XMPS- 2000

August 2023 Tasks SRS

Contents

Note : For all Above tasks for this month CSV and CCODE & MCODE all should be generated.

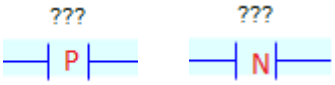
(later in next month after firmware & utility stable we will take decision to remove CSV)

Task 1: Add Edge detectors separate contact symbols in UI

Requirement:

1. Add one contact symbol (Edge Detector symbols “P/N”) in (Ladder Toolbar).
   As shown in below image.

2. When the user adds a contact in the logic window and clicks on the edge detector contact symbol from the toolbar, a “P” should appear on the contact, and “N” should appear on the contact when he clicks the same edge detector contact symbol again.



3. P" should act as a normal contact and "N should act as a negation contact.
4. The size & colour of the all element in the toolbar should be the same.
5. CSV & MCODE generation is similar like Normal contact and negation contact

Task 2: Minimum 4 Set / Reset parallel coils in one rung in UI

UI:

Set / Reset Coil.

1. This Functionality useful when we user wants to add multiple parallel set / Reset Coil.
2. User should able to add minimum 4 Set / 4 Reset Parallel Coil in one single rung.

Example: one rung with 4 set parallel coil, same for reset parallel coil.

Fig 1

C.S.V: C.S.V should be as per Set & Reset coil Instruction (four different lines)

Task 3: Option of showing logical address instead of Tag name in the logic blocks in UI

Requirement:

UI:

1. This requirement is applicable to Logic Block Window.
2. Option to show logical address in logic block window. This option is provided in the popup that is provided for new tags (Add New Tag window).

Fig 2

3. Show the logical address of that particular tag instead of the tag name when the user clicks the Show this logical address checkbox.
4. Example :

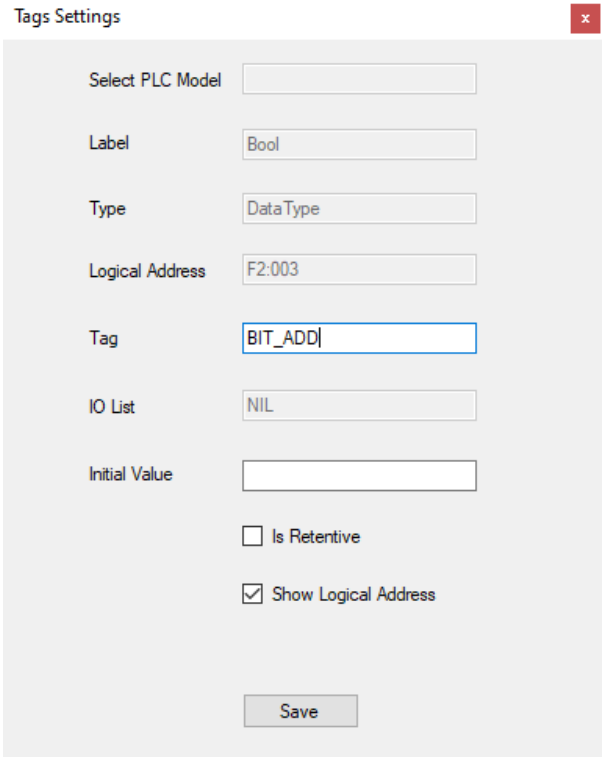


Fig 3

5. In this example, when the user clicks Show Logical Address, the tag's address should appear in the Logic window instead of the tag's name.

Fig 4

6. And display the logical address in different colours when the user clicks on Show Logical Address.

Task 4: Increase memory bits & words size to 1K

Requirement:

Memory Bit Size:

1. This requirement is applicable to Bit Memory Address and Word Memory address.
2. Increase the bit memory address size from F2:256 to F2:1023

I.e. we have current bit memory address size from F2:000 to F2:255. So next to this address add bit memory address from F2:256 to F2:1023

3. So the total "BIT" memory address size should be 1k. (i.e. F2:000 to F2:255 + F2:256 to F2:1023)
4. Convert this bit address (F2:256 to F2:1023) using this base address "0x2001D340".
5. **Validation**: Address F2:000 to F2:999 must accept three digit numbers only and F2:1000 to F2:1023 must accept four digit format.

Word Size:

1. This requirement is applicable to Bit Memory Address and Word Memory address.
2. Increase the Word memory address size from W4:256 to W4:1023
   I.e. we have current Word memory address size from W4: 000 to W4: 255. So next to this address add Word memory address from W4:256 to W4: 1023

3. So the total "Word" memory address size should be 1k. (i.e. W4:000 to W4:255 + W4:256 to W4:1023)
4. Convert this word address (W4:256 TO W4:1023) Using this base address "**0x2001D3A0".**
5. **Validation**: Address W4:000 to W4:999 must accept three digit numbers only and W4:1000 to W4:1023 must accept four digit format.

Address Code for Online Monitor and force functionality for above addresses

Flag Address	HEX CODE	**Integer Word**	HEX CODE
F2:000	20B	W4:000	40B
F2:001	20C	W4:001	40C
F2:002	20D	W4:002	40D
F2:003	20E	W4:003	40E
F2:004	20F	W4:004	40F
F2:005	210	W4:005	410
F2:006	211	W4:006	411
F2:007	212	W4:007	412
F2:008	213	W4:008	413
F2:009	214	W4:009	414
F2:010	215	W4:010	415
F2:011	216	W4:011	416
F2:012	217	W4:012	417
F2:013	218	W4:013	418
F2:014	219	W4:014	419
F2:015	21A	W4:015	41A
F2:016	21B	W4:016	41B
F2:017	21C	W4:017	41C
F2:018	21D	W4:018	41D
F2:019	21E	W4:019	41E
F2:020	21F	W4:020	41F
F2:021	220	W4:021	420
F2:022	221	W4:022	421
F2:023	222	W4:023	422
F2:024	223	W4:024	423

F2:025	224	W4:025	424
F2:026	225	W4:026	425
F2:027	226	W4:027	426
F2:028	227	W4:028	427
F2:029	228	W4:029	428
F2:030	229	W4:030	429
F2:031	22A	W4:031	42A
F2:032	22B	W4:032	42B
F2:033	22C	W4:033	42C
F2:034	22D	W4:034	42D
F2:035	22E	W4:035	42E
F2:036	22F	W4:036	42F
F2:037	230	W4:037	430
F2:038	231	W4:038	431
F2:039	232	W4:039	432
F2:040	233	W4:040	433
F2:041	234	W4:041	434
F2:042	235	W4:042	435
F2:043	236	W4:043	436
F2:044	237	W4:044	437
F2:045	238	W4:045	438
F2:046	239	W4:046	439
F2:047	23A	W4:047	43A
F2:048	23B	W4:048	43B
F2:049	23C	W4:049	43C
F2:050	23D	W4:050	43D
F2:051	23E	W4:051	43E
F2:052	23F	W4:052	43F
F2:053	240	W4:053	440
F2:054	241	W4:054	441
F2:055	242	W4:055	442
F2:056	243	W4:056	443
F2:057	244	W4:057	444
F2:058	245	W4:058	445
F2:059	246	W4:059	446
F2:060	247	W4:060	447
F2:061	248	W4:061	448
F2:062	249	W4:062	449
F2:063	24A	W4:063	44A
F2:064	24B	W4:064	44B
F2:065	24C	W4:065	44C
F2:066	24D	W4:066	44D
F2:067	24E	W4:067	44E

F2:068	24F	W4:068	44F
F2:069	250	W4:069	450
F2:070	251	W4:070	451
F2:071	252	W4:071	452
F2:072	253	W4:072	453
F2:073	254	W4:073	454
F2:074	255	W4:074	455
F2:075	256	W4:075	456
F2:076	257	W4:076	457
F2:077	258	W4:077	458
F2:078	259	W4:078	459
F2:079	25A	W4:079	45A
F2:080	25B	W4:080	45B
F2:081	25C	W4:081	45C
F2:082	25D	W4:082	45D
F2:083	25E	W4:083	45E
F2:084	25F	W4:084	45F
F2:085	260	W4:085	460
F2:086	261	W4:086	461
F2:087	262	W4:087	462
F2:088	263	W4:088	463
F2:089	264	W4:089	464
F2:090	265	W4:090	465
F2:091	266	W4:091	466
F2:092	267	W4:092	467
F2:093	268	W4:093	468
F2:094	269	W4:094	469
F2:095	26A	W4:095	46A
F2:096	26B	W4:096	46B
F2:097	26C	W4:097	46C
F2:098	26D	W4:098	46D
F2:099	26E	W4:099	46E
F2:100	26F	W4:100	46F
F2:101	270	W4:101	470
F2:102	271	W4:102	471
F2:103	272	W4:103	472
F2:104	273	W4:104	473
F2:105	274	W4:105	474
F2:106	275	W4:106	475
F2:107	276	W4:107	476
F2:108	277	W4:108	477
F2:109	278	W4:109	478
F2:110	279	W4:110	479

F2:111	27A	W4:111	47A
F2:112	27B	W4:112	47B
F2:113	27C	W4:113	47C
F2:114	27D	W4:114	47D
F2:115	27E	W4:115	47E
F2:116	27F	W4:116	47F
F2:117	280	W4:117	480
F2:118	281	W4:118	481
F2:119	282	W4:119	482
F2:120	283	W4:120	483
F2:121	284	W4:121	484
F2:122	285	W4:122	485
F2:123	286	W4:123	486
F2:124	287	W4:124	487
F2:125	288	W4:125	488
F2:126	289	W4:126	489
F2:127	28A	W4:127	48A
F2:128	28B	W4:128	48B
F2:129	28C	W4:129	48C
F2:130	28D	W4:130	48D
F2:131	28E	W4:131	48E
F2:132	28F	W4:132	48F
F2:133	290	W4:133	490
F2:134	291	W4:134	491
F2:135	292	W4:135	492
F2:136	293	W4:136	493
F2:137	294	W4:137	494
F2:138	295	W4:138	495
F2:139	296	W4:139	496
F2:140	297	W4:140	497
F2:141	298	W4:141	498
F2:142	299	W4:142	499
F2:143	29A	W4:143	49A
F2:144	29B	W4:144	49B
F2:145	29C	W4:145	49C
F2:146	29D	W4:146	49D
F2:147	29E	W4:147	49E
F2:148	29F	W4:148	49F
F2:149	2A0	W4:149	4A0
F2:150	2A1	W4:150	4A1
F2:151	2A2	W4:151	4A2
F2:152	2A3	W4:152	4A3
F2:153	2A4	W4:153	4A4

F2:154	2A5	W4:154	4A5
F2:155	2A6	W4:155	4A6
F2:156	2A7	W4:156	4A7
F2:157	2A8	W4:157	4A8
F2:158	2A9	W4:158	4A9
F2:159	2AA	W4:159	4AA
F2:160	2AB	W4:160	4AB
F2:161	2AC	W4:161	4AC
F2:162	2AD	W4:162	4AD
F2:163	2AE	W4:163	4AE
F2:164	2AF	W4:164	4AF
F2:165	2B0	W4:165	4B0
F2:166	2B1	W4:166	4B1
F2:167	2B2	W4:167	4B2
F2:168	2B3	W4:168	4B3
F2:169	2B4	W4:169	4B4
F2:170	2B5	W4:170	4B5
F2:171	2B6	W4:171	4B6
F2:172	2B7	W4:172	4B7
F2:173	2B8	W4:173	4B8
F2:174	2B9	W4:174	4B9
F2:175	2BA	W4:175	4BA
F2:176	2BB	W4:176	4BB
F2:177	2BC	W4:177	4BC
F2:178	2BD	W4:178	4BD
F2:179	2BE	W4:179	4BE
F2:180	2BF	W4:180	4BF
F2:181	2C0	W4:181	4C0
F2:182	2C1	W4:182	4C1
F2:183	2C2	W4:183	4C2
F2:184	2C3	W4:184	4C3
F2:185	2C4	W4:185	4C4
F2:186	2C5	W4:186	4C5
F2:187	2C6	W4:187	4C6
F2:188	2C7	W4:188	4C7
F2:189	2C8	W4:189	4C8
F2:190	2C9	W4:190	4C9
F2:191	2CA	W4:191	4CA
F2:192	2CB	W4:192	4CB
F2:193	2CC	W4:193	4CC
F2:194	2CD	W4:194	4CD
F2:195	2CE	W4:195	4CE
F2:196	2CF	W4:196	4CF

F2:197	2D0	W4:197	4D0
F2:198	2D1	W4:198	4D1
F2:199	2D2	W4:199	4D2
F2:200	2D3	W4:200	4D3
F2:201	2D4	W4:201	4D4
F2:202	2D5	W4:202	4D5
F2:203	2D6	W4:203	4D6
F2:204	2D7	W4:204	4D7
F2:205	2D8	W4:205	4D8
F2:206	2D9	W4:206	4D9
F2:207	2DA	W4:207	4DA
F2:208	2DB	W4:208	4DB
F2:209	2DC	W4:209	4DC
F2:210	2DD	W4:210	4DD
F2:211	2DE	W4:211	4DE
F2:212	2DF	W4:212	4DF
F2:213	2E0	W4:213	4E0
F2:214	2E1	W4:214	4E1
F2:215	2E2	W4:215	4E2
F2:216	2E3	W4:216	4E3
F2:217	2E4	W4:217	4E4
F2:218	2E5	W4:218	4E5
F2:219	2E6	W4:219	4E6
F2:220	2E7	W4:220	4E7
F2:221	2E8	W4:221	4E8
F2:222	2E9	W4:222	4E9
F2:223	2EA	W4:223	4EA
F2:224	2EB	W4:224	4EB
F2:225	2EC	W4:225	4EC
F2:226	2ED	W4:226	4ED
F2:227	2EE	W4:227	4EE
F2:228	2EF	W4:228	4EF
F2:229	2F0	W4:229	4F0
F2:230	2F1	W4:230	4F1
F2:231	2F2	W4:231	4F2
F2:232	2F3	W4:232	4F3
F2:233	2F4	W4:233	4F4
F2:234	2F5	W4:234	4F5
F2:235	2F6	W4:235	4F6
F2:236	2F7	W4:236	4F7
F2:237	2F8	W4:237	4F8
F2:238	2F9	W4:238	4F9
F2:239	2FA	W4:239	4FA

