

Scadaflex II SFX2M Communication Register List

Read Only Bits

Modbus Input Points	DF1/EIP Bank 3	Description
1	1	Local DI's
17	17	AI Low Alarm Bits
25	25	AI High Alarm Bits
33	33	Com Fail Status
41	41	Destination ComFail (1-32)
73	73	Pump Error (1-3)
76	76	Pump Controller Error
77	77	Programming Severe Error
78	78	Hardware Fault
79	79	Software Fault
80	80	Network Fault
81	81	reserved
89	89	Local Force Status
93	93	Basic First Scan
94	94	Basic Run Indicator
95	95	FTP Server file received
96	96	Lockout
97	97	Com Master Config Error Flags
105	105	DO Relay State (1-8)
113	113	Alarm Active (per group)
121	121	Alarming
122	122	Log Run Indicator
123	123	Voice System Busy
129	129	Remote Sensor Status Bits (8 * 64)
641	641	Fault Bits

Bits

Modbus Coils	DF1/EIP Bank 13	Description
1	1	Local DO's
9	9	PI Totalizer Clear
18	18	Ethernet Com Stats Clear
19	19	Com1 Com Stats Clear
20	20	Com2 Com Stats Clear
24	24	Delete Cleared Alarms
25	25	Command Triggers (1-16)
101	101	B Registers (1 - 504)
605		FTP Logging Trigger
607		Ethernet Master Comm Trigger
608		Com1 Master Com Trigger
609		Com2 Master Com Trigger
610		MQTT Publish All Trigger
611		Report Trigger
612		Error Stack Clear
613		Comm Event Trigger (1-128)
2001		Daylight Savings Time Enable
2009		IO Force Enable
2033		IO Comm Fail Enables (DO & AO)
2041		DI Invert
2057		DI Filter Enable (DI1 - DI12)
2073		Digital Test Mode Enable
2074		Analog Test Mode Enable
2075		Disable WAN HTTP Config Service
2077		TFTP Enable
2079		Allow Unsecured Log GET's
2080		Use DHCP
2081		Allow Unsecured WUI Read Only Access
2082		Disable Config Register Write Protection
2083		Ethernet Auto PowerDown
2084		Use STARTTLS on Port 587 (Microsoft Servers)
2085		Temp C / F
2087		Ethernet: Use HTTP Accelerator
2088		Enable Debug Mode
2089		Display Underscore as Space
2092		Enable Slow 8 Sec Trending
2093		Allow SMS Access w/o logging in

2094		Disable Cellular Data
2095		Ping Disable
2097		Attempt Programming Restart on Error
2098		Programming ScanTime WatchDog Disable
2099		Show Input Voltage on '?'
2100		Show Battery Voltage on '?'
2101		Disable 'Full Website' on Mobile
2102		Enable 'Graphic HMI' on Mobile
2103		Enable High Speed Analog's
2104		Link Layer Disable
2105		PID Reverse Acting Channel 1
2106		PID Reverse Acting Channel 2
2107		PID Reverse Acting Channel 3
2108		PID Reverse Acting Channel 4
2109		Enable Both Float & Level Controller on Local Display
2110		Alive Message - Skip if Alarmed in last 24 hours
2111		On Pump Fail Leave Call On
2112		Show / Enable Redundant UPS data
2113		DigiRadio Master Use Retries on Probing
2114		Ethernet Master Use Retries on Probing
2115		Serial Com1 Master Use Retries on Probing
2116		Serial Cell Master Use Retries on Probing
2117		Use Ethernet DNS Address on Cell Modem
2118		Programming AutoStart
2119		CellData: Use HTTP Accelerator
2120		MQTT Use Secure TLS Connection
2121		Log Category Enable 0
2122		Log Category Enable 1
2123		Log Category Enable 2
2124		Log Category Enable 3
2125		Log Category Enable 4
2126		Log Category Enable 5
2127		Log Category Enable 6
2128		Log Category Enable 7
2129		Log Category Enable 8
2130		Log Category Enable 9
2131		Log Category Enable 10
2132		Log Category Enable 11
2133		Log Category Enable 12
2134		Log Category Enable 13
2135		Log Category Enable 14

