleMeasured	FLOAT	Read/Write
110	CalibrationDiameterVelRPMSingleSetpoint	FLOAT	Read/Write
111	CalibrationDiameterVelRPMSmallMeasured	FLOAT	Read/Write
112	CalibrationDiameterVelRPMSmallSetpoint	FLOAT	Read/Write
113	CalibrationDiameterVelRPMLargeMeasured	FLOAT	Read/Write
114	CalibrationDiameterVelRPMLargeSetpoint	FLOAT	Read/Write
115	CalibrationOutputVersusTorque	FLOAT	Read/Write
116	StopProportionalVelocityState 0=Off, 1=On	INT	Read/Write
117	StopProportionalVelocityMaxStopTime	FLOAT	Read/Write
118	StopProportionalVelocityMaxVelocity	FLOAT	Read/Write

<u>Number</u>	<u>Description</u>	<u>Type</u>	<u>Read/Write</u>
119	HoldLevelRatio	FLOAT	Read/Write
120	OutputLimit	FLOAT	Read/Write
121	UserConfigCalMassUnits 0=ounces, 1=pounds, 2=grams, 3=kilograms, 4=newtons	INT	Read/Write
122	OverspeedMaximumVelocity	FLOAT	Read/Write
123	CalibrationVelocityDiameterGain	FLOAT	Read/Write
124	CalibrationVelocityDiameterOffset	FLOAT	Read/Write

Parameters 500 through 999 are allocated for Non-Setup Selectable Parameters

<u>Number</u>	<u>Description</u>	<u>Type</u>	<u>Read/Write</u>
500	RunStopInputLocation 0=Local Hardware, 1=Fieldbus	UNSIGNED_SHORT	Read Only
501	SpliceJogInputLocation 0=Local Hardware, 1=Fieldbus	UNSIGNED_SHORT	Read Only
502	TensionOnOffMode 0=Toggle Mode, 1=Level Mode	UNSIGNED_SHORT	Read Only
503	DigitalInputVoltageRange 0=5 volt, 1=24 volt	UNSIGNED_SHORT	Read Only
504	DigitalInputActiveState 0=Active Low, 1=Active High	UNSIGNED_SHORT	Read Only
505	RelayCurrentRange 0=5 milliamp, 1=100 milliamp	UNSIGNED_SHORT	Read Only
506	LoadCellType 0=Magpowr, 21 millivolt, 1=500 millivolt, 2=5 volt	UNSIGNED_SHORT	Read Only
507	IsolatedOutputMode 0=4-20 milliamp, 1=10 volt, 2=+/-10 volt	UNSIGNED_SHORT	Read Only
508	IsolatedOutputFunction 0=Torque, 1=Inverse Diameter	UNSIGNED_SHORT	Read Only
509	NonIsolatedOutputFunction 0=Torque, 1=Inverse Diameter	UNSIGNED_SHORT	Read Only
510	FieldbusType 0=None, 1=HMS	UNSIGNED_SHORT	Read Only
511	SensorRating	FLOAT	Read/Write
512	WrapAngle	FLOAT	Read/Write
513	Calibration_PWM_Current_Pt1	FLOAT	Read/Write
514	Calibration_PWM_Current_Pt2	FLOAT	Read/Write
515	Calibration_PWM_10V_Pt1	FLOAT	Read/Write
516	Calibration_PWM_10V_Pt2	FLOAT	Read/Write
517	Calibration_PWM_PM10V_Pt1	FLOAT	Read/Write
518	Calibration_PWM_PM10V_Pt2	FLOAT	Read/Write
519	Calibration_NonIsolatedOutputGain	FLOAT	Read/Write
520	Calibration_TensionOutputGain	FLOAT	Read/Write
521	Calibration_RPM_Actual	FLOAT	Read Only
522	Calibration_Velocity_Actual Use for reading of ActualVelocity use FieldbusVelocityIn to set Velocity from fieldbus	FLOAT	Read Only
523	Calibration_RPM_Edit_Setpoint	FLOAT	Read/Write

