ETHERNET/IP



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EtherNet/IP Switch Management

The **Stride** SE2 managed switch supports EtherNet/IP (Ethernet Industrial Protocol) in the following ways:

- Class 1 Implicit (I/O) Messaging Server/Adapter
- Class 3 Explicit Messaging Server/Adapter
- Unconnected Explicit Messaging Server/Adapter

The EtherNet/IP server is disabled by default in the Managed Switch.

😔 Stride SE2-SW16M Switc 🗙			-	
← → C (i) 192.168.0.1/index.asp			☆	G :
		Stride		Exit
Collapse Expand • Stride SE2-SW16M Switch Information • Port Statistics • Basic Configuration	Ethernet IP Ethernet IP	Disable Disable Disable	Save EtherNet/IP Re	Help
 LLDP ARP QoS Configuration Port Trunk (Link Aggregation) Port Rate Configuration Redundancy Multicast Diagnostics SNTP Port Security Options Management Security VLAN RMON MAC Address FDB Alarm SNMP Modbus TCP Ethernet IP DHCP Device Management End User License Agreement Save Configuration 	Note that Alarm	s are disabled by default. Enable any desired a	larms on the Alar	m page.

NOTE: The configuration must be saved (selection is available on left hand side at the bottom) or it will be lost upon the next power cycle.

Implicit (I/O) Messaging

The **Stride** SE2 managed switch supports both Unicast and Multicast Implicit (I/O) Messaging. The required parameters are shown below:

Assembly Instance						
Connection Points Size						
Input	101 (0x65)	156 bytes				
Output	102 (0x66)	20 bytes				
Config	0	0				

The Configuration is not required in the path. If it is included, use 0 for the Attribute and 0 size.

The Run/Idle (4 byte) header is required and is not included in the Output size specified above.

Input Data is defined as the data that is 'Produced' by the **Stride** managed switch and is read (Consumed) by the EtherNet/IP Master/Scanner device.

	Input Data						
Byte Offset Number	Size Name (in Bytes)		Details				
		Input Data					
0	2	Port Status: Ports 1–8					
2	2	Port Status: Ports 9–16	2 hits par part				
4	2	Port Status: Ports 17–24	Diabled = 00				
6	2	Port Status: Ports 25–32	Up = 01				
8	2	Port Status: Ports 33–40	Down = 10				
10	2	Port Status: Ports 41–48	For example, Port 1 is the most significant				
12	2	Port Status: Ports 49–56	bit and Port 8 is the least significant bit.				
14	2	Port Status: Ports 57–64					
16	1	Alarm Status of Port 1					
17	1	Alarm Status of Port 2	Diabled = 0x00				
18	1	Alarm Status of Port 3	Normal = 0x01				
19–79	1	Alarm Status of Port 4–64	Alarm = 0x02				
80	1	AD-Ring Alarm Status Ring 1					
81	1	AD-RP Ring Alarm Status Ring 1	Diabled = 0x00 Normal = 0x01 Alarm = 0x02 None = 0x03				
82-143	2	AD-Ring Alarm and AD-RP Ring Alarm Status for Rings 2-32	Same format as previous 2 bytes but for Rings 2-32				
144	2	IP Address Conflict Alarm Status	Diabled = 0x00				
145	1	MAC Address Conflict Alarm	Normal = 0x01 Alarm - 0x02				
146	1	Power Alarm Status	Diabled = 0x00 Normal = 0x01 Power 1 Alarm = 0x02 Power 2 Alarm = 0x03				
147	9	Reserved					

Output Data is defined as the data that is 'Produced' or written from the EtherNet/IP Master/ Scanner device and is received (Consumed) by the **Stride** managed switch.