2136		Log Category Enable 15
2137		FTP Preface file name with unit Name
2138		Allow off Schedule Acks
2139		MQTT Add Units to Published numbers
2140		Add Alarms to Cleared Report
2141		Only except SMS/ Email Messages from Known Contacts
2142		FTP Use CellData
2143		External CellModem Enable
2145		Ethernet FTP Server Enable
2146		Ethernet FTP Server Anonymous Logon allowed
2147		FTP Relay from Server to Client
2148		Cellular FTP Server Enable
2149		Cellular FTP Server Anonymous Logon allowed
2152		Report on Cleared Alarms
2153		Disable SDX Redirect on IO Buss
2154		Trending Strip mode enable
2155		Cellular Stealth Mode Enabled
2156		Use Cellular Interface for MQTT
2158		Enable Satellite Time Update
2159		Use Cellular Interface for Satellite Server
2161		Ethernet Port SDX Enable
2162		Ethernet Port Modbus Enable
2163		Ethernet Port EIP Enable
2169		ComR Port SDX Enable
2170		ComR Port Modbus Enable
2171		ComR Port DF1 Enable
2172		ComR Port BrickNet Enabled
2173		ComR Bridging Eterlogic Enable
2177		Com1 Port SDX Enable
2178		Com1 Port Modbus Enable
2179		Com1 Port DF1 Enable
2180		Com1 Port BrickNet Enabled
2181		Com1 Bridging Eterlogic Enable
2185		Cell Port SDX Enable
2186		Cell Port Modbus Enable
2190		Texting Mode Enable
2191		Cell Port STM Enable
2193		N Register Retain Enables
2697		B Register Retain Enables
3201		Master Engine Destination Disable
3233		Master Engine Event Polling Enables

3361		UI Scale Clamp Enable
3369		B Register Write Enable
3873		N Register Write Enables
4377		Display Item on WEB B Registers
4881		Display Item on WEB N Registers
5385		Display Item on WEB Command Triggers
5401		Display Item on WEB IO
5425		Display Item on ? B Registers
5929		Display Item on ? N Registers
6433		Display Item on ? IO
6457		Display HMI Scan Enable
6489		Display HMI Write Enable
6521		Text HMI Page Enables
6529		Trending Attach Trace to Right Axis 1-64
6593		Alarm Disable Bits - B's
7097		Alarm Disable Bits - DI's
7111		Alarm Disable Bits - Mesh
7303		Alarm Disable Bits - Others
7361		Remote Sensor Config Blocks

Read Only Integers

Modbus Input Registers	DF1/EIP Bank 7	Description
1	1	AI Registers
5	5	Vin
6	6	Vbatt
7	7	AI DispTemperature
8	8	Cell RSSI
9	9	Ext Cell RSSI
10	10	Ultrasonic
11	11	SMS Delivery Latency (m)
13	13	AI Raw Value
17	17	DI Rate
19	19	DI Interval [32 Bit]
23	23	PID Output
27	27	PID Error
33	33	Ethernet Slave TX/RX Packets [2 x 16 Bit]
35	35	Mesh / DigiRadio Slave TX/RX Packets [2 x 16 Bit]
37	37	Com1 Slave TX/RX Packets [2 x 16 Bit]
39	39	Cellular Slave TX/RX Packets [2 x 16 Bit]
41	41	Master Destination TX/RX Packets [2 x 16 Bit] (1-32)
105	105	Mesh Master Destination TX/RX Packets [2 x 16 Bits] (1-64)
233	233	Current Cell Data TX/RX Bytes [2 x 32 Bit]
237	237	Last Month Cell Data TX/RX Bytes [2 x 32 Bit]
241	241	Current Month Cell SMS TX/RX Bytes [2 x 32 Bit]
245	245	Last Month Cell SMS TX/RX Bytes [2 x 32 Bit]
249	249	Master Success - DigiRadio %
250	250	Master Success - Ethernet %
251	251	Master Success - Com1 %
252	252	Master Success - Com2 %
253	253	Last Source Address - Ethernet
254	254	Last Source Address - Mesh / DigiRadio
255	255	Last Source Address - Com1
256	256	Last Source Address - Com2
257	257	Last Destination Address - Ethernet
258	258	Last Destination Address - Mesh / DigiRadio
259	259	Last Destination Address - Com1
260	260	Last Destination Address - Com2
261	261	Ethernet Com Fail Counts
262	262	Mesh / DigiRadio Com Fail Counts