F2:240	2FB	W4:240	4FB
F2:241	2FC	W4:241	4FC
F2:242	2FD	W4:242	4FD
F2:243	2FE	W4:243	4FE
F2:244	2FF	W4:244	4FF
F2:245	300	W4:245	500
F2:246	301	W4:246	501
F2:247	302	W4:247	502
F2:248	303	W4:248	503
F2:249	304	W4:249	504
F2:250	305	W4:250	505
F2:251	306	W4:251	506
F2:252	307	W4:252	507
F2:253	308	W4:253	508
F2:254	309	W4:254	509
F2:255	30A	W4:255	50A
F2:256	2A0B	W4:256	2D0B
F2:257	2A0C	W4:257	2D0C
F2:258	2A0D	W4:258	2D0D
F2:259	2A0E	W4:259	2D0E
F2:260	2A0F	W4:260	2D0F
F2:261	2A10	W4:261	2D10
F2:262	2A11	W4:262	2D11
F2:263	2A12	W4:263	2D12
F2:264	2A13	W4:264	2D13
F2:265	2A14	W4:265	2D14
F2:266	2A15	W4:266	2D15
F2:267	2A16	W4:267	2D16
F2:268	2A17	W4:268	2D17
F2:269	2A18	W4:269	2D18
F2:270	2A19	W4:270	2D19
F2:271	2A1A	W4:271	2D1A
F2:272	2A1B	W4:272	2D1B
F2:273	2A1C	W4:273	2D1C
F2:274	2A1D	W4:274	2D1D
F2:275	2A1E	W4:275	2D1E
F2:276	2A1F	W4:276	2D1F
F2:277	2A20	W4:277	2D20
F2:278	2A21	W4:278	2D21
F2:279	2A22	W4:279	2D22
F2:280	2A23	W4:280	2D23
F2:281	2A24	W4:281	2D24

F2:282	2A25	W4:282	2D25
F2:283	2A26	W4:283	2D26
F2:284	2A27	W4:284	2D27
F2:285	2A28	W4:285	2D28
F2:286	2A29	W4:286	2D29
F2:287	2A2A	W4:287	2D2A
F2:288	2A2B	W4:288	2D2B
F2:289	2A2C	W4:289	2D2C
F2:290	2A2D	W4:290	2D2D
F2:291	2A2E	W4:291	2D2E
F2:292	2A2F	W4:292	2D2F
F2:293	2A30	W4:293	2D30
F2:294	2A31	W4:294	2D31
F2:295	2A32	W4:295	2D32
F2:296	2A33	W4:296	2D33
F2:297	2A34	W4:297	2D34
F2:298	2A35	W4:298	2D35
F2:299	2A36	W4:299	2D36
F2:300	2A37	W4:300	2D37
F2:301	2A38	W4:301	2D38
F2:302	2A39	W4:302	2D39
F2:303	2A3A	W4:303	2D3A
F2:304	2A3B	W4:304	2D3B
F2:305	2A3C	W4:305	2D3C
F2:306	2A3D	W4:306	2D3D
F2:307	2A3E	W4:307	2D3E
F2:308	2A3F	W4:308	2D3F
F2:309	2A40	W4:309	2D40
F2:310	2A41	W4:310	2D41
F2:311	2A42	W4:311	2D42
F2:312	2A43	W4:312	2D43
F2:313	2A44	W4:313	2D44
F2:314	2A45	W4:314	2D45
F2:315	2A46	W4:315	2D46
F2:316	2A47	W4:316	2D47
F2:317	2A48	W4:317	2D48
F2:318	2A49	W4:318	2D49
F2:319	2A4A	W4:319	2D4A
F2:320	2A4B	W4:320	2D4B
F2:321	2A4C	W4:321	2D4C
F2:322	2A4D	W4:322	2D4D
F2:323	2A4E	W4:323	2D4E
F2:324	2A4F	W4:324	2D4F

F2:325	2A50	W4:325	2D50
F2:326	2A51	W4:326	2D51
F2:327	2A52	W4:327	2D52
F2:328	2A53	W4:328	2D53
F2:329	2A54	W4:329	2D54
F2:330	2A55	W4:330	2D55
F2:331	2A56	W4:331	2D56
F2:332	2A57	W4:332	2D57
F2:333	2A58	W4:333	2D58
F2:334	2A59	W4:334	2D59
F2:335	2A5A	W4:335	2D5A
F2:336	2A5B	W4:336	2D5B
F2:337	2A5C	W4:337	2D5C
F2:338	2A5D	W4:338	2D5D
F2:339	2A5E	W4:339	2D5E
F2:340	2A5F	W4:340	2D5F
F2:341	2A60	W4:341	2D60
F2:342	2A61	W4:342	2D61
F2:343	2A62	W4:343	2D62
F2:344	2A63	W4:344	2D63
F2:345	2A64	W4:345	2D64
F2:346	2A65	W4:346	2D65
F2:347	2A66	W4:347	2D66
F2:348	2A67	W4:348	2D67
F2:349	2A68	W4:349	2D68
F2:350	2A69	W4:350	2D69
F2:351	2A6A	W4:351	2D6A
F2:352	2A6B	W4:352	2D6B
F2:353	2A6C	W4:353	2D6C
F2:354	2A6D	W4:354	2D6D
F2:355	2A6E	W4:355	2D6E
F2:356	2A6F	W4:356	2D6F
F2:357	2A70	W4:357	2D70
F2:358	2A71	W4:358	2D71
F2:359	2A72	W4:359	2D72
F2:360	2A73	W4:360	2D73
F2:361	2A74	W4:361	2D74
F2:362	2A75	W4:362	2D75
F2:363	2A76	W4:363	2D76
F2:364	2A77	W4:364	2D77
F2:365	2A78	W4:365	2D78
F2:366	2A79	W4:366	2D79
F2:367	2A7A	W4:367	2D7A

F2:368	2A7B	W4:368	2D7B
F2:369	2A7C	W4:369	2D7C
F2:370	2A7D	W4:370	2D7D
F2:371	2A7E	W4:371	2D7E
F2:372	2A7F	W4:372	2D7F
F2:373	2A80	W4:373	2D80
F2:374	2A81	W4:374	2D81
F2:375	2A82	W4:375	2D82
F2:376	2A83	W4:376	2D83
F2:377	2A84	W4:377	2D84
F2:378	2A85	W4:378	2D85
F2:379	2A86	W4:379	2D86
F2:380	2A87	W4:380	2D87
F2:381	2A88	W4:381	2D88
F2:382	2A89	W4:382	2D89
F2:383	2A8A	W4:383	2D8A
F2:384	2A8B	W4:384	2D8B
F2:385	2A8C	W4:385	2D8C
F2:386	2A8D	W4:386	2D8D
F2:387	2A8E	W4:387	2D8E
F2:388	2A8F	W4:388	2D8F
F2:389	2A90	W4:389	2D90
F2:390	2A91	W4:390	2D91
F2:391	2A92	W4:391	2D92
F2:392	2A93	W4:392	2D93
F2:393	2A94	W4:393	2D94
F2:394	2A95	W4:394	2D95
F2:395	2A96	W4:395	2D96
F2:396	2A97	W4:396	2D97
F2:397	2A98	W4:397	2D98
F2:398	2A99	W4:398	2D99
F2:399	2A9A	W4:399	2D9A
F2:400	2A9B	W4:400	2D9B
F2:401	2A9C	W4:401	2D9C
F2:402	2A9D	W4:402	2D9D
F2:403	2A9E	W4:403	2D9E
F2:404	2A9F	W4:404	2D9F
F2:405	2AA0	W4:405	2DA0
F2:406	2AA1	W4:406	2DA1
F2:407	2AA2	W4:407	2DA2
F2:408	2AA3	W4:408	2DA3
F2:409	2AA4	W4:409	2DA4
F2:410	2AA5	W4:410	2DA5

F2:411	2AA6	W4:411	2DA6
F2:412	2AA7	W4:412	2DA7
F2:413	2AA8	W4:413	2DA8
F2:414	2AA9	W4:414	2DA9
F2:415	2AAA	W4:415	2DAA
F2:416	2AAB	W4:416	2DAB
F2:417	2AAC	W4:417	2DAC
F2:418	2AAD	W4:418	2DAD
F2:419	2AAE	W4:419	2DAE
F2:420	2AAF	W4:420	2DAF
F2:421	2AB0	W4:421	2DB0
F2:422	2AB1	W4:422	2DB1
F2:423	2AB2	W4:423	2DB2
F2:424	2AB3	W4:424	2DB3
F2:425	2AB4	W4:425	2DB4
F2:426	2AB5	W4:426	2DB5
F2:427	2AB6	W4:427	2DB6
F2:428	2AB7	W4:428	2DB7
F2:429	2AB8	W4:429	2DB8
F2:430	2AB9	W4:430	2DB9
F2:431	2ABA	W4:431	2DBA
F2:432	2ABB	W4:432	2DBB
F2:433	2ABC	W4:433	2DBC
F2:434	2ABD	W4:434	2DBD
F2:435	2ABE	W4:435	2DBE
F2:436	2ABF	W4:436	2DBF
F2:437	2AC0	W4:437	2DC0
F2:438	2AC1	W4:438	2DC1
F2:439	2AC2	W4:439	2DC2
F2:440	2AC3	W4:440	2DC3
F2:441	2AC4	W4:441	2DC4
F2:442	2AC5	W4:442	2DC5
F2:443	2AC6	W4:443	2DC6
F2:444	2AC7	W4:444	2DC7
F2:445	2AC8	W4:445	2DC8
F2:446	2AC9	W4:446	2DC9
F2:447	2ACA	W4:447	2DCA
F2:448	2ACB	W4:448	2DCB
F2:449	2ACC	W4:449	2DCC
F2:450	2ACD	W4:450	2DCD
F2:451	2ACE	W4:451	2DCE
F2:452	2ACF	W4:452	2DCF
F2:453	2AD0	W4:453	2DD0

F2:454	2AD1	W4:454	2DD1
F2:455	2AD2	W4:455	2DD2
F2:456	2AD3	W4:456	2DD3
F2:457	2AD4	W4:457	2DD4
F2:458	2AD5	W4:458	2DD5
F2:459	2AD6	W4:459	2DD6
F2:460	2AD7	W4:460	2DD7
F2:461	2AD8	W4:461	2DD8
F2:462	2AD9	W4:462	2DD9
F2:463	2ADA	W4:463	2DDA
F2:464	2ADB	W4:464	2DDB
F2:465	2ADC	W4:465	2DDC
F2:466	2ADD	W4:466	2DDD
F2:467	2ADE	W4:467	2DDE
F2:468	2ADF	W4:468	2DDF
F2:469	2AE0	W4:469	2DE0
F2:470	2AE1	W4:470	2DE1
F2:471	2AE2	W4:471	2DE2
F2:472	2AE3	W4:472	2DE3
F2:473	2AE4	W4:473	2DE4
F2:474	2AE5	W4:474	2DE5
F2:475	2AE6	W4:475	2DE6
F2:476	2AE7	W4:476	2DE7
F2:477	2AE8	W4:477	2DE8
F2:478	2AE9	W4:478	2DE9
F2:479	2AEA	W4:479	2DEA
F2:480	2AEB	W4:480	2DEB
F2:481	2AEC	W4:481	2DEC
F2:482	2AED	W4:482	2DED
F2:483	2AEE	W4:483	2DEE
F2:484	2AEF	W4:484	2DEF
F2:485	2AF0	W4:485	2DF0
F2:486	2AF1	W4:486	2DF1
F2:487	2AF2	W4:487	2DF2
F2:488	2AF3	W4:488	2DF3
F2:489	2AF4	W4:489	2DF4
F2:490	2AF5	W4:490	2DF5
F2:491	2AF6	W4:491	2DF6
F2:492	2AF7	W4:492	2DF7
F2:493	2AF8	W4:493	2DF8
F2:494	2AF9	W4:494	2DF9
F2:495	2AFA	W4:495	2DFA
F2:496	2AFB	W4:496	2DFB

F2:497	2AFC	W4:497	2DFC
F2:498	2AFD	W4:498	2DFD
F2:499	2AFE	W4:499	2DFE
F2:500	2AFF	W4:500	2DFF
F2:501	2B00	W4:501	2E00
F2:502	2B01	W4:502	2E01
F2:503	2B02	W4:503	2E02
F2:504	2B03	W4:504	2E03
F2:505	2B04	W4:505	2E04
F2:506	2B05	W4:506	2E05
F2:507	2B06	W4:507	2E06
F2:508	2B07	W4:508	2E07
F2:509	2B08	W4:509	2E08
F2:510	2B09	W4:510	2E09
F2:511	2B0A	W4:511	2E0A
F2:512	2B0B	W4:512	2E0B
F2:513	2B0C	W4:513	2E0C
F2:514	2B0D	W4:514	2E0D
F2:515	2B0E	W4:515	2E0E
F2:516	2B0F	W4:516	2E0F
F2:517	2B10	W4:517	2E10
F2:518	2B11	W4:518	2E11
F2:519	2B12	W4:519	2E12
F2:520	2B13	W4:520	2E13
F2:521	2B14	W4:521	2E14
F2:522	2B15	W4:522	2E15
F2:523	2B16	W4:523	2E16
F2:524	2B17	W4:524	2E17
F2:525	2B18	W4:525	2E18
F2:526	2B19	W4:526	2E19
F2:527	2B1A	W4:527	2E1A
F2:528	2B1B	W4:528	2E1B
F2:529	2B1C	W4:529	2E1C
F2:530	2B1D	W4:530	2E1D
F2:531	2B1E	W4:531	2E1E
F2:532	2B1F	W4:532	2E1F
F2:533	2B20	W4:533	2E20
F2:534	2B21	W4:534	2E21
F2:535	2B22	W4:535	2E22
F2:536	2B23	W4:536	2E23
F2:537	2B24	W4:537	2E24
F2:538	2B25	W4:538	2E25
F2:539	2B26	W4:539	2E26