Output Data								
Byte Offset Number	Size (in Bytes)	Name	Details					
	Output Data							
	4	Run/Idle Header	Bits 4-31: Reserved Bits 2-3: ROO (Ready for Ownership of Outputs) Bit 1:COO (Claim Output Ownership) Bit 0: Run/Idle (Run = 1, Idle = 0) This header is typically sent by the Operating System					
0	2	Port Enable: Ports 1–8						
2	2	Port Enable: Ports 9–16						
4	2	Port Enable: Ports 17-24						
6	2	Port Enable: Ports 25–32	2 bits per port:					
8	2	Port Enable: Ports 33–40	Enable = 01					
10	2	Port Enable: Ports 41–48	No change = 00					
12	2	Port Enable: Ports 49–56	No change = 11					
14	2	Port Enable: Ports 57–64						
16	2	Reserved						
18	2	Reserved						

Explicit Messaging

Explicit messaging allows for much more information to be accessed in the managed switch but does require more configuration.

There are 2 different services that the managed switch supports:

Set Single Attribute Service					
Service 16 (0x10): Set Single Attribute					
Class	4				
Instance	tance 104 (0x68)				
Attribute	ibute 3				
Size	22 bytes				

Get Single Attribute Service					
Service	14 (0x0e): Get Single Attribute				
Class	4				
Instance	103 (0x67)				
Attribute	3				
Size	260 bytes				

The first two bytes of the data sent in the "Set Single Attribute Service" determine the meaning of the remaining 20 bytes of the write block and also what type of data is sent in the response to the "Get Single Attribute Service".

The first two bytes of the data sent in the "Set Single Attribute Service" can be either of the following:

- Byte 0 = 01 Byte 1 = 00: Determines that the rest of the sent data is the same format as the I/O Messaging Output data. The data sent in the response to the "Get Single Attribute Service" will be the same as the I/O Messaging Input data.
- Byte 0 = 00 Byte 1 = 00: Allows access to many other pieces of data in the managed switch. These bytes should be followed by pointer values explained in the table below.

Address Matrix								
00 01 02 03 04 05>								
00	Port Status and alarm (Same as I/O Messaging)	-	-	-	-	-	-	-
01 (Device Info)	-	Mfg Name	Device Type	Mfg Address	Contact Phone Number	Other Info	-	-
02 (Port Info)	-	Port 1	Port 2	Port 3	Port 4	Port 5	>	Port N
03 (AD-Ring Info)	Ring Mode	Ring 1	Ring 2	Ring 3	Ring 4	Ring 5	>	Ring N
04 (AD-RP Ring Info)	Ring Mode	Ring 1	Ring 2	Ring 3	Ring 4	Ring 5	>	Ring N
05 (RSTP Ring Info)	Root Bridge Status	Ring 1	Ring 2	Ring 3	Ring 4	Ring 5	>	Ring N

When Byte 0 = 00 and Byte 1 = 00, Byte 2 should be the value in the Row such as 01 for Device Info or 02 for Port Info and Byte 3 should be the value in the Column header to choose the specific piece of data from the Info type.

For example:

- To retrieve the Manufacturer Address, Bytes 0 3 should contain the following (in respective order) = 00 00 01 03
- To retrieve the Information for RSTP Ring 4, Bytes 0 3 should contain the following = 00 00 05 04



NOTE: The first four bytes of "Set Attribute Single Service" message determine the response of the "Get Attribute Single Service" message. The "Set Attribute Single Service" response is always the same and does not contain the information in the switch.

To Enable/Disable Ports and retrieve Port status (same as I/O Messaging):





To retrieve extended data: Example: Device Info (Other):

The tables on the following pages detail the format of the data returned by the various information areas outlined in the table above.