263	263	Com1 Com Fail Counts
264	264	Com2 Com Fail Counts
265	265	Latency Last - Ethernet
266	266	Latency Last - Mesh / DigiRadio
267	267	Latency Last - Com1
268	268	Latency Last - Com2
269	269	Latency Max - Ethernet
270	270	Latency Max - Mesh / DigiRadio
271	271	Latency Max - Com1
272	272	Latency Max - Com2
273	273	Destination Com Fail Counts (1-32)
305	305	Destination Latency Last (1-32)
337	337	Latency Live - Ethernet
338	338	Latency Live - Mesh / DigiRadio
339	339	Latency Live - Com1
340	340	Latency Live - Com2
345	345	Last System Code
350	350	Last System Extension
355	355	Error Stack Pointer
356	356	Mesh Destination Com Fail Counts (1-64)
420	420	Remote Sensor Calibration Value
421	421	Mesh Error
422	422	Mesh Elapsed Time
486	486	Mesh Sleep Time Left
487	487	Mesh Poll Time Left
488	488	Last Caller ID
489	489	Pump Controller Sequence ID
518	518	Systick [32 bit]
520	520	Programming Scan Time
521	521	Programming Scan Time MAX
522	522	Programming Error Code
523	523	Programming Error Line
524	524	Programming Error Code (clears after reading in programming)
525	525	System Log Stats (% used)
526	526	Event Log Stats (% used)
527	527	Alarm Journal Log Stats (% used)
528	528	PID P Out [32 bit]
536	536	PID I Out [32 bit]
544	544	PID D Out [32 bit]

Integers

Modbus Holding Registers	DF1/EIP Bank 17	Description
1	1	AO Registers
3	3	PI Totalizer (1-2) [32 Bit]
7	7	Pump Controller Starts (32Bit)
13	13	Pump Controller RunTime (32Bit)
101	101	N Registers (1 - 504)
605	605	Protection Register
606	606	UI Low Setpoint
610	610	UI High Setpoint
614	614	PID P Gain (x 1000)
618	618	PID I Gain (x 1000)
622	622	PID D Gain (x 1000)
626	626	Pump Controller Lead A On Setpoint
627	627	Pump Controller Lead A Off Setpoint
628	628	Pump Controller Lag A On Setpoint
629	629	Pump Controller Lag A Off Setpoint
630	630	Pump Controller Lag2 A On Setpoint
631	631	Pump Controller Lag2 A Off Setpoint
632	632	Pump Controller Lead B On Setpoint
633	633	Pump Controller Lead B Off Setpoint
634	634	Pump Controller Lag B On Setpoint
635	635	Pump Controller Lag B Off Setpoint
636	636	Pump Controller Lag2 B On Setpoint
637	637	Pump Controller Lag2 B Off Setpoint
638		PI Gate Time
640		PI Interval Watchdog
641		IO Force Value
665		IO Comm Fail Values
671		DO Output Holdoff Time
675		AI IO High (1-32)
679		AI IO Low (1-32)
683		AI Engineering High (1-32)
687		AI Engineering Low (1-32)
691		Master Poll Interval (100ms) - DigiRadio
692		Master Poll Interval (100ms) - Ethernet
693		Master Poll Interval (100ms) - Com1
694		Master Poll Interval (100ms) - Com2
695		Master Comm Fail Probe Time (S) DigiRadio