F2:540	2B27	W4:540	2E27
F2:541	2B28	W4:541	2E28
F2:542	2B29	W4:542	2E29
F2:543	2B2A	W4:543	2E2A
F2:544	2B2B	W4:544	2E2B
F2:545	2B2C	W4:545	2E2C
F2:546	2B2D	W4:546	2E2D
F2:547	2B2E	W4:547	2E2E
F2:548	2B2F	W4:548	2E2F
F2:549	2B30	W4:549	2E30
F2:550	2B31	W4:550	2E31
F2:551	2B32	W4:551	2E32
F2:552	2B33	W4:552	2E33
F2:553	2B34	W4:553	2E34
F2:554	2B35	W4:554	2E35
F2:555	2B36	W4:555	2E36
F2:556	2B37	W4:556	2E37
F2:557	2B38	W4:557	2E38
F2:558	2B39	W4:558	2E39
F2:559	2B3A	W4:559	2E3A
F2:560	2B3B	W4:560	2E3B
F2:561	2B3C	W4:561	2E3C
F2:562	2B3D	W4:562	2E3D
F2:563	2B3E	W4:563	2E3E
F2:564	2B3F	W4:564	2E3F
F2:565	2B40	W4:565	2E40
F2:566	2B41	W4:566	2E41
F2:567	2B42	W4:567	2E42
F2:568	2B43	W4:568	2E43
F2:569	2B44	W4:569	2E44
F2:570	2B45	W4:570	2E45
F2:571	2B46	W4:571	2E46
F2:572	2B47	W4:572	2E47
F2:573	2B48	W4:573	2E48
F2:574	2B49	W4:574	2E49
F2:575	2B4A	W4:575	2E4A
F2:576	2B4B	W4:576	2E4B
F2:577	2B4C	W4:577	2E4C
F2:578	2B4D	W4:578	2E4D
F2:579	2B4E	W4:579	2E4E
F2:580	2B4F	W4:580	2E4F
F2:581	2B50	W4:581	2E50
F2:582	2B51	W4:582	2E51

F2:583	2B52	W4:583	2E52
F2:584	2B53	W4:584	2E53
F2:585	2B54	W4:585	2E54
F2:586	2B55	W4:586	2E55
F2:587	2B56	W4:587	2E56
F2:588	2B57	W4:588	2E57
F2:589	2B58	W4:589	2E58
F2:590	2B59	W4:590	2E59
F2:591	2B5A	W4:591	2E5A
F2:592	2B5B	W4:592	2E5B
F2:593	2B5C	W4:593	2E5C
F2:594	2B5D	W4:594	2E5D
F2:595	2B5E	W4:595	2E5E
F2:596	2B5F	W4:596	2E5F
F2:597	2B60	W4:597	2E60
F2:598	2B61	W4:598	2E61
F2:599	2B62	W4:599	2E62
F2:600	2B63	W4:600	2E63
F2:601	2B64	W4:601	2E64
F2:602	2B65	W4:602	2E65
F2:603	2B66	W4:603	2E66
F2:604	2B67	W4:604	2E67
F2:605	2B68	W4:605	2E68
F2:606	2B69	W4:606	2E69
F2:607	2B6A	W4:607	2E6A
F2:608	2B6B	W4:608	2E6B
F2:609	2B6C	W4:609	2E6C
F2:610	2B6D	W4:610	2E6D
F2:611	2B6E	W4:611	2E6E
F2:612	2B6F	W4:612	2E6F
F2:613	2B70	W4:613	2E70
F2:614	2B71	W4:614	2E71
F2:615	2B72	W4:615	2E72
F2:616	2B73	W4:616	2E73
F2:617	2B74	W4:617	2E74
F2:618	2B75	W4:618	2E75
F2:619	2B76	W4:619	2E76
F2:620	2B77	W4:620	2E77
F2:621	2B78	W4:621	2E78
F2:622	2B79	W4:622	2E79
F2:623	2B7A	W4:623	2E7A
F2:624	2B7B	W4:624	2E7B
F2:625	2B7C	W4:625	2E7C

F2:626	2B7D	W4:626	2E7D
F2:627	2B7E	W4:627	2E7E
F2:628	2B7F	W4:628	2E7F
F2:629	2B80	W4:629	2E80
F2:630	2B81	W4:630	2E81
F2:631	2B82	W4:631	2E82
F2:632	2B83	W4:632	2E83
F2:633	2B84	W4:633	2E84
F2:634	2B85	W4:634	2E85
F2:635	2B86	W4:635	2E86
F2:636	2B87	W4:636	2E87
F2:637	2B88	W4:637	2E88
F2:638	2B89	W4:638	2E89
F2:639	2B8A	W4:639	2E8A
F2:640	2B8B	W4:640	2E8B
F2:641	2B8C	W4:641	2E8C
F2:642	2B8D	W4:642	2E8D
F2:643	2B8E	W4:643	2E8E
F2:644	2B8F	W4:644	2E8F
F2:645	2B90	W4:645	2E90
F2:646	2B91	W4:646	2E91
F2:647	2B92	W4:647	2E92
F2:648	2B93	W4:648	2E93
F2:649	2B94	W4:649	2E94
F2:650	2B95	W4:650	2E95
F2:651	2B96	W4:651	2E96
F2:652	2B97	W4:652	2E97
F2:653	2B98	W4:653	2E98
F2:654	2B99	W4:654	2E99
F2:655	2B9A	W4:655	2E9A
F2:656	2B9B	W4:656	2E9B
F2:657	2B9C	W4:657	2E9C
F2:658	2B9D	W4:658	2E9D
F2:659	2B9E	W4:659	2E9E
F2:660	2B9F	W4:660	2E9F
F2:661	2BA0	W4:661	2EA0
F2:662	2BA1	W4:662	2EA1
F2:663	2BA2	W4:663	2EA2
F2:664	2BA3	W4:664	2EA3
F2:665	2BA4	W4:665	2EA4
F2:666	2BA5	W4:666	2EA5
F2:667	2BA6	W4:667	2EA6
F2:668	2BA7	W4:668	2EA7

F2:669	2BA8	W4:669	2EA8
F2:670	2BA9	W4:670	2EA9
F2:671	2BAA	W4:671	2EAA
F2:672	2BAB	W4:672	2EAB
F2:673	2BAC	W4:673	2EAC
F2:674	2BAD	W4:674	2EAD
F2:675	2BAE	W4:675	2EAE
F2:676	2BAF	W4:676	2EAF
F2:677	2BB0	W4:677	2EB0
F2:678	2BB1	W4:678	2EB1
F2:679	2BB2	W4:679	2EB2
F2:680	2BB3	W4:680	2EB3
F2:681	2BB4	W4:681	2EB4
F2:682	2BB5	W4:682	2EB5
F2:683	2BB6	W4:683	2EB6
F2:684	2BB7	W4:684	2EB7
F2:685	2BB8	W4:685	2EB8
F2:686	2BB9	W4:686	2EB9
F2:687	2BBA	W4:687	2EBA
F2:688	2BBB	W4:688	2EBB
F2:689	2BBC	W4:689	2EBC
F2:690	2BBD	W4:690	2EBD
F2:691	2BBE	W4:691	2EBE
F2:692	2BBF	W4:692	2EBF
F2:693	2BC0	W4:693	2EC0
F2:694	2BC1	W4:694	2EC1
F2:695	2BC2	W4:695	2EC2
F2:696	2BC3	W4:696	2EC3
F2:697	2BC4	W4:697	2EC4
F2:698	2BC5	W4:698	2EC5
F2:699	2BC6	W4:699	2EC6
F2:700	2BC7	W4:700	2EC7
F2:701	2BC8	W4:701	2EC8
F2:702	2BC9	W4:702	2EC9
F2:703	2BCA	W4:703	2ECA
F2:704	2BCB	W4:704	2ECB
F2:705	2BCC	W4:705	2ECC
F2:706	2BCD	W4:706	2ECD
F2:707	2BCE	W4:707	2ECE
F2:708	2BCF	W4:708	2ECF
F2:709	2BD0	W4:709	2ED0
F2:710	2BD1	W4:710	2ED1
F2:711	2BD2	W4:711	2ED2

F2:712	2BD3	W4:712	2ED3
F2:713	2BD4	W4:713	2ED4
F2:714	2BD5	W4:714	2ED5
F2:715	2BD6	W4:715	2ED6
F2:716	2BD7	W4:716	2ED7
F2:717	2BD8	W4:717	2ED8
F2:718	2BD9	W4:718	2ED9
F2:719	2BDA	W4:719	2EDA
F2:720	2BDB	W4:720	2EDB
F2:721	2BDC	W4:721	2EDC
F2:722	2BDD	W4:722	2EDD
F2:723	2BDE	W4:723	2EDE
F2:724	2BDF	W4:724	2EDF
F2:725	2BE0	W4:725	2EE0
F2:726	2BE1	W4:726	2EE1
F2:727	2BE2	W4:727	2EE2
F2:728	2BE3	W4:728	2EE3
F2:729	2BE4	W4:729	2EE4
F2:730	2BE5	W4:730	2EE5
F2:731	2BE6	W4:731	2EE6
F2:732	2BE7	W4:732	2EE7
F2:733	2BE8	W4:733	2EE8
F2:734	2BE9	W4:734	2EE9
F2:735	2BEA	W4:735	2EEA
F2:736	2BEB	W4:736	2EEB
F2:737	2BEC	W4:737	2EEC
F2:738	2BED	W4:738	2EED
F2:739	2BEE	W4:739	2EEE
F2:740	2BEF	W4:740	2EEF
F2:741	2BF0	W4:741	2EF0
F2:742	2BF1	W4:742	2EF1
F2:743	2BF2	W4:743	2EF2
F2:744	2BF3	W4:744	2EF3
F2:745	2BF4	W4:745	2EF4
F2:746	2BF5	W4:746	2EF5
F2:747	2BF6	W4:747	2EF6
F2:748	2BF7	W4:748	2EF7
F2:749	2BF8	W4:749	2EF8
F2:750	2BF9	W4:750	2EF9
F2:751	2BFA	W4:751	2EFA
F2:752	2BFB	W4:752	2EFB
F2:753	2BFC	W4:753	2EFC
F2:754	2BFD	W4:754	2EFD

F2:755	2BFE	W4:755	2EFE
F2:756	2BFF	W4:756	2EFF
F2:757	2C00	W4:757	2F00
F2:758	2C01	W4:758	2F01
F2:759	2C02	W4:759	2F02
F2:760	2C03	W4:760	2F03
F2:761	2C04	W4:761	2F04
F2:762	2C05	W4:762	2F05
F2:763	2C06	W4:763	2F06
F2:764	2C07	W4:764	2F07
F2:765	2C08	W4:765	2F08
F2:766	2C09	W4:766	2F09
F2:767	2C0A	W4:767	2F0A
F2:768	2C0B	W4:768	2F0B
F2:769	2C0C	W4:769	2F0C
F2:770	2C0D	W4:770	2F0D
F2:771	2C0E	W4:771	2F0E
F2:772	2C0F	W4:772	2F0F
F2:773	2C10	W4:773	2F10
F2:774	2C11	W4:774	2F11
F2:775	2C12	W4:775	2F12
F2:776	2C13	W4:776	2F13
F2:777	2C14	W4:777	2F14
F2:778	2C15	W4:778	2F15
F2:779	2C16	W4:779	2F16
F2:780	2C17	W4:780	2F17
F2:781	2C18	W4:781	2F18
F2:782	2C19	W4:782	2F19
F2:783	2C1A	W4:783	2F1A
F2:784	2C1B	W4:784	2F1B
F2:785	2C1C	W4:785	2F1C
F2:786	2C1D	W4:786	2F1D
F2:787	2C1E	W4:787	2F1E
F2:788	2C1F	W4:788	2F1F
F2:789	2C20	W4:789	2F20
F2:790	2C21	W4:790	2F21
F2:791	2C22	W4:791	2F22
F2:792	2C23	W4:792	2F23
F2:793	2C24	W4:793	2F24
F2:794	2C25	W4:794	2F25
F2:795	2C26	W4:795	2F26
F2:796	2C27	W4:796	2F27
F2:797	2C28	W4:797	2F28

F2:798	2C29	W4:798	2F29
F2:799	2C2A	W4:799	2F2A
F2:800	2C2B	W4:800	2F2B
F2:801	2C2C	W4:801	2F2C
F2:802	2C2D	W4:802	2F2D
F2:803	2C2E	W4:803	2F2E
F2:804	2C2F	W4:804	2F2F
F2:805	2C30	W4:805	2F30
F2:806	2C31	W4:806	2F31
F2:807	2C32	W4:807	2F32
F2:808	2C33	W4:808	2F33
F2:809	2C34	W4:809	2F34
F2:810	2C35	W4:810	2F35
F2:811	2C36	W4:811	2F36
F2:812	2C37	W4:812	2F37
F2:813	2C38	W4:813	2F38
F2:814	2C39	W4:814	2F39
F2:815	2C3A	W4:815	2F3A
F2:816	2C3B	W4:816	2F3B
F2:817	2C3C	W4:817	2F3C
F2:818	2C3D	W4:818	2F3D
F2:819	2C3E	W4:819	2F3E
F2:820	2C3F	W4:820	2F3F
F2:821	2C40	W4:821	2F40
F2:822	2C41	W4:822	2F41
F2:823	2C42	W4:823	2F42
F2:824	2C43	W4:824	2F43
F2:825	2C44	W4:825	2F44
F2:826	2C45	W4:826	2F45
F2:827	2C46	W4:827	2F46
F2:828	2C47	W4:828	2F47
F2:829	2C48	W4:829	2F48
F2:830	2C49	W4:830	2F49
F2:831	2C4A	W4:831	2F4A
F2:832	2C4B	W4:832	2F4B
F2:833	2C4C	W4:833	2F4C
F2:834	2C4D	W4:834	2F4D
F2:835	2C4E	W4:835	2F4E
F2:836	2C4F	W4:836	2F4F
F2:837	2C50	W4:837	2F50
F2:838	2C51	W4:838	2F51
F2:839	2C52	W4:839	2F52
F2:840	2C53	W4:840	2F53