Device Information					
Byte Offset Number	Size (in Bytes)	Data Type	Name	Details	
D	evice Informat	tion: Manu	ufacturer Name (Set A	ttribute Single = 0x00 00 01 01)	
0	2	INT16	Query Status	Query Successful = 0x0000 Query Failure = 0xfff	
2	258	ASCII	Mfg Name	Example: "A" = 0x41 "u" = 0x75 "t" = 0x74 "o" = 0x6f "m" = 0x6d "a" = 0x61 "t" = 0x74 etc	
	Device Infor	mation: D	evice Type (Set Attrib	ute Single = 0x00 00 01 02)	
0	2	INT16	Query Status	Query Successful = 0x0000 Query Failure = 0xffff	
2	258	ASCII	Model Number	Example: "S" = 0x53 "E" = 0x45 etc	
De	vice Information	on: Manuf	acturer Address (Set	Attribute Single = 0x00 00 01 03)	
0	2	INT16	Query Status	Query Successful = 0x0000 Query Failure = 0xfff	
2	258	ASCII	Location	Example: "3" = 0x33 "5" = 0x35 etc	
Dev	vice Informatio	on: Contac	t Phone Number (Set	Attribute Single = 0x00 00 01 04)	
0	2	INT16	Query Status	Query Successful = 0x0000 Query Failure = 0xffff	
2	258	ASCII	Contact Phone Number	Example: "1" = 0x31 "(" = 0x28 etc	

Device Information (cont'd)								
Byte Offset Number	Size (in Bytes)	Data Type	Name	Details				
Device Information: Other Info (Set Attribute Single = 0x00 00 01 05)								
0	2	INT16	Query Status	Query Successful = 0x0000 Query Failure = 0xffff				
2	40	ASCII	Model Number	Example: "S"= 0x53 "t" = 0x74 "r" = 0x72 "i" = 0x69 "d" = 0x64 "e" = 0x65 "S" = 0x53 "E" = 0x45 "2" = 0x32 etc				
42	30	ASCII	Serial Number					
72	22	ASCII	Bootrom Version	ASCII formatted as shown in "Model Number" ex. above				
94	18	ASCII	Current Firmware Version					
112	4	INT32	Switch Management Interface IP Address	192.168.0.1 (0xc0a80001)				
116	2	INT16	Device MAC Address Number					
118	6	INT16	Device Full MAC Address	00-1E-CD-00-00-01 Word 0 HI byte = 0x00 Word 0 LO byte = 0x1e Word 1 HI byte = 0xcd Word 1 LO byte = 0x00 Word 2 HI byte = 0x00 Word 2 HI byte = 0x00				
124	1	INT	Power 1 Status	Power Off = 0x00 Power On - 0x01				
125	1	INT	Power 2 Status	Power Off = 0x00 Power On - 0x01 None = -x-2				
126	2	INT16	CPU occupancy rate (long term)					
128	2	INT16	CPU occupancy rate (short term)					
130	4	INT32	Total Memory (bytes)					
134	4	INT32	Free memory (bytes)					
138	4	INT32	Device running time (minutes)					

Port Information					
Byte Offset Number	Size (in bytes)	Data Type	Name	Details	
	Port Information	tion (Set A	Attribute Single = 0x00 00 02 01 - N	lumber of ports on switch)	
0	2	INT16	Query Status	Query Successful = 0x0000 Query Failure = 0xffff	
2	64	ASCII	Port Description	"FE" or "GE"	
66	1	INT	Port Status	Up/Down/Disable Disable = 0x00 Up = 0x01 Down = 0x02	
67	1	INT	Port Rate	10/100/1000/10000M 10M = 0x00 100M = 0x01 1000M = 0x02 10000M = 0x03	
68	1	INT	Port Duplex	Half/Full Half = 0x00 Full = 0x01	
69	1	INT	Port Flow Control Status	On/Off Off = 0x00 On = 0x01	
70	8	INT64	Port Received Packets		
78	8	INT64	Port Received Bytes		
86	8	INT64	Port Sent Packets		
94	8	INT64	Port Sent Bytes		
102	8	INT64	Port Received Unicast Packets		
110	8	INT64	Port Received Multicast Packets		
118	8	INT64	Port Received Broadcast Packets		
126	8	INT64	Port Sent Unicast Packets		
134	8	INT64	Port Sent Multicast Packets		
142	8	INT64	Port Sent Broadcast Packets		
150	8	INT64	Port Received Pause Frames		
158	8	INT64	Port Sent Pause Frames		
166	8	INT64	Port received CRC Error Packets		