<u>Number</u>	<u>Description</u>	<u>Type</u>	<u>Read/Write</u>
524	Calibration_Velocity_Edit_Setpoint	FLOAT	Read/Write
525	Calibration_RPM_Pulse_PerRevolution	FLOAT	Read/Write
526	Not Used	----	----
527	Not Used	----	----
528	Calibration_RPM_Pulse_Current	FLOAT	Read/Write
529	Calibration_RPM_Voltage_Gain	FLOAT	Read/Write
530	Calibration_RPM_Voltage_Pt	FLOAT	Read/Write
531	Calibration_RPM_Voltage_Setpoint	FLOAT	Read/Write
532	Calibration_RPM_Voltage_Current	FLOAT	Read/Write
533	Calibration_Velocity_Pulse_Gain	FLOAT	Read/Write
534	Calibration_Velocity_Pulse_Pt	FLOAT	Read/Write
535	Calibration_Velocity_Pulse_Setpoint	FLOAT	Read/Write
536	Calibration_Velocity_Pulse_Current	FLOAT	Read/Write
537	Calibration_Velocity_Voltage_Gain	FLOAT	Read/Write
538	Calibration_Velocity_Voltage_Pt	FLOAT	Read/Write
539	Calibration_Velocity_Voltage_Setpoint	FLOAT	Read/Write
540	Calibration_Velocity_Voltage_Current	FLOAT	Read/Write
541	Calibration_AuxInput_Voltage_Gain	FLOAT	Read/Write
542	Calibration_AuxInput_Voltage_Pt	FLOAT	Read/Write
543	Calibration_AuxInput_Voltage_Setpoint	FLOAT	Read/Write
544	Calibration_AuxInput_Voltage_Current	FLOAT	Read/Write
545	LCDContrast	UNSIGNED_SHORT	Read/Write
546	ChangeSetupNumber	UNSIGNED_SHORT	Read/Write
547	OutputPercentage	FLOAT	Read/Write
548	Tension	FLOAT	Read/Write
549	DiameterActual	FLOAT	Read Only
550	FieldbusTensionOnOffToggle 0=Dont toggle, 1=Toggle Tension On/Off will toggle when this input goes from a 0 to a 1.	UNSIGNED_SHORT	Read/Write
551	FieldbusRunStopInput 0=Stop, 1=Run	UNSIGNED_SHORT	Read/Write
552	FieldbusSpliceInput 0=Not Splice, 1=Splice	UNSIGNED_SHORT	Read/Write
553	TensionOffState 0=Tension On, 1=Tension Off	UNSIGNED_SHORT	Read Only
554	FieldbusDiameterIn Use RollDiameter to read the present RollDiameter	FLOAT	Read/Write
555	FieldbusVelocityIn Use Calibration_Velocity_Actual to read the present Velocity	FLOAT	Read/Write
556	ProgramMajorVersion	INT	Read Only
557	ProgramMinorVersion This is the version number 920Axx.yy	INT	Read Only
558	ProgramMajorProgram	INT	Read Only
559	ProgramMinorProgram This is the program number 1Axx-yy	INT	Read Only
560	DiameterSensorType 0=None, 1=Estimated, 2=Voltage, 3=Velocity/RPM	INT	Read/Write
561	RPMSensorType 0=None, 1=Pulse, 2=Voltage	INT	Read/Write
562	VelocitySensorType 0=None, 1=Pulse, 2=Voltage	INT	Read/Write
563	SetpointSensorType 0=None, 1=TB4.1, 2=TB4.2, 3=TB5.1, 4=TB5.2	UNSIGNED_SHORT	Read/Write
564	SetupNumberSensorType 0=None, 1=TB4.1, 2=TB4.2, 3=TB5.1, 4=TB5.2	UNSIGNED_SHORT	Read/Write

Messages and Error Messages

0xFFFF	Acknowledge
0xF000	Parameter is Read Only
0xF001	Invalid parameter ID
0xF002	Invalid Read/Write control value
0xF003	Data is below the minimum value for this parameter
0xF004	Data is above the maximum value for this parameter
0xF005	Parameter is being edited by the User from the Cygnus front panel

Reasons for "Parameter is not changeable"

0xD001	Security Code is set.
0xD002	System is Not Running
0xD003	System is Not Stopped
0xD004	System Type is not Rewind
0xD005	Security Code is set, or, System is Not Stopped, or, System is Not in Manual
0xD006	Security is LOCKED
0xD007	Security is UNLOCKED
0xD008	Security code did not verify, security is UNLOCKED
0xD009	Value is not in range
0xD00A	Sensor Type is set to NONE
0xD00B	Diameter sensor is set to NONE
0xD00C	Security Code is set, or, System in Not in Manual
0xD00D	Security is LOCKED, or, System is Not Running
0xD00E	The same analog input can not be configured for multiple functions
0xD00F	Undefined, Load Cell calibration is complete
0xD010	Undefined, Auto Tune will be complete after a control is designed
0xD011	System is Not in Manual
0xD012	System is Not Running and In Auto Mode
0xD013	Tension On/Off is Not Toggle
0xD014	System is Not Stopped, or, Security is LOCKED
0xD015	Undefined, Compensation is Optimal
0xD016	Undefined, The Oscillation may be an instability or an outside disturbance
0xD017	Undefined, Stability is Optimal
0xD018	Undefined, Calibrate Inertia/Accel complete
0xD019	Diameter Not received from Fieldbus
0xD01A	System must be UNLOCKED, and, Running in Auto Mode, and, with Tension On
0xD01B	Undefined, Not Stable? Switch to Quick Stabilize
0xD01C	Undefined, Gain Scheduling and Out-Of-Round compensation have been turned Off
0xD01D	System is Not in Hold, or, Tension is On.
0xD01E	Gain Scheduling is active.
0xD01F	Undefined, Remember to switch to Auto mode.
0xD020	Setpoint is configured for Remote analog input.
0xD021	Setup Number is configured for Remote analog input.
0xD022	Can not change while diameter type is Velocity/RPM
0xD023	Can not change Remote setup number while System is Not Stopped.