696	Master Comm Fail Probe Time (S) Ethernet
697	Master Comm Fail Probe Time (S) Com1
698	Master Comm Fail Probe Time (S) Com2
703	Master Respose Timeout (0.1 Sec) - DigiRadio
704	Master Respose Timeout (0.1 Sec) - Ethernet
705	Master Respose Timeout (0.1 Sec) - Com1
706	Master Respose Timeout (0.1 Sec) - Com2
707	Master Quiet Time (ms) - DigiRadio
708	Master Quiet Time (ms) - Com1
709	Master Quiet Time (ms) - Com2
710	Master Max Latency (1-32)
742	Master Destination Address (1-32)
774	Master Destination Hop 1 (1-32)
806	Master Destination Hop 2 (1-32)
838	Master Message Local Index (1-128)
966	Master Message Remote Index (1-128)
1094	Destination Port Override (1-32)
1126	Trend Strip Chart Display Minutes
1127	Web Refresh
1128	Local AI Sensor Sleep Time
1129	Local AI Sensor Warmup time
1130	IO Test Speed (x 0.1 Sec)
1131	Comm Buffer Limit
1132	DNS Lookup Holdoff (S)
1133	PID Input Span
1137	PID I/D time (x10mS)
1141	PID Output DeadBand (x100)
1145	PID Duty Cycle (S)
1149	Display HMI Objects
1181	Pump Controller Debouncing
1185	Sensor Power Selector Object
1186	Alarm Output Selector
1187	Ack All Alarms with B Register
1188	PID Input Selector
1192	PID Enable/Hold Selector
1196	PID Setpoint Selector
1200	PID Analog Out Selector
1204	PID Digital PWM Out Selector
1208	Pump Controller Call Output Selectors
1211	Pump Controller Level Source Selector
1213	Pump Controller A/B Selector

1214	Pump Controller ShutOff A Selector
1215	Pump Controller ShutOff B Selector
1216	Pump Controller Auto Input Selectors
1219	Pump Controller Run Input Selectors
1222	Pump Controller Float Input Selectors
1226	Pump Controller Float Failsafe Timer
1227	Pump Controller Fail Shutdown Timer
1228	Pump Controller Pump Failure Timer
1229	Trace Selector (1-63)
1292	Xbee Slave Selector
1293	Mesh Master AI OnChange Timer (mS) (1-64)
1357	Mapping Selector - RSSI
1421	Mapping Selector - Last Update Time
1485	Mapping Selector - Data 1
1486	Mapping Selector - Data 2
1487	Mapping Selector - Data 3
1488	Mapping Selector - Data 4
1489	Mapping Selector - Data 5
1490	Mapping Selector - Data 6
1491	Mapping Selector - Data 7
1492	Mapping Selector - Data 8
1493	Mesh Config Block (2-64) [8 bytes each]
1997	Mesh Master Response TimeOut (x100mS)
1998	Mesh Master Sleep Time (S)
1999	Mesh Master Poll time
2000	Mesh Master Probe time
2001	SMS ReAlarm timer
2002	SMS Alarm Retry Timer
2003	Cell Tower Link Fail delay (S)
2004	Cell Old Message TimeOut (M)
2005	Cell Rcvd Message TimeStamp Offset (H)
2006	Secondary Local HMI Switch Selector
2007	Local HMI Switch Enable
2008	C Drive Purge before days back
2009	Routeing Destination Ports
2017	Routeing IP Addresses
2033	Routeing Listen Ports
2041	PumpController Pump Fail Selectors
2044	IO Mode Selector
2068	UI Format Selector
2072	N Register Scaling Block Selector (1-504)