AD-RING Information					
Byte Offset Number	Size (in bytes)	Data Type	Name	Details	
	AD-RIN	IG Inform	ation: Ring Mode (Set Attribute Sir	ngle = 0x00 00 03 00)	
0	2	INT16	Query Status	Query Successful = 0x0000 Query Failure = 0xffff	
2	2	INT16	Ring Working Mode	Port/VLAN Port = 0x0000 VLAN = 0x0001	
	AD-RING	Informatio	on: Ring Info (Set Attribute Single :	= 0x00 00 03 01-20 (32))	
0	2	INT16	Query Status	Query Successful = 0x0000 Query Failure = 0xffff	
2	2	INT16	Ring ID		
4	2	INT16	Station Role	Master/Normal Master = 0x0000 Normal = 0x0001	
6	2	INT16	Ring Enable Status	Enable/Disable Disable = 0x0000 Enable = 0x0001	
8	2	INT16	Ring Status	Open/Close/Alarm Open = 0x000 Close = 0x001 Alarm = 0x0002	
10	2	INT16	Port 1 Status of the Ring	Down/Forward/Block Down = 0x000 Forward = 0x0001 Block = 0x002	
12	2	INT16	Port 2 Status of the Ring	Down/Forward/Block Down = 0x000 Forward = 0x0001 Block = 0x002	
14	2	INT16	Ring Switching Times		
16	2	INT16	AD-RING+ Status	Disable = 0x000 Enable = 0x0001	
18	2	INT16	Backup Port Status	None = 0x000 Forward = 0x0001 Block = 0x0002	
20	4	INT32	Backup Port 1 Status: IP	192.168.0.1 (0xc0 1e cd 00 00 01)	
24	6	INT16	Backup Port 1 Status: MAC	00-1e-cd-00-00-01 (0x00 1e cd 00 00 01)	

	AD-RING Information (cont'd)						
Byte Offset Number	Size (in bytes)	Data Type	Name	Details			
30	2	INT16	Backup Port 1 Status	None = 0x000 Forward = 0x0001 Block = 0x0002			
32	4	INT32	Backup Port 2 Status: IP	192.168.0.0 (0x00 1e cd 00 00 01)			
36	6	INT16	Backup Port Status: MAC	00-1e-cd-00-00-01 (0x00 1e cd 00 00 01)			
42	2	INT16	Backup Port 2 Status	None = 0x000 Forward = 0x0001 Block = 0x0002			
44	8	INT16	Ring Port 1 Info				
52	8	INT16	Ring Port 2 Info				
60	8	INT16	Backup Port				
68	2	INT16	Main Port	0 = disable, non-zero = port number			
70	32	INT16	VLAN List				

			AD-RP RING Information	on
Byte Offset Number	Size (in bytes)	Data Type	Name	Details
	AD-RP RIN	G Informa	ation: Ring Mode (Set Attribute	e Single = 0x00 00 04 00)
0	2	INT16	Query Status	Query Successful = 0x0000 Query Failure = 0xffff
2	2	INT16	Ring Working Mode	Port or VLAN Port = 0x0000 VLAN = 0x0001
	AD-RP RING I	nformatio	n: Ring Info (Set Attribute Sin	gle = 0x00 00 04 01-20 (32))
0	2	INT16	Query Status	Query Successful = 0x0000 Query Failure = 0xffff
2	2	INT16	Ring ID	
4	2	INT16	Station Role	Init = 0x0000 Root = 0x0001 B-Root = 0x0002 Normal = 0x0003
6	2	INT16	Station Priority	
8	2	INT16	Ring Protocol Enable Status	Disable = 0x0000 Enable = 0x0001
10	2	INT16	Ring Status	Init = 0x0000 Open = 0x0001 Close = 0x0002 None = 0x0003
12	2	INT16	Ring Port 1 Link Status	
14	2	INT16	Ring Port 2 Link Status	Down = 0x0000
16	2	INT16	Backup Port Link Status	
18	2	INT16	Ring Port 1 Block Status	Forwarding = 0x0000
20	2	INT16	Ring Port 2 Block Status	Blocked = 0x0001 Linkdown = 0x0002
24	8	INT16	Ring Port 1 Info	
32	8	INT16	Ring Port 2 Info	Ring Number
40	8	INT16	Backup Port	
48	2	INT16	Priority Port	None = 0x0000 Ring Port 1 = 0x0001 Ring Port 2 = 0x0002
50	2	INT16	CRC Threshold	

