

41CL Memory Reference

02/20/19

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0x208	LADYBUG1	LADY	16	Ladybug, pg 1	0x1C519857	
0x209	LADYBUG2			Ladybug, pg 2	0xD3A90581	
0x20A	OS4	LDY4	N/A	Ladybug Page 4	0x96BEF43C	
0x20B	GEIR	ISEM	23	Geir	0x9F8ABDA3	04/24/18

0x20C	IMSSYS4L	IMS4	31	IMS System-4, pg 1	0x6B2D0D27	
0x20D	IMSSYS4U		21	IMS System-4, pg 2	0x784349D2	
0x20E	WPNEFF_L	WPNE	21	Weapon Effects, pg 1	0xE4C89BC9	
0x20F	WPNEFF_U		31	Weapon Effects, pg 2	0xAA5B6B68	
0x210	ASTRO10A	LAST	23	Astro-10000, pg 1	0x2E48A231	03/22/18
0x211	ASTRO10B		24	Astro-10000, pg 2	0x730E6B4A	03/22/18
0x212	DERIVEZ1	ZDRV	21	Z-Derive, pg 1	0x4DCBD05A	
0x213	DERIVEZ2		22	Z-Derive, pg 2	0x866E53AB	
0x214	PARDIFEQ	BPDE	19	Partial Differential Equations	0xFE4B118D	
0x215	ELLIPSOI	BELP	21	Ellipsoids	0xD86B4618	
0x216	INTGDIF1	BIDQ	21	Integration/Differentiation, pg 1	0x49EE6656	
0x217	INTGDIF2		22	Integration/Differentiation, pg 2	0xF4C37E75	
0x218	DRVITG1	BDRV	31	Derivatives and Integrals, pg 1	0xAF6F90E4	05/14/18
0x219	DRVITG2			Derivatives and Integrals, pg 2	0xBA433F26	
0x21A	PRECNUT	BPRN	9	Precession & Nutation	0x37DF4FB8	02/16/18
0x21B	ASTROREF	BREF	9	Astronomical Refraction	0x03468714	06/26/18
0x21C	EPH2018A	P18E	23	Planetary Ephemerides 2018, pg 1	0xAA054808	
0x21D	EPH2018B		24	Planetary Ephemerides 2018, pg 2	0xAA4816ED	
0x21E	DERIVE1	DRV4	31	DERIVE41, pg 1	0x82B3A55F	05/14/18
0x21F	DERIVE2			DERIVE41, pg 2	0x4D07F1E4	05/14/18
0x220	RHODESII	RDII	31	RhodeSystem II	0xA9C03C67	
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0x222	RESERV_1	VOI1	9	Reservoir Engineering 1	0x28E6CA2F	02/16/18
0x223	RESERV_2			Reservoir Engineering 2	0x9F444F1B	02/16/18
0x224	RESERV_3	VOI3	10	Reservoir Engineering 3	0xD645BC8E	02/16/18
0x225	RESERV_4			Reservoir Engineering 4	0xFE783137	02/16/18
0x226	RESERV_5	VOI5	11	Reservoir Engineering 5	0x2DF9DBDC	02/16/18
0x227	RESERV_6			Reservoir Engineering 6	0x9F314E40	02/16/18
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0x229	CMA-1	CMGT	6	Capital Management	0xE0152D43	01/22/18
0x22A	FCAST1-1	FCS1	10	Forecaster-1	0x8FCB260B	01/22/18
0x22B	FCAST3-1	FCS3	10	Forecaster-3	0x0B200938	01/22/18
0x22C	HPP-1	HPPA	8	Hypothetical Probate Plus, pg 1	0x7A54301D	01/22/18
0x22D	HPP-2		12	Hypothetical Probate Plus, pg 2	0xD0F71013	01/22/18
0x22E	RACETR-1	RCTR	21	Racetrack	0x843AE9F7	01/22/18
0x22F	DSTAT	DSTY	10	Data & Statistics	0xA959E01D	02/16/18
0x230	MBK-EP-1	MBKF	3	MBK-EPROM, pg 1	0x4826340F	01/22/18
0x231	MBK-EP-2		13	MBK-EPROM, pg 2	0xA2D159B1	01/22/18
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0x233	ALL_00			blank, loaded as MBK-EPROM, pg 4	0xD666D0E4	01/22/18
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0x235	HOROSCOP	HORO	16	Horoscope	0xD6704434	04/02/18
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0x239	BUDER1-2		21	Buderus 1, pg 2	0x208F6360	01/22/18
0x23A	DRP16K-1	DRPS		Drilling Rig Platform, pg 1	0x6F499FA7	01/22/18
0x23B	DRP16K-2			Drilling Rig Platform, pg 2	0x07CB574F	01/22/18
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0x244	ASTRO1	ASTU	31	Astro-1	0x3C4908FD	01/22/18
0x245	RADIAK-1	RADA	21	RADIAK	0x923A822D	01/22/18
0x246	AMASTRO	ASTI	24	Amateur Astronomy	0xD0FEE85B	03/11/18
0x247	SWORDS	IGSW	24	Gladiator Arena Game	0xB0EEDC5D	06/21/18
0x248	IRPR-1B	IPRT	29	HP Infrared Printer Module, bnk 1	0xE8D475FB	01/22/18
0x249	IRPR-3B			HP Infrared Printer Module, bnk 2	0x54FD2405	01/22/18
0x24A	PRINTER	WPRT	29	HP 82143A Printer	0x88E517ED	01/22/18
0x24B	ILMOD-1H	HILM	28	HP-IL Module	0xC646538A	01/22/18
0x24C	WAND-1F	HWND	27	HP Barcode Wand	0x30C16379	01/22/18
0x24D	ILPRT-2E	HILN	29	HP-IL Module Printer functions	0xC4FC4699	06/10/18
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0x252	GMAC1	GMAQ	31	GMAC 1	0x7D17D183	05/14/18
0x253	SW_DEVL	SWSW	6	Software Development German book	0x65E3C429	05/14/18
0x254	PRAXIS	VIEW	9	Programs from Vieweg book	0xC364469B	05/14/18
0x255	GAMEZONE	ZONE	10	Game Zone	0x5219B146	05/14/18
0x256	REGULA1	REGU	9	Control Systems, pg 1	0x37791126	05/14/18
0x257	REGULA2		10	Control Systems, pg 2	0x6078182A	05/14/18
0x258	BSH1	BSHM	21	Bausparkasse Swabisch Hall EPROM, pg 1	0x1DB37BF5	05/14/18
0x259	BSH2		31	Bausparkasse Swabisch Hall EPROM, pg 2	0x884F4099	05/14/18
0x25A	BSH3		15	Bausparkasse Swabisch Hall EPROM, pg 3	0xA12A0934	05/14/18
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0x25C	DERIVE41	DRVP	21	DERIVE41	0xD10B4A6C	05/14/18
0x25D	DIFFGEO5		31	DIFF GEOM	0xD37FC5E6	05/14/18
0x25E	PRISMTH1	QMTH	13	Prisma Math	0x0B712962	06/24/18
0x25F	PRISMTH2		13	Prisma Math	0x9F2DBA29	06/24/18
0x260	ST_DMNGO	SDMO	31	Ste. Domingo	0xE5193871	09/10/18
0x261	ELLIPREF	BEPT	10	Ellipsoidal Refraction	0x747BFB61	09/10/18
0x262	-EQN_LIB	ELIB	11	Equation Library	0xE238C874	12/02/18
0x263	FISHSTOK	FSTK	16	Fish Stock Calculations	0x3FF6E27C	09/25/18
0x264	LATLON	LTLN	9	Geodetics	0x47F821AE	09/21/18