2576	Display TimeOut
2577	Programming Lines per Scan
2578	Web Interface Selector
2579	Dynamic DNS Selector / Enable
2580	Text HMI Boolean ON Verbage (1-50)
2630	HMI Boolean OFF Verbage (1-50)
2680	HMI Boolean Color for Verbage (1-16)
2696	Master Mode Retries - DigiRadio
2697	Master Mode Retries - Ethernet
2698	Master Mode Retries - Com1
2699	Master Mode Retries - Com2
2700	Master Message Destination Selector
2828	Master Message Type
2956	Master Message Block Size
3084	Destination Protocol Selector (1-32)
3116	Bad Login Limit (Number of times before lockout)
3117	Bad Login Lockout Time (M)
3118	Daylight Savings Dates
3122	AI Alarming Hysterisis (0 - 25.5%)
3126	UI Averaging Selector
3130	Display HMI Boolean ON Verbage (1-32)
3162	Display HMI Boolean OFF Verbage (1-32)
3194	PI Filters
3196	Pump Controller Mode/Enable Selector
3197	Pump Controller Handoff Selectors
3200	Trace - Strip Chart Interval
3201	Trace Graph Display Style Selector
3202	Trace - Color Selector Trace (1-63)
3265	Trace - Style Selector Trace (1-63)
3328	Trace - Group Enables (1-63)
3391	Basic Startup Delay
3392	POP3 Poll time (M)
3393	Alarming POP3 Poll time (M)
3394	Command POP3 Poll time (M)
3395	Command POP3 Poll time Period (M)
3396	Daily Report Message Hour Selector
3397	Daily Report Enable Selector
3398	Periodic Report Message Hour
3399	Periodic Report Interval Selector
3400	Current Call Group
3401	Status Alert Message Enable Selector

3402	Alarm Retry Counts
3403	Alarm Ack ALL with DI Selector
3404	Alarm Group Enables- B's
3908	Alarm Group Enables- DI's
3922	Alarm Group Enables- Local Com Fail's
3930	Alarm Group Enables- Destination ComFail's
3963	Alarm Group Enables- AI Alarms
3964	Alarm Group Enables - PumpController
3965	Alarm Group Enables - Programming
3966	Alarm Group Enables - Faults
3969	Alarm Group Enables - Mesh
3972	Alarming E-mail Mode Selector
3973	Cell Data Stats Snapshot Day of Month
3974	FTP Interval Selector
3975	FTP Start Time Selector
3976	FTP File Mode Selector
3977	FTP TrendLog Resolution Selector
3978	FTP Data Selector
3979	Ethernet Pre-Ping (S) ##.#
3980	Bridging Mode Selector - ComB
3981	Bridging Mode Selector - Com1
3982	Bridging Mode Selector - Com2
3983	Bridging Modbus Start Address - ComB
3984	Bridging Modbus Start Address - Com1
3985	Bridging Modbus Start Address - Com2
3986	Bridging Modbus Start Range - ComB
3987	Bridging Modbus Start Range - Com1
3988	Bridging Modbus Start Range - Com2
3989	CellModem ComFail Delay (M)
3990	Watchdog Ping Interval (H)
3991	Wakeup Ping Activity Holdoff (S)
3992	WakeUp Ping Delay (S)
3993	Mesh Master Address
4057	Mesh Master Polling ComFail Threshold
4058	Mesh Master Sleep ComFail Threshold
4059	Mesh Master PFI Polling Cycle Skip
4060	Mesh Master Wake Window %
4061	Mesh Master Calibration Address
4062	Mesh Master Calibration Channel
4063	Mesh Master Setup Address
4064	Sensor Power Time (x 100mS) - Mesh Master 1

4065	Radio Tx Power - Mesh Master 1
4066	Mode/Config Reg 1
4067	Mode/Config Reg 2
4068	Mode/Config Reg 3
4069	Mode/Config Reg 4
4070	Mode/Config Reg 5
4071	Mode/Config Reg 6
4072	Mode/Config Reg 7
4073	Mode/Config Reg 8
4074	Mode/Config Enable Select
4075	Mode/Config Type
4076	Mapping Count - Data 1
4077	Mapping Count - Data 2
4078	Mapping Count - Data 3
4079	Mapping Count - Data 4
4080	Mapping Count - Data 5
4081	Mapping Count - Data 6
4082	Mapping Count - Data 7
4083	Mapping Count - Data 8
4084	Mesh Config Block (2-64) [20 bytes each]
5344	Mesh Sleep Block - Starting Address
5345	Mesh Sleep Block - Block Size
5346	TraceRoute Selector
5347	Pump Controller Flip Flop Override
5348	C Drive Format Size (G)
5349	Route Slot Selector
5357	FTP TrendLog Days Back
5358	FTP Alarm Journal Include Selector
5359	FTP Evenmt Log Include Selector
5360	Alarm Auto Acknowledge Selectors
5361	External Cellmodem: Old Message Timeout
5362	MQTT Publish Response Timeout (S)
5363	MQTT Publish Retry Counts
5364	Pump Controller Inter Pump HoldOff
10000	IP Address (4 Char)
10002	Gate Address (4 Char)
10004	Subnet Mask (4 Char)
10006	DNS Address
10008	Ethernet Modbus Port
10009	Ethernet SDX Port
10010	TCP Activity TimeOut