Appendix – Ethernet IP interface

The Cygnus Web Tension Control, with Ethernet IP, is designed to connect to a 10/100Mbit Ethernet network using standard CAT5 cabling. Also, you should read the *Design Appendix Ethernet/IP* from the HMS website.

HMS Anybus PDF files: Refer to page 1 of this document for web links.

Adobe® Acrobat Reader® application: <https://get.adobe.com/reader/>

Configuring the IP address



If you are placing the Cygnus on a public or corporate network, please consult your IT department or the person(s) responsible for your network, before connecting the Cygnus. Your IT department is usually responsible for assigning or controlling IP addresses.

1. Open Internet Explorer or another internet browser window with the following URL:
http://xxx.xxx.xxx.xxx/ where xxx.xxx.xxx.xxx is your new IP address.
2. Set all the configuration switches on the Ethernet daughter card to OFF.
3. Turn on the power.
4. On the Cygnus, select **More... > Program > Configure I/O > Fieldbus**.
 - a) Make sure that the fieldbus board is **HMS** and that the fieldbus type is **Ethernet IP+WEB**.
 - b) Press any of the three keys on the lower right or left side of the display. This will display the network configuration for the Cygnus.
 - c) Record the IP address, subnet mask, gateway address, and MAC address.
5. Connect the Cygnus to a 10/100Mbit Ethernet network, using a CAT5 cable.
6. Open a DOS command prompt on a PC running Windows NT/2000/XP.
7. In the DOS window type: `arp -s <IP-address> <MAC-address>`
 - a) Substitute the desired IP address into the above command in place of `<IP-address>`.
 - b) Substitute the MAC address from the Cygnus screen with the dashes in place of `<MAC-address>`. The MAC address is also located on the bottom of the Ethernet IP daughter board.
8. In the DOS window type: `ping <IP-address>`
 - a) You should get a reply from the Cygnus
 - b) If there is no replay, repeat the ping.
 - c) If there is no reply after a second, repeat the above step after verifying the MAC address and IP address.
9. In the DOS window type: `arp -d <IP-address>`
 - a) The Cygnus will now adopt the new IP address.
 - b) You may have to cycle the power to display the new IP address.
10. The resulting web page will allow you to configure the subnet mask and gateway address for your particular network.

At this point, you could enable the Cygnus to use a DHCP server to dynamically configure the Cygnus network settings.

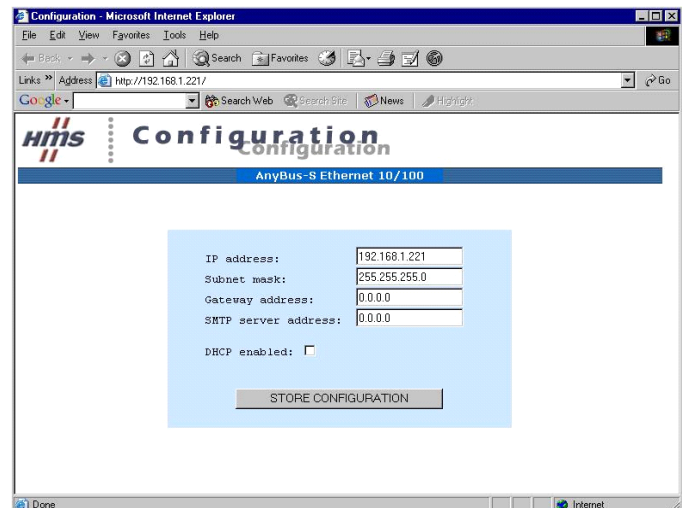


Figure 1.
Sample web page from Anybus Ethernet IP



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