	AD-RP RING Information (cont'd)						
Byte Offset Number	Size (in bytes)	Data Type	Name	Details			
52	2	INT16	DHP Mode	Disable = 0x0000 Normal Node = 0x0001 Home Node = 0x0002			
54	2	INT16	Home Port	None - 0x0000 Ring Port 1 = 0x0001 Ring Port 2 = 0x0002 Ring Port 1-2 = 0x0003			
56	4	INT16	Boot IP	0 or the IP address. Ex: 192.168.0.1 (0xc0 a8 00 01)			
60	2		Protocol VLAN	All 0xFF if none			
62	32	INT16	Protected VLAN	16 VLAN, All 0xFF if none			

			RSTP Information	
Byte Offset Number	Size (in bytes)	Data Type	Name	Details
	RSTP Info	ormation:	Root Bridge Status (Set Attribute	Single = 0x00 00 05 00)
0	2	INT16	Query Status	Query Successful = 0x0000 Query Failure = 0xffff
2	2	INT16	Protocol Enable Status	Disable = 0x0000 Enable = 0x0001
4	8	INT16	Root Bridge ID	Combination of priority and MAC address Example: Priority = 0x8000 MAC = 00-1e-cd-00-00-01 Root Bridge ID = 0x8000001ecd000001
12	8	INT16	Bridge ID	Combination of priority and MAC address
20	2	INT16	Spanning Tree Priority	
22	2	INT16	Hello Time	
24	2	INT16	Max Age Time	
26	2	INT16	Forward Delay Time	
28	2	INT16	Message-age Increment	Compulsion = 0x0001 Default = 0x0002
	RSTP In	formation	: Ring Info (Set Attribute Single =	0x00 00 05 01-20 (32))
0	2	INT16	Query Status	Query Successful = 0x0000 Query Failure = 0xffff
2	2	INT16	Port Protocol Enable Status	Disable = 0x0000 Enable = 0x0001
4	2	INT16	Port Priority	Init = 0x0000
6	4	INT32	Routing Cost	
10	2	INT16	Cost Automatic Calculation Status	Disable = 0x0000 Enable = 0x0001
12	2	INT16	Port Role	Designated = 0x0000 Root = 0x0001 Alternate = 0x0002 Backup = 0x0003 Edge = 0x0004 RSTP disable = 0x0005 Linkdown - 0x0006
14	2	INT16	Port Status	Forwarding = 0x0001 Blocked = 0x0002