F2:841	2C54	W4:841	2F54
F2:842	2C55	W4:842	2F55
F2:843	2C56	W4:843	2F56
F2:844	2C57	W4:844	2F57
F2:845	2C58	W4:845	2F58
F2:846	2C59	W4:846	2F59
F2:847	2C5A	W4:847	2F5A
F2:848	2C5B	W4:848	2F5B
F2:849	2C5C	W4:849	2F5C
F2:850	2C5D	W4:850	2F5D
F2:851	2C5E	W4:851	2F5E
F2:852	2C5F	W4:852	2F5F
F2:853	2C60	W4:853	2F60
F2:854	2C61	W4:854	2F61
F2:855	2C62	W4:855	2F62
F2:856	2C63	W4:856	2F63
F2:857	2C64	W4:857	2F64
F2:858	2C65	W4:858	2F65
F2:859	2C66	W4:859	2F66
F2:860	2C67	W4:860	2F67
F2:861	2C68	W4:861	2F68
F2:862	2C69	W4:862	2F69
F2:863	2C6A	W4:863	2F6A
F2:864	2C6B	W4:864	2F6B
F2:865	2C6C	W4:865	2F6C
F2:866	2C6D	W4:866	2F6D
F2:867	2C6E	W4:867	2F6E
F2:868	2C6F	W4:868	2F6F
F2:869	2C70	W4:869	2F70
F2:870	2C71	W4:870	2F71
F2:871	2C72	W4:871	2F72
F2:872	2C73	W4:872	2F73
F2:873	2C74	W4:873	2F74
F2:874	2C75	W4:874	2F75
F2:875	2C76	W4:875	2F76
F2:876	2C77	W4:876	2F77
F2:877	2C78	W4:877	2F78
F2:878	2C79	W4:878	2F79
F2:879	2C7A	W4:879	2F7A
F2:880	2C7B	W4:880	2F7B
F2:881	2C7C	W4:881	2F7C
F2:882	2C7D	W4:882	2F7D
F2:883	2C7E	W4:883	2F7E

F2:884	2C7F	W4:884	2F7F
F2:885	2C80	W4:885	2F80
F2:886	2C81	W4:886	2F81
F2:887	2C82	W4:887	2F82
F2:888	2C83	W4:888	2F83
F2:889	2C84	W4:889	2F84
F2:890	2C85	W4:890	2F85
F2:891	2C86	W4:891	2F86
F2:892	2C87	W4:892	2F87
F2:893	2C88	W4:893	2F88
F2:894	2C89	W4:894	2F89
F2:895	2C8A	W4:895	2F8A
F2:896	2C8B	W4:896	2F8B
F2:897	2C8C	W4:897	2F8C
F2:898	2C8D	W4:898	2F8D
F2:899	2C8E	W4:899	2F8E
F2:900	2C8F	W4:900	2F8F
F2:901	2C90	W4:901	2F90
F2:902	2C91	W4:902	2F91
F2:903	2C92	W4:903	2F92
F2:904	2C93	W4:904	2F93
F2:905	2C94	W4:905	2F94
F2:906	2C95	W4:906	2F95
F2:907	2C96	W4:907	2F96
F2:908	2C97	W4:908	2F97
F2:909	2C98	W4:909	2F98
F2:910	2C99	W4:910	2F99
F2:911	2C9A	W4:911	2F9A
F2:912	2C9B	W4:912	2F9B
F2:913	2C9C	W4:913	2F9C
F2:914	2C9D	W4:914	2F9D
F2:915	2C9E	W4:915	2F9E
F2:916	2C9F	W4:916	2F9F
F2:917	2CA0	W4:917	2FA0
F2:918	2CA1	W4:918	2FA1
F2:919	2CA2	W4:919	2FA2
F2:920	2CA3	W4:920	2FA3
F2:921	2CA4	W4:921	2FA4
F2:922	2CA5	W4:922	2FA5
F2:923	2CA6	W4:923	2FA6
F2:924	2CA7	W4:924	2FA7
F2:925	2CA8	W4:925	2FA8
F2:926	2CA9	W4:926	2FA9

F2:927	2CAA	W4:927	2FAA
F2:928	2CAB	W4:928	2FAB
F2:929	2CAC	W4:929	2FAC
F2:930	2CAD	W4:930	2FAD
F2:931	2CAE	W4:931	2FAE
F2:932	2CAF	W4:932	2FAF
F2:933	2CB0	W4:933	2FB0
F2:934	2CB1	W4:934	2FB1
F2:935	2CB2	W4:935	2FB2
F2:936	2CB3	W4:936	2FB3
F2:937	2CB4	W4:937	2FB4
F2:938	2CB5	W4:938	2FB5
F2:939	2CB6	W4:939	2FB6
F2:940	2CB7	W4:940	2FB7
F2:941	2CB8	W4:941	2FB8
F2:942	2CB9	W4:942	2FB9
F2:943	2CBA	W4:943	2FBA
F2:944	2CBB	W4:944	2FBB
F2:945	2CBC	W4:945	2FBC
F2:946	2CBD	W4:946	2FBD
F2:947	2CBE	W4:947	2FBE
F2:948	2CBF	W4:948	2FBF
F2:949	2CC0	W4:949	2FC0
F2:950	2CC1	W4:950	2FC1
F2:951	2CC2	W4:951	2FC2
F2:952	2CC3	W4:952	2FC3
F2:953	2CC4	W4:953	2FC4
F2:954	2CC5	W4:954	2FC5
F2:955	2CC6	W4:955	2FC6
F2:956	2CC7	W4:956	2FC7
F2:957	2CC8	W4:957	2FC8
F2:958	2CC9	W4:958	2FC9
F2:959	2CCA	W4:959	2FCA
F2:960	2CCB	W4:960	2FCB
F2:961	2CCC	W4:961	2FCC
F2:962	2CCD	W4:962	2FCD
F2:963	2CCE	W4:963	2FCE
F2:964	2CCF	W4:964	2FCF
F2:965	2CD0	W4:965	2FD0
F2:966	2CD1	W4:966	2FD1
F2:967	2CD2	W4:967	2FD2
F2:968	2CD3	W4:968	2FD3
F2:969	2CD4	W4:969	2FD4

F2:970	2CD5	W4:970	2FD5
F2:971	2CD6	W4:971	2FD6
F2:972	2CD7	W4:972	2FD7
F2:973	2CD8	W4:973	2FD8
F2:974	2CD9	W4:974	2FD9
F2:975	2CDA	W4:975	2FDA
F2:976	2CDB	W4:976	2FDB
F2:977	2CDC	W4:977	2FDC
F2:978	2CDD	W4:978	2FDD
F2:979	2CDE	W4:979	2FDE
F2:980	2CDF	W4:980	2FDF
F2:981	2CE0	W4:981	2FE0
F2:982	2CE1	W4:982	2FE1
F2:983	2CE2	W4:983	2FE2
F2:984	2CE3	W4:984	2FE3
F2:985	2CE4	W4:985	2FE4
F2:986	2CE5	W4:986	2FE5
F2:987	2CE6	W4:987	2FE6
F2:988	2CE7	W4:988	2FE7
F2:989	2CE8	W4:989	2FE8
F2:990	2CE9	W4:990	2FE9
F2:991	2CEA	W4:991	2FEA
F2:992	2CEB	W4:992	2FEB
F2:993	2CEC	W4:993	2FEC
F2:994	2CED	W4:994	2FED
F2:995	2CEE	W4:995	2FEE
F2:996	2CEF	W4:996	2FEF
F2:997	2CF0	W4:997	2FF0
F2:998	2CF1	W4:998	2FF1
F2:999	2CF2	W4:999	2FF2
F2:1000	2CF3	W4:1000	2FF3
F2:1001	2CF4	W4:1001	2FF4
F2:1002	2CF5	W4:1002	2FF5
F2:1003	2CF6	W4:1003	2FF6
F2:1004	2CF7	W4:1004	2FF7
F2:1005	2CF8	W4:1005	2FF8
F2:1006	2CF9	W4:1006	2FF9
F2:1007	2CFA	W4:1007	2FFA
F2:1008	2CFB	W4:1008	2FFB
F2:1009	2CFC	W4:1009	2FFC
F2:1010	2CFD	W4:1010	2FFD
F2:1011	2CFE	W4:1011	2FFE
F2:1012	2CFF	W4:1012	2FFF

F2:1013	2D00	W4:1013	3000
F2:1014	2D01	W4:1014	3001
F2:1015	2D02	W4:1015	3002
F2:1016	2D03	W4:1016	3003
F2:1017	2D04	W4:1017	3004
F2:1018	2D05	W4:1018	3005
F2:1019	2D06	W4:1019	3006
F2:1020	2D07	W4:1020	3007
F2:1021	2D08	W4:1021	3008
F2:1022	2D09	W4:1022	3009
F2:1023	2D0A	W4:1023	300A

Task 5: Pack and Unpack (New Instruction FB Addition)

This functionality is useful to use Word address as bit address**.**

Requirement:

1. Pack:

FB name – Pack

UI:

Input (0 -15) But show only one on UI and Output (1)

- Input 1 – Text (IN1)
- Input 2 – Disable
- Input 3 – Disable
- Input 4 – Disable
- Output 1 – Text (Output)
- Output 2- Disable

Validation:

- Input 1: Bool
- Output 1 : Word

C.S.V:

- Opcode: 0x0390 ... (0 is datatype)

Tag Name of Pack And Unpack FB:

- Adding tags: Default tags should appear for pack and unpack addresses.
  Eg: If user takes address F2:000 in input 1 then tag PK_1 should be assigned to that address, next address PK_2, next PK_3 and so on.
  That means PK_1 tag should come for F2:000, PK_2 should come for F2:001 and PK_15 tag should come for F2:015.
  • Add tag from PK_16 when user adds another function block for Pack FB
  Same for the unpack function block. (Tag name should be UPK_1, UPK_2).
  • The user should be able to edit the tag name of this address in the Defined Tags window.
  • Validation: An address used in this function block should also be accessible to other function blocks

- Here we use only one input and one output. When the user adds any bit address to input1 instance F2:000 so all the following F2:000 to F2:015 should be used by F2:000. So show the text in the application popup near the Input1 label that the address (“F2:000 to F2:015”).

Example As shown in below:

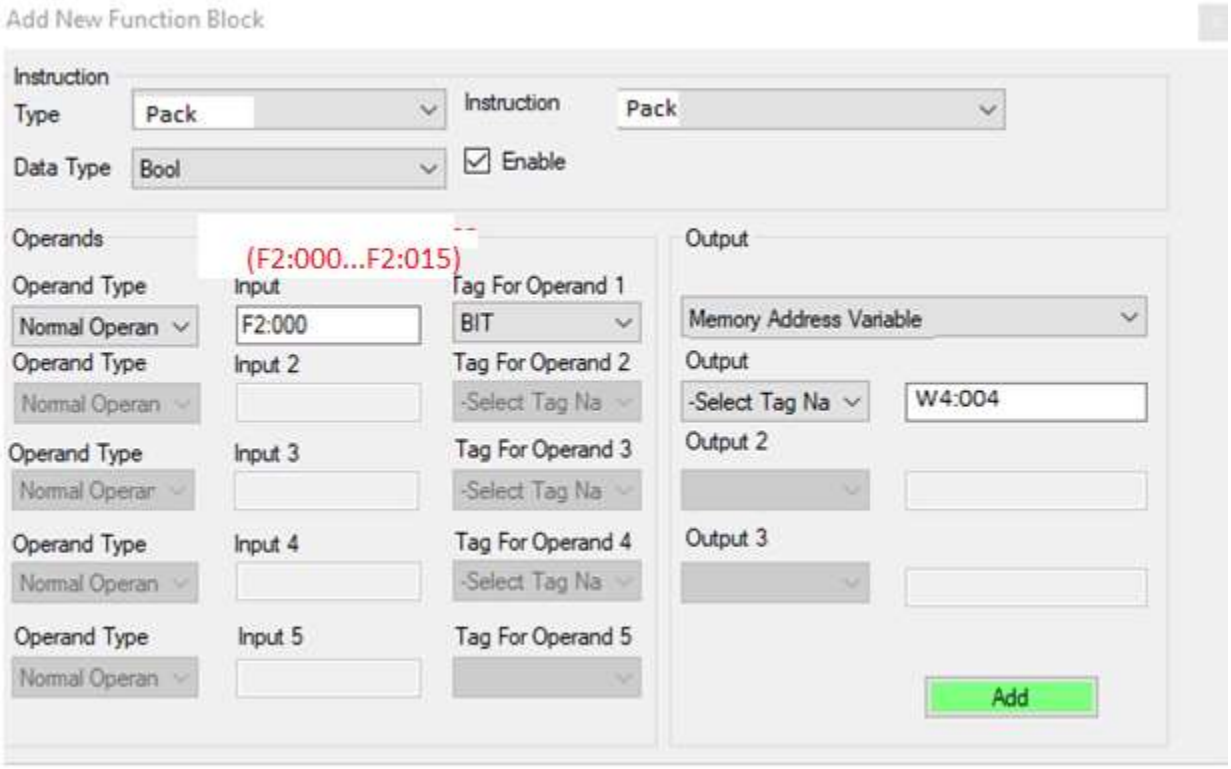


Fig 5

Tag window of Pack.