10011		HTTP Port
10012		SDX Unit ID
10013		Ethernet Modbus / DF1 Address
10014		Ethernet Comm Watchdog Timeout(x 0.1 Sec)
10015		DigiRadio Baud Rate Select
10016		DigiRadio Parity (0=None, 1 = Even, 2 = Odd)
10017		DigiRadio Rx Character Gap Extra (x 307uS)
10018		DigiRadio Xmit En Delay (0.001 S)
10019		DigiRadio Modbus / DF1 Address
10020		MESH_SLEEP_PING_TMR / DigiRadio Str/Fwd In Base
10021		DigiRadio Str/Fwd Out Base Add
10022		DigiRadio Str/Fwd Add Range
10023		DigiRadio / Mesh Comm Watchdog Timeout(x 0.1 Sec)
10025		Com1 Baud Rate Select
10026		Com1 Parity (0=None, 1 = Even, 2 = Odd)
10027		Com1 Rx Character Gap Extra (x 307uS)
10028		Com1 Xmit En Delay (0.001 S)
10029		Com1 Modbus / DF1 Address
10030		Com1 Str/Fwd In Base Add
10031		Com1 Str/Fwd Out Base Add
10032		Com1 Str/Fwd Add Range
10033		Com1 Comm Watchdog Timeout(x 0.1 Sec)
10034		Com1 Mode Selector
10037		Cell Ping IP (4 char)
10039		Cell Modbus Address
10040		Cell Modbus Port
10041		Cell SDX Port
10042		Cell Web Port
10043		Cell Comm Watchdog Timeout(x 0.1 Sec)
10044		Com2 Mode Selector
10045		ComR Bridging Port
10046		Com1 Bridging Port
10047		Cell Bridging Port
10048		FTP Server Default Port
10049		FTP Server Default Port (Cellular)
10051		MQTT Publish Poll Rate
10052		SATServer Poll Rate
10053		Wiegand Register 32 bit
10097		TimeZone Offset (Hours x 10)
10099		Days Count for CSV reports
10102		Last SLOG entry for Attachments

10104		Diagnostics - mS Late count MAX
10105		Diagnostics - keypress counter
10106		Diagnostics - Max ScanTime for MAIN
10107		Diagnostics - TCP Resets Sent (Socket not found)
10108		Restarts
10109		RTC Month mm (Jan = 1)
10110		RTC Day dd
10111		RTC Year yy (2 digit year)
10112		RTC Hours hh
10113		RTC Minutes mm
10114		RTC Seconds ss
10115		RTC millisecond Offset
10116		SD Card Status
10117		Monitor Selector
10118		RTC Day of Week
10119		Web6 STATUS
10120		Control Register
10121		MAC
10124		Defaults Revision ID
10125		Firmware Revision ID
10126		Model Number
10127		Bootloader Version
10128		Manufacturer Date
10129		Factory Cal Date
10130		User Cal Date
10131		SDX Buffer Size (x128 Bytes)
10132		Configuration
10133		Serial Number [32 Bit]
10135		Manufacturer ID [32 Bit]
10137		Revision Number
10138		Software ID
10139		Lifeboat Version
10140		Reserved for future use
10142		Calibration - VBATT, VIN
10144		Calibration - AI Current (1-4)
10148		Calibration - AO Current (1-2)
10150		Calibration - AO Offset (1-2)
10152		Calibration - AI Voltage
10153		Calibration - AI mV
10154		Calibration - AI mV Offset
10155		Calibration - AI Resistive (1-4)

65001		RTC Month mm (Jan = 1)
65002		RTC Day dd
65003		RTC Year yyyy (4 digit year)
65004		RTC Hours hh
65005		RTC Minutes mm
65006		RTC Seconds ss