Examples

Productivity 2000 I/O Messaging

erNet/IP Client Properties			Ľ
	Use Structure	StrSW12	
Device Name StrideSW12	TCP Connected	TCPConnected +	16
Ethernet Port CPU-ETH-Ext •	Adapter Name	AdapterName +][
IP Address 192.168.0.100	Vendor ID	VendorID -	
CP Port Number 44818	TCP/IP Error	Tcp1pError +	
MSG1 [L/O]			
MSGI [I/O] Enable MsgIEnable	Connection Online	Msg1ConnOnline +	
MSGI [[/0] Enable Msg1Enable	Connection Online	Msg1ConnOnline +	
MSGI [I/O] Enable MsgIEnable	Connection Online General Status Extended Status	Msg1ConnOnline + Msg1GenStatus + SkrSW12_ExtStat +	
MSGI [[/0] Enable Meg1Enable () Enable Routing Slot Number 0	Connection Online General Status Extended Status Status Description	Msg1 ConnOnline + Msg1 GenStatus + StrSW12_ExtStat + Msg1 StatusDesc +	
MSGI [[/0] Enable MsgIEnable MsgIEnable T->0 (INPUT) O->T (OUTPUT) C	Connection Online General Status Extended Status Status Description	Msg1ConnOnline + Msg1GenStatus + StrSW12_ExtStat + Msg1StatusDesc +	
MSGI [[/O] Enable Msg1Enable Enable Routing Slot Number 0 T->O (INPUT) O->T (OUTPUT) C Target To Originator (INPUT) Data Delivery Option RPI Time (msec)	Connection Online General Status Extended Status Status Description CONFIG DATA Multicast 250	Msg1ConnOnline • Msg1GenStatus • StrSW12_ExtStat • Msg1StatusDesc •	
MSGI [[/0] Enable MsgIEnable	Connection Online General Status Extended Status Status Description CONFIG DATA Multicast • 250 101 Integer, 8 Bit Unsigned, 1	Msg1ConnOnline • Msg1GenStatus • StrSW12_ExtStat • Msg1StatusDesc • (0x65) D Array	
MSGI [[/0] Enable Msg1Enable * Enable Routing Slot Number 0 T->O (INPUT) O->T (OUTPUT) C Target To Originator (INPUT) Data Delivery Option RPI Time (msec) Assembly Instance/Connection Point Datatype: Data Array	Connection Online 1 General Status 1 Extended Status 2 Status Description 1 CONFIG DATA Multicast = 250 101 Integer, 8 Bit Unsigned, 1 StrSW12_Input_Data	Msg1ConnOnline • Msg1GenStatus • StrSW12_ExtStat • Msg1StatusDesc • (0x65) D Array • Isso	
MSGI [[/0] Enable MsgIEnable • Enable Routing Slot Number 0 T->O (INPUT) O->T (OUTPUT) C Target To Originator (INPUT) Data Delivery Option RPI Time (msec) Assembly Instance/Connection Point Data Array Message Size (bytes):	Connection Online General Status Extended Status Status Description CONFIG DATA Multicast 250 101 Integer, 8 Bit Unsigned, 1 StrSW12_Input_Data 156	Msg1ConnOnline • Msg1GenStatus • StrSW12_ExtStat • Msg1StatusDesc • (0x65) D Array •	

Input Data

erNet/IP Client	Properties				
		Vse Structure	StrSW12	•	
Device Name	StrideSW12	TCP Connected	TCPConnected		1
Ethernet Port	CPU-ETH-Ext +	Adapter Name	AdapterName		
IP Address	192.168.0.100	Vendor ID	VendorID		1
CP Port Number	44818	TCP/IP Error	TopIpError	*	11
Swap Byte Or	der 4561 [1/0]				
Enable MsgtEn	able +	Connection Online	Msg1ConnOnline	-	
		General Status	Msg1GenStatus	+	-
Enable Rout	ing Slot Number 0	Extended Status	StrSW12_ExtStat	•	
		Status Description	Msg1StatusDesc	*	0
T->0 (IN	PUT) O->T (OUTPUT) C	ONFIG DATA			
Originator To Assembl	Target (OUTPUT) Data RPI Time (msec) y Instance/Connection Point Datatype:	250 102 Integer, 8 Bit Unsigned, 1	(0x66) D Array		
	Data Array	StrSW12_Output_Data	•		
	Message Size (bytes):	20			
	Number of Elements	20			
	de Status Header				
🔽 Indu					
🖉 Indu					