	LogicalAddress	Tag	Type	InitialValue	Retentive	RetentiveAddress	ShowLogicalAddress
▶	F2:000	PK_1	DataType-Bool		☐		☐
	F2:001	PK_2	DataType-Bool	1	☐		☐

Fig 6

We are providing two ways to specify address in function block.

1. Show Address in bracket near Tag name (F2:000 to F2:015). Example as shown in below.

Fig 7

2. Show all addresses in a tooltip when the user points the cursor over a function block. (According to our other function block's tooltip. (As per our tooltip of our other function block.)
   (IN1: F2:000: BOOL:: RET;
   IN2: F2:001: BOOL::;
   IN3: F2:002: BOOL:: RET;
   IN4: F2:003: BOOL::;
   IN5: F2:004: BOOL::;
   IN6: F2:005: BOOL::;
   IN7: F2:006: BOOL:: ;
   IN8: F2:007: BOOL: : ;
   IN9: F2:008: BOOL: : ;
   IN10: F2:009: BOOL: : ;

IN11: F2:010: BOOL: : ;
IN12: F2:011: BOOL: : ;
IN13: F2:012: BOOL: : ;
IN14: F2:013: BOOL: : ;
IN15: F2:014: BOOL : : ;
IN16: F2:015: BOOL : : ;

OP1: W4:004: WORD: : ;
)

2. Unpack:

FB name – Unpack

UI:

Input (1) and Output (0-15)

- Input 1 – Text (IN1)
- Output 1 – Text (OP1)

Validation:

- Input 1: Word
- Output 1: Bool

C.S.V:

- Opcode: 0x0402 ... (2 is datatype)

Tag Name of Unpack FB:

- Adding tags: Default tags should appear for unpack addresses.
- Eg: If user takes address F2:000 in input 1 then tag UPK_1 should be assigned to that address, next address UPK_2, next UPK_3 and so on.
- That means UPK_1 tag should come for F2:000, UPK_2 should come for F2:001 and UPK_15 tag should come for F2:015.
- Add tag from UPK_16 when user adds another function block for Pack FB
- Same for the unpack function block. (Tag name should be UPK_1, UPK_2).
- The user should be able to edit the tag name of this address in the Defined Tags window.
- Validation: An address used in this function block should also be accessible to other function blocks.

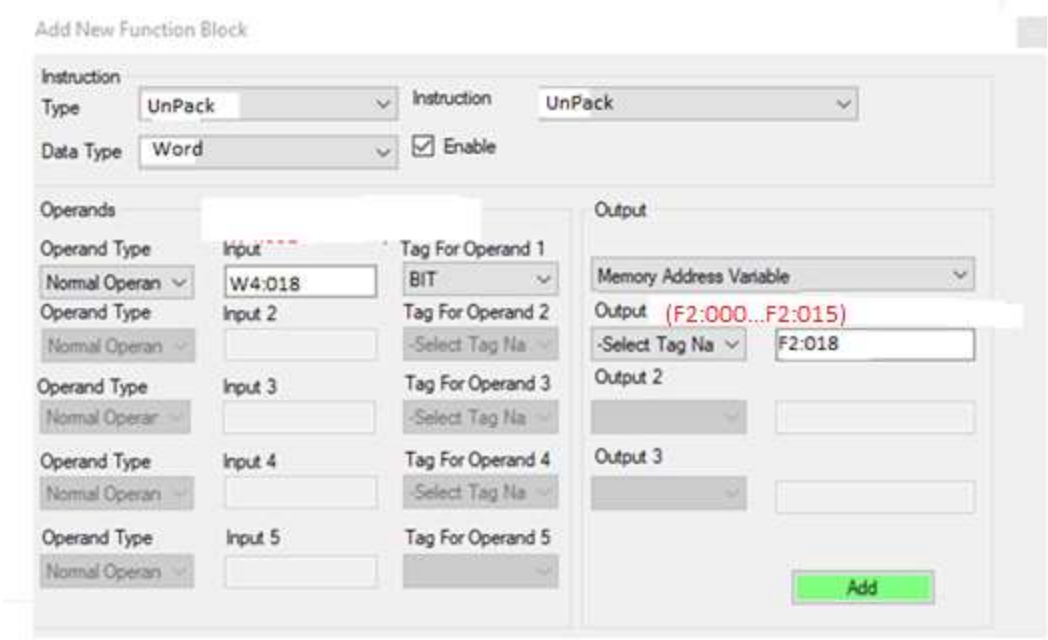


Fig 8

Tag window of UnPack.

	LogicalAddress	Tag	Type	InitialValue	Retentive	RetentiveAddress	ShowLogicalAddress
▶	F2:000	UPK_1	DataType-Bool		☐		☐
	F2:001	UPK_2	DataType-Bool	1	☐		☐

Fig 9

We are providing two ways to specify address in function block.

1. Show Address in bracket near Tag name (F2:000 … F2:015). Example as shown in below.

Fig 10

2. Show all address in Tooltip when user moves cursor on function block.
   Example:
   (IN1: W4:004: WORD: : ;
   OP1: F2:018: BOOL: RET;
   OP2: F2:019: BOOL::;
   OP3: F2:020: BOOL:: RET;
   OP 4: F2:021: BOOL::;
   OP5: F2:022: BOOL::;
   OP6: F2:023: BOOL::;
   OP7: F2:024: BOOL:: ;
   OP8: F2:025: BOOL: : ;
   OP9: F2:026: BOOL: : ;
   OP10: F2:027: BOOL: : ;
   OP11: F2:028: BOOL: : ;
   OP12: F2:029: BOOL: : ;
   OP13: F2:030: BOOL: : ;
   OP14: F2:031: BOOL: : ;
   OP15: F2:032: BOOL : : ;
   OP16: F2:033: BOOL: : ;
)

Task 6: Exponential (New Instruction FB Addition)

This functionality is useful to find exponential of input given by user. (i.e.: e raised to the power of INPUT 1)

Requirement:

Add this function Block under Arithmetic Instruction List.

1. EXP:

FB name – EXP

UI:

- Input 1 – Text (IN1)
- Input 2 – Disable
- Input 3 – Disable
- Input 4 – Disable
- Output 1 – Text (Output)
- Output 2- Disable

Validation:

- Input 1: Byte , Word , Double Word ,Int , Real
- Output 1 : Real

C.S.V:

- Opcode: 038x ... (x is datatype)

Fig 11

Task 7: XMPS-2000 & PLC Synchronization

- **Login Frame from XMPS2000-**

When user click on Login button send login frame.

Wait for acknowledge frame, then go for Download/Login as per all acknowledge.

8-Bit	16-Bit	8-Bit	8-Bit	8-Bit
SOF	Program CRC	PLC module type	CRC	EOF

- **Acknowledgment from XMPro10**

8-Bit	8-Bit	8-Bit	8-Bit	8-Bit	8-Bit	8-Bit	8-Bit	8-Bit
SOF	Program CRC ack.	PLC Mode ack.	Expansion module mismatch error ack.	Expansion module Id not set ack.	Expansion AI_AO or UI_UO mode not set ack	PLC module type ack.	CRC	EOF

Example of Login & acknowledge frame-

Login frame

0XDB	0X00ED	0X0	CRC	0XDA

Response frame

0XDB	0X00	0X00	0X00	0X0A	0X02	0X00	CRC	0XDA

SOF- 0XDB

Program CRC - (response frame)

Calculate CRC of program.

Attach CRC in Ccode text file.

If CRC match -0

CRC match error-1

Action taken: - As per Acknowledgement response Update and show status of PLC in UI.

Error status acknowledgement--

Error status	No error	Error
Expansion module mismatch error.	**0**	**1**
Expansion module Id not set.	**A**	**Send module number 0-6**
Expansion module AI_AO or UI_UO mode not set.	**A**	**Send module number 0-6**

Error Show message-

1) Expansion module mismatch error.

If sequence of expansion module is incorrect then show this error.

2) If Expansion module mode (AI &AO & Id not set) - Action taken: -show message **"Error".** with "Reconnect" button, If user click on Reconnect button send PLC reconnect frame.

SOF	PLC restart Command		EOF
0XFD	**0X03**	**CRC**	**0XFB**

PLC Module type-

XM14DT – 0

XM17ADT - 1

XM-14DT-HIO-2

For error Show message-PLC module type mismatch.

CRC- Frame CRC

SOF- 0XDA

Task 8: High Speed Input & Output (New Product Addition)

This functionality is useful to use only High Speed Input (HIS) and High Speed Output HSO**.**

Requirement:

8.0 New Project Details Window

Requirement

1. Add a new model to the Select PLC Model dropdown list when creating a new project.
Example: The New Select PLC Model dropdown list should look like this

- **XM-14DT**
- **XM-17ADT**
- **XM-14DT-HIO**

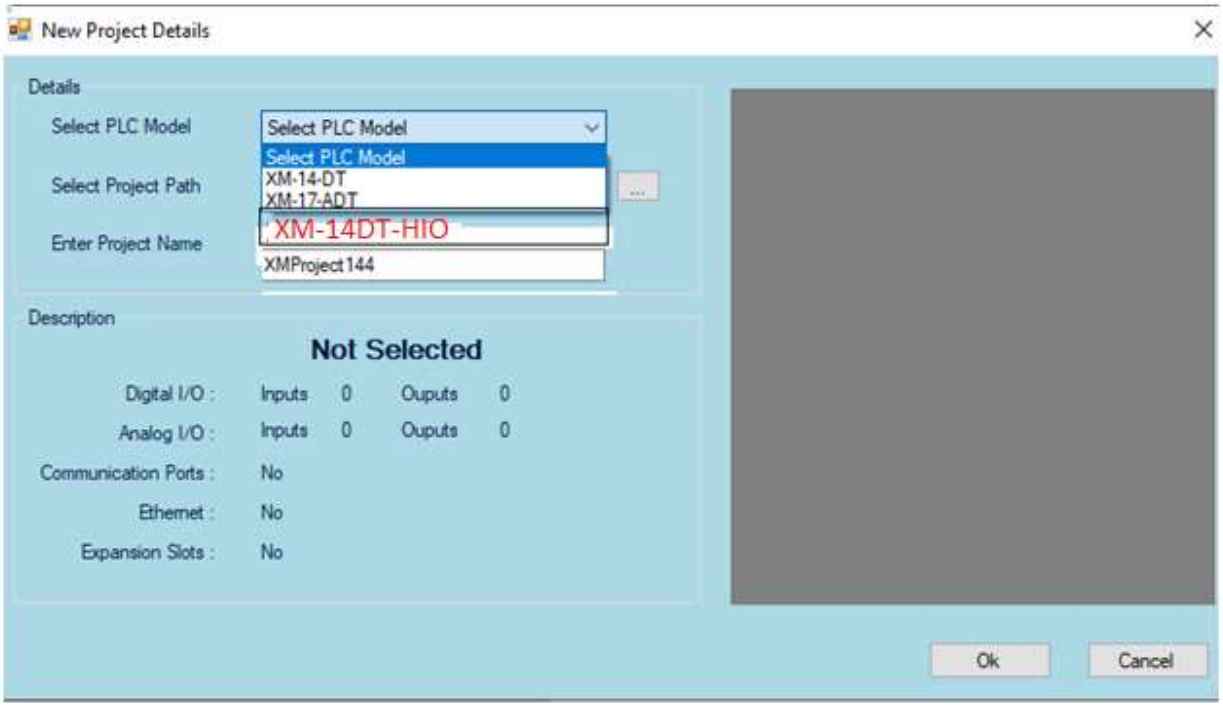


Fig 12

8.1 IO Configuration:

Requirement:

8.1.1 Mode Requirement:

1. In IO configuration, only base IO is required for high speed input and output.
2. From base IO we need first four digital inputs and first two digital outputs for HSIO.
   I.e. (Input: I1:000.00, I1:000.01, I1:000.02, I1:000.03 And
   Output: Q0:000.00, Q0:000.01)

Model	Label	LogicalAddress	Tag	IoList	Type	InitialValue	Retentive	RetentiveAddress	ShowLogicalAddress	Mode
XM-14-DT	DI0	I1:000.00	DigitalInput_DI0	OnBoardIO	DigitalInput		☐		☐	
XM-14-DT	DI1	I1:000.01	DigitalInput_DI1	OnBoardIO	DigitalInput		☐		☐	
XM-14-DT	DI2	I1:000.02	DigitalInput_DI2	OnBoardIO	DigitalInput		☐		☐	
XM-14-DT	DI3	I1:000.03	DigitalInput_DI3	OnBoardIO	DigitalInput		☐		☐	
XM-14-DT	DI4	I1:000.04	DigitalInput_DI4	OnBoardIO	DigitalInput		☐		☐	
XM-14-DT	DI5	I1:000.05	DigitalInput_DI5	OnBoardIO	DigitalInput		☐		☐	
XM-14-DT	DI6	I1:000.06	DigitalInput_DI6	OnBoardIO	DigitalInput		☐		☐	
XM-14-DT	DI7	I1:000.07	DigitalInput_DI7	OnBoardIO	DigitalInput		☐		☐	
XM-14-DT	DO0	Q0:000.00	DigitalOutput_DO0	OnBoardIO	DigitalOutput		☐		☐	
XM-14-DT	DO1	Q0:000.01	DigitalOutput_DO1	OnBoardIO	DigitalOutput		☐		☐	
XM-14-DT	DO2	Q0:000.02	DigitalOutput_DO2	OnBoardIO	DigitalOutput		☐		☐	
XM-14-DT	DO3	Q0:000.03	DigitalOutput_DO3	OnBoardIO	DigitalOutput		☐		☐	
XM-14-DT	DO4	Q0:000.04	DigitalOutput_DO4	OnBoardIO	DigitalOutput		☐		☐	
XM-14-DT	DO5	Q0:000.05	DigitalOutput_DO5	OnBoardIO	DigitalOutput		☐		☐	

Fig 13

Input Mode:

1. This Mode is applicable to only first four Digital input and first two digital output from Base IO's.
2. Add following mode in Mode dropdown :

A. DI0 (I1:000.00):

1. Up
2. Down
3. Up/Down Direction (A count, B-direction)
4. Quadrature 2x Encoder
5. Quadrature 4x Encoder
6. Interrupt
7. Digital Input

B. DI1 (I1:000.01):

1. Up
2. Down
3. Digital Input

C. DI2 (I1:000.02):

1. Up
2. Down
3. Up/Down Direction (A, B-direction)
4. Quadrature 2x Encoder

5. Quadrature 4x Encoder
6. Interrupt
7. Digital Input

D. DI3 (I1:000.03):

1. Up
2. Down
3. Digital Input

3. The default mode should be "Digital Input" when no mode is selected".
4. If the user selects "Up/Down Direction Mode" in DI0, display the text **up/Down – A Count** in the first DIO mode and **Up/Down-B Direction** for DI1. And this DI1 (I1:000.01) mode should be **disabled** with text **up/down - B direction.**
   (I.e. Mode of DI1 should be auto fill as per selection in mode of DI0. (When mod is UP/Down Direction, Quadrature 2x Encoder and Quadrature 4x encoder)

Example: As shown in below image.