Output Data

herNet/IP Client	Properties				12
		Vise Structure	StrSW12	•	
Device Name	Stride5W12	TCP Connected	TCPConnected	-	16,
Ethernet Port	CPU-ETH-Ext +	Adapter Name	AdapterName		1
IP Address	192.168.0.100	Vendor ID	VendorID	-	16
CP Port Number	44818	TCP/IP Error	TcpIpError	×][4
Carlla Martin	tsG1 [1/0]	Connection Online	Marat Casa Galina		
Endore Program	abe * [[]	Connection Online	Host Carl Dates	-	+++
Enable Rout	ing Slot Number	0 Extended Status	StrSW12_ExtStat	•	
		Status Description	Msg1StatusDesc	+	
T->0 (IN	PUT) 0->T (OUTPUT)	CONFIG DATA			
Configuration	Data onfiguration Data				
Assembl	y Instance/Connection Poir Datatype	nt 0 (0x0)			
	Data Arra	sy	•		
	Message Size (bytes): 0			
	Number of Element	6			

Configuration Data (None)

Productivity 2000 Explicit Messaging

				V Use Structure	StrSW12_SetSing	•	
Device Name	StrideSW1	2 -		In Progress	InProgress	•	-
Connection	Unconnect	ted MSG 👻	li -	Complete	Complete	•	
Service	Assy:Set :	Single Attrib	ute -	Success	Success	•	
Se	rvice ID	16	(0x10)	Error	Error		+++
3	Class ID		(0x4)	Timeout	Timeout		
😨 Use Attri	bute ID	3	(0x3)	Exception	ExcResponse		
Inst	ance ID	104	(0x68)	Response String			
Enabi	e Input Datatype Data Array	·		·			
Message S Numb	e Input Datatype Data Array Size (bytes) ser Elements PUT)	, , [, [1	¥			
Cost (OUT	e Input Datatype Data Array Size (bytes) Size (bytes) PUT) e Output	 / - 0	1	. un			
Cost (out) Cost (out) Cost (out)	e Input Datatype Data Array Sae (bytes) er Elements PUT) e Output Datatype	0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 Bit Unsigne	*			
Enabl Message 3 Numb	e Input Datatype Data Array Size (bytes) ver Elements PUT) e Output Datatype Data Array	0 0 1 Integer, 8 5 StrSW12_	1 Bit Unsigne Set_Data	d, 1D Array			
Enabl Message 3 Numb O->T (OUT) Enabl Message 3	e Input Datatype Data Array Size (bytes) ver Element PUT) e Output Datatype Data Array Size (bytes)	0 0 Integer, 8 Str5W12_ 22	1 Bit Unsigne Set_Data	e un			
Enabl Message 3 Numb O->T (OUT) Enabl Message 3 Numb	e Input Datatype Data Array Size (bytes) er Element: PUT) Datatype Data Array Size (bytes) wer Element:	0 1 1nteger, 8 22	1 Bit Unsigne Set_Data	d, 1D Array			

Set Single Attribute Service

Device Name						And the second second
	StrideSW12			In Progres	s InProgress	100
Connection 1	Unconnecter	d MSG 🗶		Complet	e Complete	-
Service	Assy:Get Sir	ngle Attribu	te -	Succes	s Success	-
Serv	vice ID	14	(0xE)	Erro	error	1
a	lass ID	4	(0x4)	Timeo	t Timerut	
171Use Attribu	de ID	3	(0x3)	Exceptio	0	 1000
Insta	oce ID	103	(0)(67)	Response Strin	g ExcResponse	
Message Siz	e (bytes): 3 r Elements	360	50			
0-21 (00140	10					
Enable (Dutature					
	bata Array			10		
Message Siz	e (bytes): (0		and the state of t		
Number	Elements		1			
Chan Incha	ction Comm	ent				