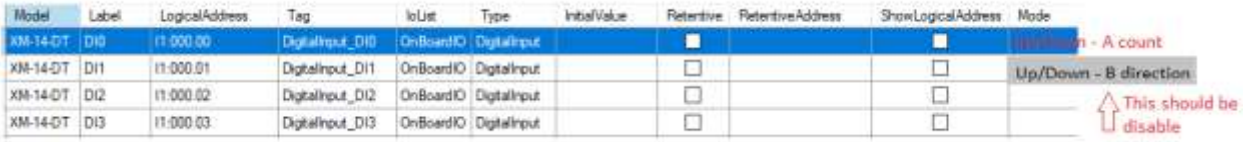


Fig 14

5. If the user selects "Quadrature **2x Encoder**" in DI0, display the text **Quadrature 2x Encoder** – A Count in the first DIO mode and Quadrature 2x Encoder – B direction for DI1. And this DI1 (I1:000.01) mode should disable with **text Quadrature 2x Encoder.**
6. Same for "Quadrature 4x Encoder "as per Quadrature 2x Encoder (As per point no 5).

Output Mode: This Mode is applicable to only first two digital output.

1. Add following mode in Mode dropdown :
   A. DO0 (Q0:000.00):
      1. PTO
      2. Interrupt Output
      3. Digital Output

   B. DO1 (Q0:000.01):
      1. PTO
      2. Interrupt Output
      3. Digital Output.

2. The mode is only applicable for this IO. The mode does not apply to IOs other than this IO.
3. The default mode should be "Digital Output" when no mode is selected".
4. This mode is not applicable for expansion and remote IO.
5. Keep the data in this base IO configuration tab as is. Only the type should be according to the selected mode. (The selected mode should be displayed in the Type column.)

8.1.2 Left Panel: Add a subfolder under Base IO Configuration. As shown in the figure below.

This HSIO configuration should only appear when the model is XM-14DT-HIO.

- HSIO Configuration

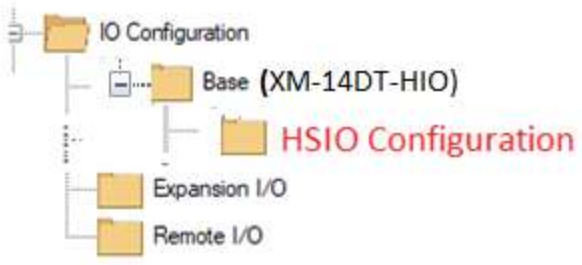


Fig 15

1. Create a tab/window for HSIO configuration. When the user clicks on HSIO from the Left panel, the corresponding window should open.

8.1.3 HSIO Configuration Window:

1. This window should have two sections/screens. One for input and another for output. As shown below.
2. After clicking on input, an input screen with four function blocks should open and after clicking on output, a screen corresponding to output with two functions should open.
3. Please check next point for details of function block.

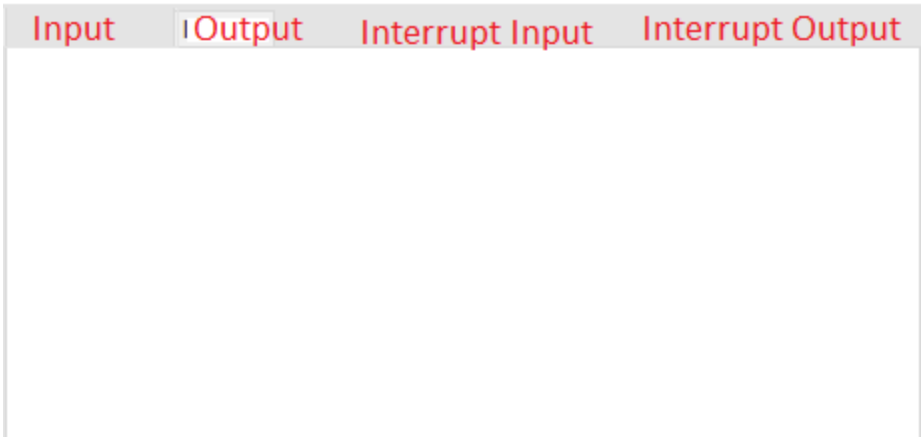


Fig 16

Input Screen: When the user opens this screen, the following function block should appear on the screen.

1. **FB name – HSI-1**

UI:

- Input 1 : Enable (bit)
- Input 2 : Input (bit)

- Input 3 : Stop (bit)
- Input 4 : Reset (bit
- Input 5 : Load (bit)
- Input 6 : Preset (DINT)
- Input 7 : Compare (DINT)
- Input 8 : Compare High (DINT)
- Input 9 : Compare Low (DINT)
- Output 1 : Direction (bit)
- Output 1 : Mode (Byte)
- Output 3 : Counter Val (Dint)
- Output 4 : EQ Compare (bit)
- Output 5 : LT Compare(bit)
- Output 6 : GT Compare(bit)
- Output 7 : Overflow bit
- Output 8 : Error(byte)

Validation:

- Input 1 bit
- Input 2 : bit
- Input 3 : bit
- Input 4 : bit
- Input 5 : bit
- Input 6 : DINT
- Input 7 : DINT
- Input 8 : DINT
- Input 9 : DINT
- Output 1 : bit
- Output 2 : Byte
- Output 3 : Dint
- Output 4 : bit
- Output 5 : bit
- Output 6 : bit
- Output 7 : bit
- Output 8 : byte

The final form of the function block should be:

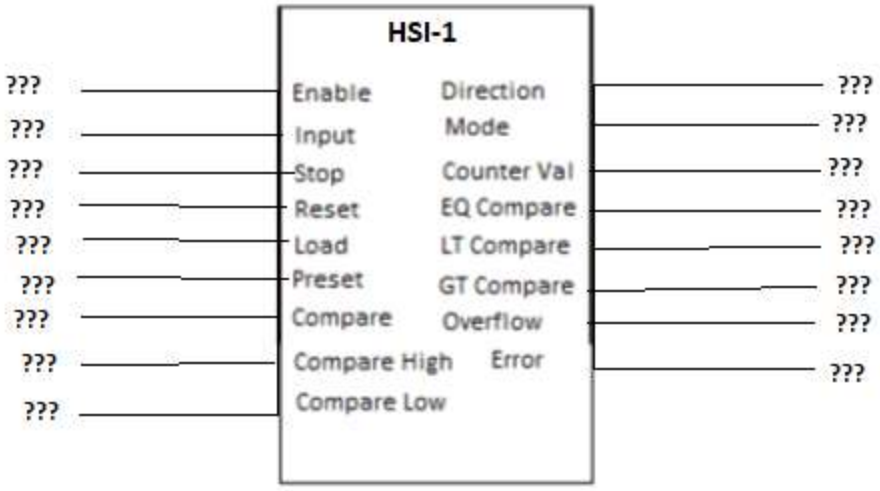


Fig 17

2. FB name – HSI-2

UI:

- Input 1 : Enable (bit)
- Input 2 : Input (bit)
- Input 3 : Stop (bit)
- Input 4 : Reset (bit
- Input 5 : Load (bit)
- Input 6 : Preset (DINT)
- Input 7 : Compare (DINT)
- Input 8 : Compare High (DINT)
- Input 9 : Compare Low (DINT)
- Output 1 : Direction (bit)
- Output 1 : Mode (Byte)
- Output 3 : Counter Val (Dint)
- Output 4 : EQ Compare (bit)
- Output 5 : LT Compare(bit)
- Output 6 : GT Compare(bit)
- Output 7 : Overflow bit

- Output 8 : Error(byte)

Validation:

- Input 1 bit
- Input 2 : bit
- Input 3 : bit
- Input 4 : bit
- Input 5 : bit
- Input 6 : DINT
- Input 7 : DINT
- Input 8 : DINT
- Input 9 : DINT
- Output 1 : bit
- Output 2 : Byte
- Output 3 : Dint
- Output 4 : bit
- Output 5 : bit
- Output 6 : bit
- Output 7 : bit
- Output 8 : byte

The final look of the function block should be:

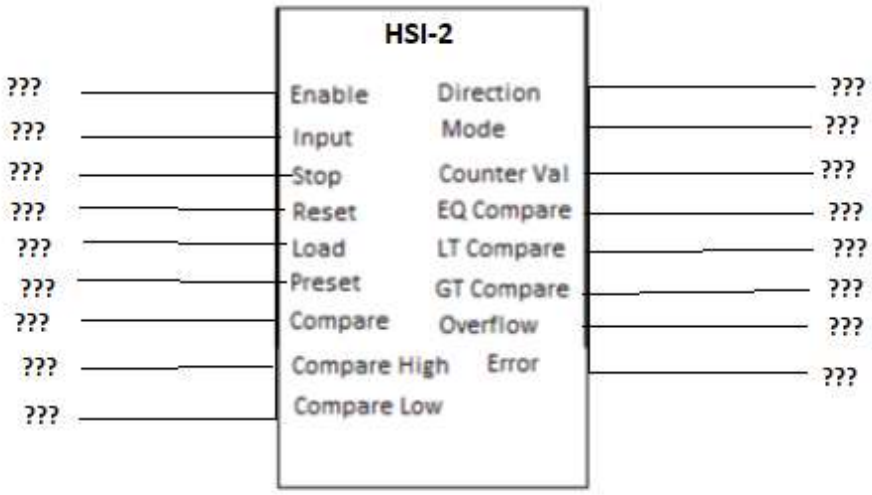


Fig 18

2. FB name – HSI-3

UI:

- Input 1 : Enable (bit)
- Input 2 : Input (bit)
- Input 3 : Stop (bit)
- Input 4 : Reset (bit
- Input 5 : Load (bit)
- Input 6 : Preset (DINT)
- Input 7 : Compare (DINT)
- Input 8 : Compare High (DINT)
- Input 9 : Compare Low (DINT)
- Output 1 : Direction (bit)
- Output 1 : Mode (Byte)
- Output 3 : Counter Val (Dint)
- Output 4 : EQ Compare (bit)
- Output 5 : LT Compare(bit)
- Output 6 : GT Compare(bit)
- Output 7 : Overflow bit
- Output 8 : Error(byte)

Validation:

- Input 1 bit
- Input 2 : bit
- Input 3 : bit
- Input 4 : bit
- Input 5 : bit
- Input 6 : DINT
- Input 7 : DINT
- Input 8 : DINT
- Input 9 : DINT
- Output 1 : bit
- Output 2 : Byte
- Output 3 : Dint

- Output 4 : bit
- Output 5 : bit
- Output 6 : bit
- Output 7 : bit
- Output 8 : byte

The final look of the function block should be:

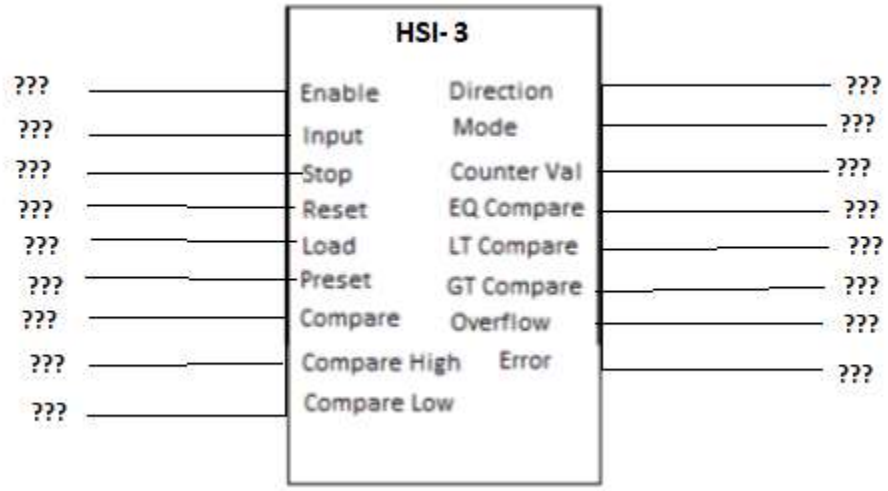


Fig 19

2. FB name – HSI-4

UI:

- Input 1 : Enable (bit)
- Input 2 : Input (bit)
- Input 3 : Stop (bit)
- Input 4 : Reset (bit
- Input 5 : Load (bit)
- Input 6 : Preset (DINT)
- Input 7 : Compare (DINT)
- Input 8 : Compare High (DINT)
- Input 9 : Compare Low (DINT)
- Output 1 : Direction (bit)

- Output 1 : Mode (Byte)
- Output 3 : Counter Val (Dint)
- Output 4 : EQ Compare (bit)
- Output 5 : LT Compare(bit)
- Output 6 : GT Compare(bit)
- Output 7 : Overflow bit
- Output 8 : Error(byte)

Validation:

- Input 1 bit
- Input 2 : bit
- Input 3 : bit
- Input 4 : bit
- Input 5 : bit
- Input 6 : DINT
- Input 7 : DINT
- Input 8 : DINT
- Input 9 : DINT
- Output 1 : bit
- Output 2 : Byte
- Output 3 : Dint
- Output 4 : bit
- Output 5 : bit
- Output 6 : bit
- Output 7 : bit
- Output 8 : byte

The final look of the function block should be:

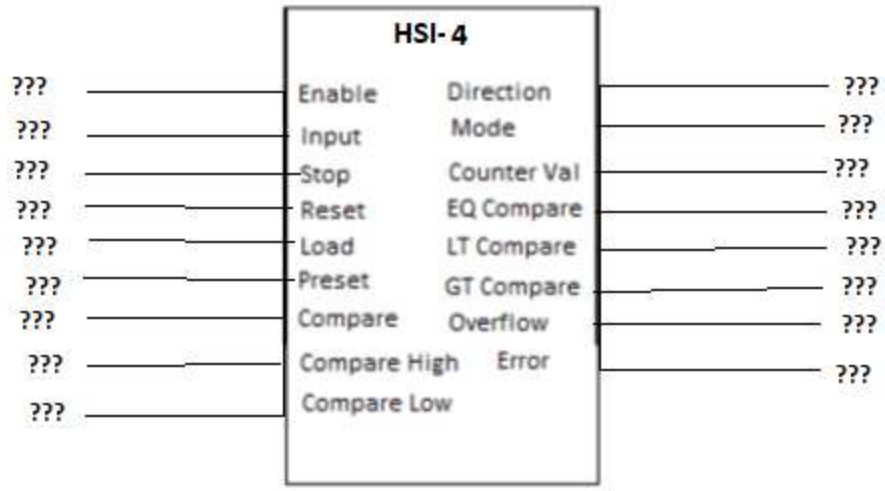


Fig 20

The final look of the function block (Input Screen) should be: (HSIO Configuration Window)

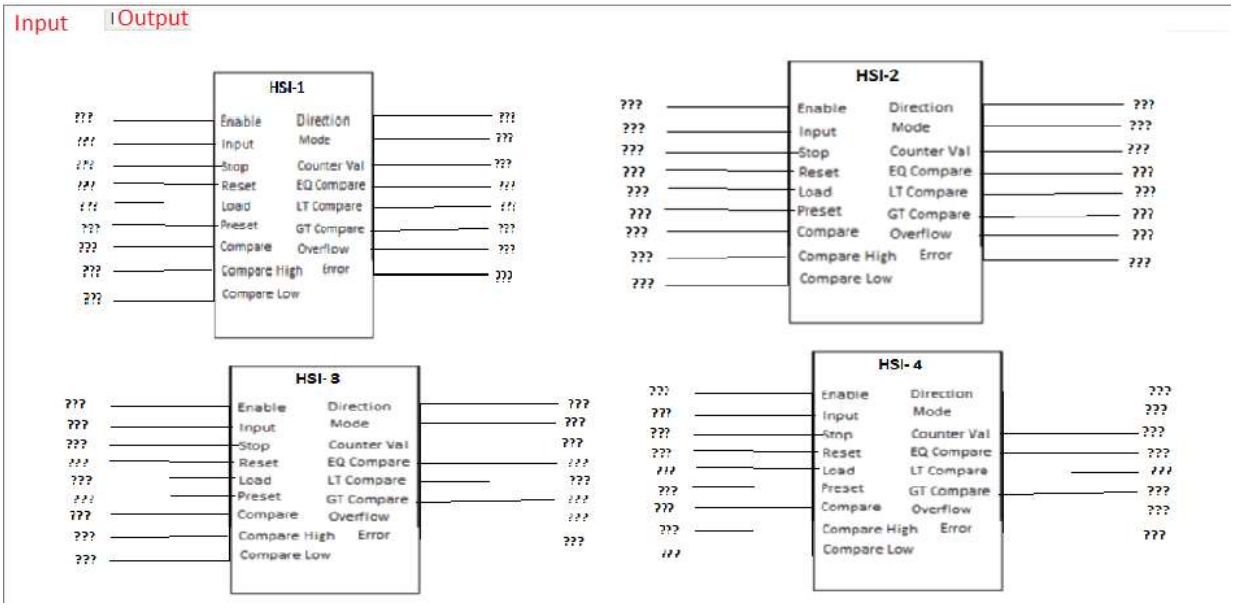


Fig 21

Validation:

- Compare High input is always greater than **compare**
- Compare Low input is always less than **compare.**

Output Screen: When user Open this screen, following function block should appear on screen.

1. **FB name – HSO-1**

UI:

- Input 1 : Enable (bit)
- Input 2 : Output (udint)
- Input 3 : Start (bit)
- Input 4 : Stop (bit)
- Input 5 : Slow (bit)
- Input 6 : Start freq. (Udint)
- Input 7 : Stop freq. (Udint)
- Input 8 : Slow freq. (Udint
- Input 9 : Max freq. (Udint)
- Input 10 : Start Pulse (Udint)
- Input 11 : Stop Pulse (Udint)
- Input 12 : Slow Pulse (Udint)
- Input 13 : Total Pulses (Udint)
- Output 1 : Pulse counter(Udint)
- Output 2 : Error (byte)
- Output 3 : Done (bit)

Validation:

- Input 1 :bit
- Input 2 : udint
- Input 3 : bit
- Input 4 : bit
- Input 5 : bit
- Input 6 : Udint
- Input 7 : Udint
- Input 8 : Udint

- Input 9 : Udint
- Input 10 : Udint
- Input 11 : Udint
- Input 12 : Udint
- Input 13 : Udint
- Output 1 : Udint
- Output 2 : byte
- Output 3: bit

Final look of function block should be like this:

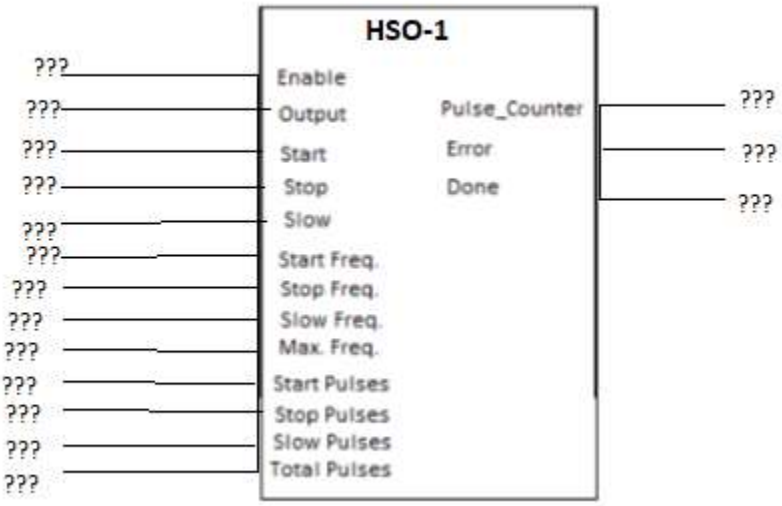


Fig 22

2. **FB name – HSO-2**

UI:

- Input 1 : Enable (bit)
- Input 2 : Output (udint)
- Input 3 : Start (bit)
- Input 4 : Stop (bit)
- Input 5 : Slow (bit)
- Input 6 : Start freq. (Udint)
- Input 7 : Stop freq. (Udint)

- Input 8 : Slow freq. (Udint
- Input 9 : Max freq. (Udint)
- Input 10 : Start Pulse (Udint)
- Input 11 : Stop Pulse (Udint)
- Input 12 : Slow Pulse (Udint)
- Input 13 : Total Pulses (Udint)
- Output 1 : Pulse counter(Udint)
- Output 2 : Error (byte)
- Output 3 : Done (bit)

Validation:

- Input 1 :bit
- Input 2 : udint
- Input 3 : bit
- Input 4 : bit
- Input 5 : bit
- Input 6 : Udint
- Input 7 : Udint
- Input 8 : Udint
- Input 9 : Udint
- Input 10 : Udint
- Input 11 : Udint
- Input 12 : Udint
- Input 13 : Udint
- Output 1 : Udint
- Output 2 : byte
- Output 3: bit

Final look of function block should be like this:

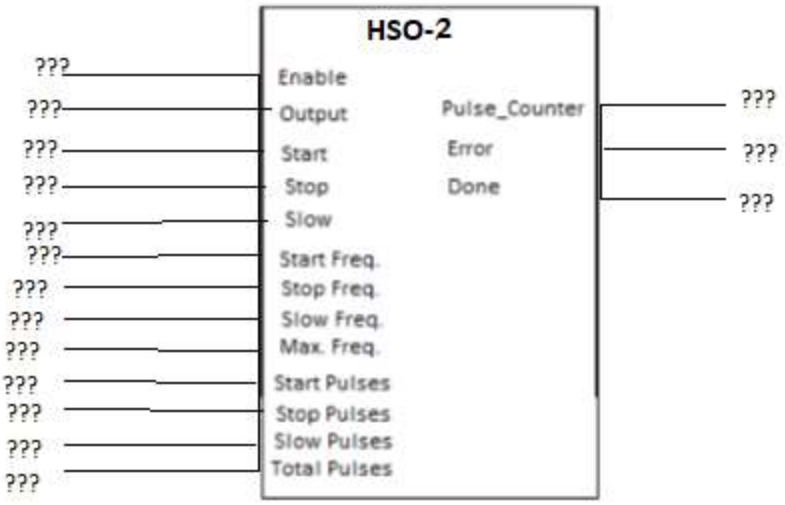


Fig 23

Final Look of Output screen (HSIO Configuration Window) :

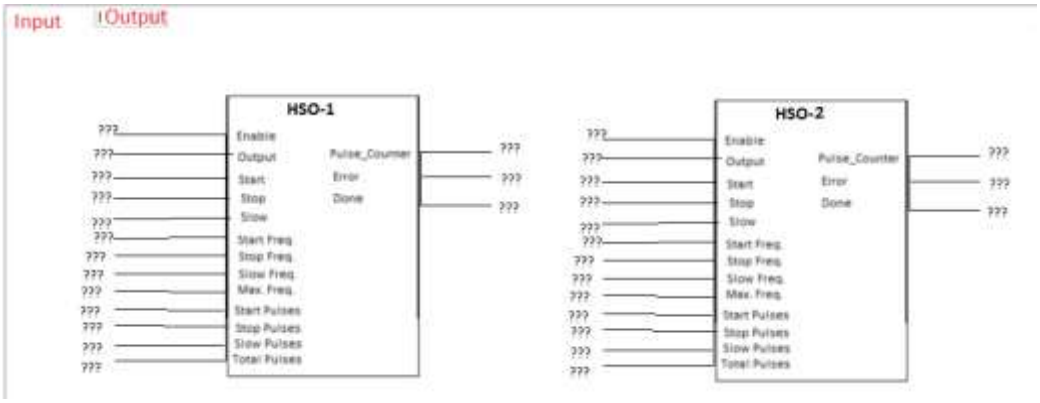


Fig 24

Validation:

- Sum of start pulse, stop pulse, slow pulse should always be less than or equal to total pulses.

8.1.4 Add Tag (HSIO Configuration Window):

1. When the user clicked on "???", a popup should open to add a tag.
2. Popup for define Tag should be like this:

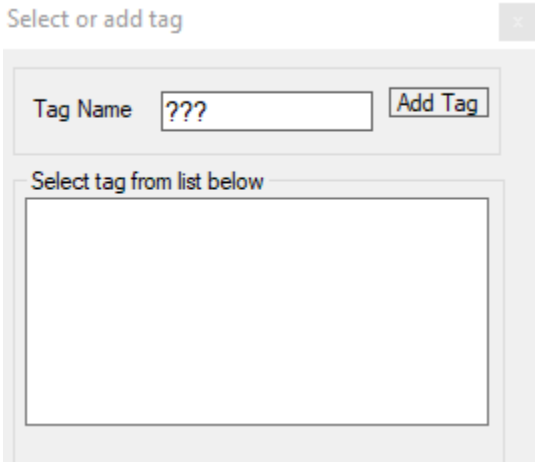


Fig 25

3. Validation :
    - Add Tag as per datatype.
    - Don't show a compiler error if the user doesn't fill in any input. (All inputs are not required to be filled in.)