Get Single Attribute Service

Do-more Explicit Messaging

X 2 2		
EIPMSG @IntEIPClient	•	Create Data Block
IP Address © Fixed 192 168 0 100 C Variable D0 100 100 100 TCP Port Number 44818 100 100 100 100	Req is String Structure Req is Numeric Data Block Req Start	for SSO StrSWSet0 *
Path 0x4 Class 0x68 Instance 0x68 ✓ Use Attribute 0x3	Req Number of BYTEs Ore Response Service Data B C Res is String Structure C Res is String Structure	22 • uffer
Service Secific Service Set Attribute (16, 0x10) Generic Service D0	Res Start Res Start Res Length in BYTEs Res Max Length in BYTEs	D1 D2 4
Enable Ponce on Leading Edge Continuous on Power Flow at Interval Power Flow at Interval Constant Inch min m sec s ms ms Ovariable D0 ms	General Status Code Extended Status C Ext is String Structure Ext is Numeric Data Block Ext Start	[D3
On Success: Set bit JMP to Stage On Success Counter On Error: Set bit JMP to Stage C1 C1 On Error Counter D7	Ext Length in BYTEs Ext Max Length in BYTEs	[D0 [4

Set Single Attribute Service

Get Single Attribute Service

×××27			
EIPMSG Device	@IntEIPClient	7	Create Data Block
IP Address Fixed Variable TCP Port Number	192 . 168 . 0 . 100 D0 [44818	Use Request Service Data Bu Req is String Structure Req is Numeric Data Block Req Start Req Start	for SS0 StrSWSet0
Path Class Instance IF Use Attribute Service	0x4 0x67 0x3	Peq Number of DYTES Peq Use Response Service Data E C Res is String Structure G Res is Numeric Data Block Res Start	SS0 StrSWGet0
C Generic Service		Res Length in BYTEs Res Max Length in BYTEs	[D2 •]
Finable Once on Leading Edge		General Status Code	D3
Continuous on Power F Constant hu C Vanable D0	h min m sec s ms ms	 Ext is String Structure Ext is Numeric Data Block Ext Start 	ISS0
On Success: Gest bit Gest for Set bit Gest for Success Counter	JMP to Stage C0	Ext Length in BYTEs Ext Mair Length in BYTEs	D0 4
On Error: Set bit On Error Counter	JMP to Stage C1		

CompactLogix I/O Messaging

General Con	nection	Module Info						
Type: Vendor: Parent:	ETHEF Allen-B Local	RNET-MODULE Ge radley	neric Etherne	t Module				
Name:	Strides	5W12		Connection Para	Assembly			
Description:	_				Instance:	Size:		
				Input:	101	156	1	(8-bit)
			Ψ.	Output:	102	20	-	(8-bit)
Comm Format	: Data -	SINT		Cooling ration :	100	0		(9.6a)
Address / H	lost Nam	e		Corriguiation.	100	-		loon
IP Addre	195:	192 . 168 . 0	. 2	Status Input:				
) Host Na	me:)į	Status Output				

CompactLogix Explicit Messaging

Set Single Attribute Service

Configuration* Com		munication T	ag				
Message	Iype:	CIP Gener	ic		•		
Service Type:	Set Attribute Single 🔹				Source Element:	StrSW12SetData 🗣	
Service Code:	10	(Hex) Class:	4	(Hex)	Source Length: Destination Element:	22 💠	(Bytes)
Instance:	104	Attribute:	3	(Hex)		Ne <u>w</u> Tag	
	() En	sble Waiting	⊖ S ed Error	tart Code:	O Done D	Ione Length: 0	
) Enable) Error Co	de:						

Get Single Attribute Service

Configuratio	on" Com	nunication Ta	9					
Message	Type:	CIP Gener	ic		•			
Service Type: Service Code: Instance:	Get Attrit	oute Single		•	Source Element:			
					Source Length:	0	(Bytes)	
	e (H	Hex) <u>C</u>lass:	4 0 ⁻ 3 0 ⁻	(Hex)	Destination Element:	StrSW12GetData 👻		
	103	Attribute:		(Hex)		New T	'ag	
		ble Wating	0.5	tart	O Done I	Done Lengt	h: 0	
C Enable C Error Co irror Path:	O Ena de:	Extende	ed Error	Code:		_ raned O		