CCODE for XM-14DT-HIO

Byte no.	Data	Comment	Data Size
0	#	SOF	1 Byte
	!a (8545 Decimal)	CRC	2 Byte
		CRC	2 Byte
1	!A (8513 Decimal)	Com settings	2 Byte
2	0 to 4	Baudrate	1 Byte
3	0 to 3	parity	1 Byte
4	0-65535	Communication timeout	2 Byte
5			

6	0-9	No. of retries	1 Byte
7	6-8	Data length	1 Byte
8	1-2	Stop bit	1 Byte
9	0-65535	Send delay	2 Byte
10			
11	3.5-100	Min. Interface	1 Byte
12	!B (8514 Decimal)	Ethernet settings	2 Byte
13	0 /1	use dhcp /static	1 Byte
14	0-255	IP address 1st byte	1 Byte
15	0-255	IP address 2nd byte	1 Byte
16	0-255	IP address 3rd byte	1 Byte
17	0-255	IP address 4th byte	1 Byte
18	0-255	Subnet 1st byte	1 Byte
19	0-255	Subnet 2nd byte	1 Byte
20	0-255	Subnet 3rd byte	1 Byte
21	0-255	Subnet 4th byte	1 Byte
22	0-255	Gateway 1st byte	1 Byte
23	0-255	Gateway 2nd byte	1 Byte
24	0-255	Gateway 3rd byte	1 Byte
25	0-255	Gateway 4th byte	1 Byte
26	2	port no	2 Byte
27			
28	!C(8515 Decimal)	nEthernet settings	2 Byte
29	0 /1	use dhcp /static	1 Byte
30	0-255	IP address 1st byte	1 Byte
31	0-255	IP address 2nd byte	1 Byte
32	0-255	IP address 3rd byte	1 Byte
33	0-255	IP address 4th byte	1 Byte
34	0-255	Subnet 1st byte	1 Byte
35	0-255	Subnet 2nd byte	1 Byte
36	0-255	Subnet 3rd byte	1 Byte
37	0-255	Subnet 4th byte	1 Byte
38	0-255	Gateway 1st byte	1 Byte
39	0-255	Gateway 2nd byte	1 Byte
40	0-255	Gateway 3rd byte	1 Byte
41	0-255	Gateway 4th byte	1 Byte
42	0	port no	2 Byte
43			
44	!D(8516 Decimal)	PLC model	2 Byte
45	1 , 2 ,3	XM-14DT/XM-17-ADT/XM-14DT-HIO	1 Byte
46	!E (8517 Decimal)	Remote IO Configuration	2 Byte

47	0-66/63	No. of Remote_DI	1 Byte
48	0-66/63	No. of Remote_DO	1 Byte
49	63	No. of Remote_AI	1 Byte
50	63	No. of Remote_AO	1 Byte
51		No. of Universal I/P	1 Byte
52		No. of Universal O/P	1 Byte
53	!F (8518 Decimal)	PLC on board IO Configuration	2 Byte
54	8	No. of onboard DI	1 Byte
55	6	No. of onboard DO	1 Byte
56	0/2	No. of onboard AI	1 Byte
57	0/1	No. of onboard AO	1 Byte
58	0 to 3	AI1 mode	1 Byte
59	0 to 3	AI2 mode	1 Byte
60	0 to 3	AO1 mode	1 Byte
61	1 to 7	HSI-1 Mode	1 Byte
62	1 to 3	HSI-2 Mode	1 Byte
63	1 to 7	HSI-3 Mode	1 Byte
64	1 to 3	HSI-4 Mode	1 Byte
65	1 to 3	HSO-1 Mode	1 Byte
66	1 to 3	HSO-2Mode	1 Byte
	!G (8519 Decimal)	XM 14DT HIO	2 Byte
	1F	HSI1-CODE	1 Byte
	decimal value-10 digit	Address 1-9 operand type	4 Byte
	decimal value-10 digit	Address 10-17 operand type	4 Byte
	Address in decimal	Address-1	4 Byte
	Address in decimal	Address-2	4 Byte
	Address in decimal	Address-3	4 Byte
	Address in decimal	Address-4	4 Byte
	Address in decimal	Address-5	4 Byte
	Address in decimal	Address-6	4 Byte
	Address in decimal	Address-7	4 Byte
	Address in decimal	Address-8	4 Byte
	Address in decimal	Address-9	4 Byte
	Address in decimal	Address-10	4 Byte
	Address in decimal	Address-11	4 Byte
	Address in decimal	Address-12	4 Byte
	Address in decimal	Address-13	4 Byte
	Address in decimal	Address-14	4 Byte
	Address in decimal	Address-15	4 Byte
	Address in decimal	Address-16	4 Byte

	Address in decimal	Address-17	4 Byte
	2F	HSI2-CODE	1 Byte
	decimal value-10 digit	Address 1-9 operand type	4 Byte
	decimal value-10 digit	Address 10-17 operand type	4 Byte
	Address in decimal	Address-1	4 Byte
	Address in decimal	Address-2	4 Byte
	Address in decimal	Address-3	4 Byte
	Address in decimal	Address-4	4 Byte
	Address in decimal	Address-5	4 Byte
	Address in decimal	Address-6	4 Byte
	Address in decimal	Address-7	4 Byte
	Address in decimal	Address-8	4 Byte
	Address in decimal	Address-9	4 Byte
	Address in decimal	Address-10	4 Byte
	Address in decimal	Address-11	4 Byte
	Address in decimal	Address-12	4 Byte
	Address in decimal	Address-13	4 Byte
	Address in decimal	Address-14	4 Byte
	Address in decimal	Address-15	4 Byte
	Address in decimal	Address-16	4 Byte
	Address in decimal	Address-17	4 Byte
	3F	HSI3-CODE	1 Byte
	decimal value-10 digit	Address 1-9 operand type	4 Byte
	decimal value-10 digit	Address 10-17 operand type	4 Byte
	Address in decimal	Address-1	4 Byte
	Address in decimal	Address-2	4 Byte
	Address in decimal	Address-3	4 Byte
	Address in decimal	Address-4	4 Byte
	Address in decimal	Address-5	4 Byte
	Address in decimal	Address-6	4 Byte
	Address in decimal	Address-7	4 Byte
	Address in decimal	Address-8	4 Byte
	Address in decimal	Address-9	4 Byte
	Address in decimal	Address-10	4 Byte
	Address in decimal	Address-11	4 Byte
	Address in decimal	Address-12	4 Byte
	Address in decimal	Address-13	4 Byte
	Address in decimal	Address-14	4 Byte

	Address in decimal	Address-15	4 Byte
	Address in decimal	Address-16	4 Byte
	Address in decimal	Address-17	4 Byte
	4F	HSI4-CODE	1 Byte
	decimal value-10 digit	Address 1-9 operand type	4 Byte
	decimal value-10 digit	Address 10-17 operand type	4 Byte
	Address in decimal	Address-1	4 Byte
	Address in decimal	Address-2	4 Byte
	Address in decimal	Address-3	4 Byte
	Address in decimal	Address-4	4 Byte
	Address in decimal	Address-5	4 Byte
	Address in decimal	Address-6	4 Byte
	Address in decimal	Address-7	4 Byte
	Address in decimal	Address-8	4 Byte
	Address in decimal	Address-9	4 Byte
	Address in decimal	Address-10	4 Byte
	Address in decimal	Address-11	4 Byte
	Address in decimal	Address-12	4 Byte
	Address in decimal	Address-13	4 Byte
	Address in decimal	Address-14	4 Byte
	Address in decimal	Address-15	4 Byte
	Address in decimal	Address-16	4 Byte
	Address in decimal	Address-17	4 Byte
	5F	HS01-CODE	1 Byte
	decimal value-10 digit	Address 1-9 operand type	4 Byte
	decimal value-10 digit	Address 10-16 operand type	4 Byte
	Address in decimal	Address-1	4 Byte
	Address in decimal	Address-2	4 Byte
	Address in decimal	Address-3	4 Byte
	Address in decimal	Address-4	4 Byte
	Address in decimal	Address-5	4 Byte
	Address in decimal	Address-6	4 Byte
	Address in decimal	Address-7	4 Byte
	Address in decimal	Address-8	4 Byte
	Address in decimal	Address-9	4 Byte
	Address in decimal	Address-10	4 Byte
	Address in decimal	Address-11	4 Byte
	Address in decimal	Address-12	4 Byte

	Address in decimal	Address-13	4 Byte
	Address in decimal	Address-14	4 Byte
	Address in decimal	Address-15	4 Byte
	Address in decimal	Address-16	4 Byte
	6F	HS02-CODE	1 Byte
	decimal value-10 digit	Address 1-9 operand type	4 Byte
	decimal value-10 digit	Address 10-16 operand type	4 Byte
	Address in decimal	Address-1	4 Byte
	Address in decimal	Address-2	4 Byte
	Address in decimal	Address-3	4 Byte
	Address in decimal	Address-4	4 Byte
	Address in decimal	Address-5	4 Byte
	Address in decimal	Address-6	4 Byte
	Address in decimal	Address-7	4 Byte
	Address in decimal	Address-8	4 Byte
	Address in decimal	Address-9	4 Byte
	Address in decimal	Address-10	4 Byte
	Address in decimal	Address-11	4 Byte
	Address in decimal	Address-12	4 Byte
	Address in decimal	Address-13	4 Byte
	Address in decimal	Address-14	4 Byte
	Address in decimal	Address-15	4 Byte
	Address in decimal	Address-16	4 Byte
67	!H (8520 Decimal)	Modbus RTU	2 Byte
68	0-99	No. of RTU request	1 Byte
69	0-255	Slave_ID_0	1 Byte
70	0-3600000	Polling_0	4 Byte
71			
72			
73			
74	Address in Decimal	Variable_0	4 Byte
75			
76			
77			
78	1-16	Function Code_0	1 Byte
79	0-65535	Address_0	2Byte
80			
81	0-255	Length_0	1 Byte
82	Address in Decimal	Disabling Variable_0	4 Byte
83			

84			
85			
86	0-255	Slave_ID_1	1 Byte
87	0-3600000	Polling_1	4 Byte
88			
89			
90			
91	Address in Decimal	Variable_1	4 Byte
92			
93			
94			
95	1-16	Function Code_1	1 Byte
96	0-65535	Address_1	2Byte
97			
98	0-255	Length_1	1 Byte
99	Address in Decimal	Disabling Variable_1	4 Byte
100			
101			
102			
103	.....	.....	.....
104	0-255	Slave_ID_99	1 Byte
105	0-3600000	Polling_99	4 Byte
106			
107			
108			
109	Address in Decimal	Variable_99	4 Byte
110			
111			
112			
113	1-16	Function Code_99	1 Byte
114	0-65535	Address_99	2Byte
115			
116	0-255	Length_99	1 Byte
117	Address in Decimal	Disabling Variable_99	4 Byte
118			
119			
120			

8.1.5 Addition of new Datatype

1. DINT (RANGE : -2,147,483,648 TO + 2,147,483,647)
2. UDINT (RANGE : 0 TO +4294967295)
3. DINT and UDINT Datatype is applicable to HSIO Function Block, Arithmetic and Compare Function block**.**

8.1.6 Interrupt Block :

Requirement :

1. Add the Interrupt Logic Blocks folder under main in the project tree (left panel). As shown in the figure below

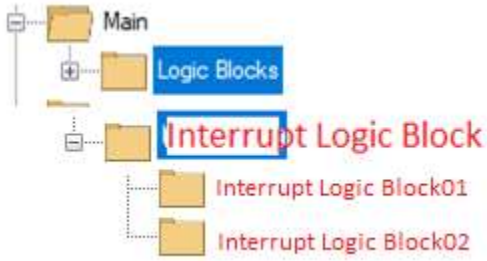


Fig 26

2. The user should be able to add an interrupt logic block by right clicking on the interrupt logic block. After clicking on the Interrupt Logic Block, the Logic Block window should open. (according to our main logic block window)

3. **Validation:**
   - In the Interrupt Logic Block window, the user can add a maximum of 10 rangs in Interrupt Logic Block.
   - Only two Interrupt Logic Block should present.

8.2 Interrupt Input Screen :

When the user clicks on the Interrupt Input screen from the HSIO Configuration window the following screen should open.

Fig 27

1. Default Type should be “External”.
2. External Event should be default:
   - **In first Event textbox : HI_DI0_INTP**
   - **In second Event textbox : HI-DI1_INTP**

3. The user should be able to select an interrupt logic block from a dropdown list. Add an interrupt logic block to the Interrupt Logic Block dropdown list.
4. **CCODE for XM-14DT-HIO (Interrupt):**

	!N (8526 Decimal)	Interrupt	2 Byte
		1 (Interrupt-1)	1 Byte
	(1-2)	Interrupt logic block-number	1 Byte
		2 (Interrupt-2)	1 Byte
	(1-2)	Interrupt logic block-number	1 Byte
557	&	EOF	1 Byte

5. **Mcode for XM-14DT-HIO(Interrupt Logic Block) :**

	SOF
	Total no. of rungs
1	Rung Number
2	Data_type
3	Enable_type
4	Enable
5	OPCODE
6	Type_operand_1

EX.-2 RUNG

1

7	OP1	
8	Type_operand_2	
9	OP2	
10	Type_operand_3	
11	OP3	
12	Type_operand_4	
13	OP4	
14	No_of_Operand_	
15	T_C_Name	
16	Output1,	
17	Output2	
18	Rung Number	2
19	Data_type	
20	Enable_type	
21	Enable	
22	OPCODE	
23	Type_operand_1	
24	OP1	
25	Type_operand_2	
26	OP2	
27	Type_operand_3	
28	OP3	
29	Type_operand_4	
30	OP4	
31	No_of_Operand_	
32	T_C_Name	
33	Output1,	
34	Output2	
	!F	Interrupt logic block MCODE
	INT0	
	Total no. of INT0 block rungs	ex.-2
1	Rung Number	
2	Data_type	
3	Enable_type	
4	Enable	
5	OPCODE	
6	Type_operand_1	
7	OP1	
8	Type_operand_2	
9	OP2	

10	Type_operand_3
11	OP3
12	Type_operand_4
13	OP4
14	No_of_Operand_
15	T_C_Name
16	Output1,
17	Output2
18	Rung Number
19	Data_type
20	Enable_type
21	Enable
22	OPCODE
23	Type_operand_1
24	OP1
25	Type_operand_2
26	OP2
27	Type_operand_3
28	OP3
29	Type_operand_4
30	OP4
31	No_of_Operand_
32	T_C_Name
33	Output1,
34	Output2
	INT1
	Total no. of INT1 block rungs
1	Rung Number
2	Data_type
3	Enable_type
4	Enable
5	OPCODE
6	Type_operand_1
7	OP1
8	Type_operand_2
9	OP2
10	Type_operand_3
11	OP3
12	Type_operand_4
13	OP4

ex.-1

14	No_of_Operand_
15	T_C_Name
16	Output1,
17	Output2
	EOF