0x265	RIPRAP	RRAP	13	RIPRAP Engineering	0x68C9CD7A	09/25/18
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0x268	E-6A_1	E-6A	21	E-6A Weight & Balance, pg 1	0x30B8DDA3	11/01/18
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0x273	DIVINAT	DIVN	9	Divination	0x0C9A108A	11/01/18
0x274	SWPENG1	SWP5	12	Swap Disk Engineering Programs, pg 1	0xDCBDA43C	11/01/18
0x275	SWPENG2			Swap Disk Engineering Programs, pg 2	0x6B451837	11/01/18
0x276	ABRAFRA1	ABRD	1	Abrasives Formulation, pg 1	0x7BBE79C2	11/08/18
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0x31B	ALL_FF			empty	0x53D36BD2	
0x31C	ALL_FF			empty	0x53D36BD2	
0x31D	ALL_FF			empty	0x53D36BD2	
0x31E	ALL_FF			empty	0x53D36BD2	
0x31F	ALL_FF			empty	0x53D36BD2	
0x320	ALL_FF			empty	0x53D36BD2	
0x321	ALL_FF			empty	0x53D36BD2	
0x322	ALL_FF			empty	0x53D36BD2	
0x323	ALL_FF			empty	0x53D36BD2	
0x324	ALL_FF			empty	0x53D36BD2	
0x325	ALL_FF			empty	0x53D36BD2	
0x326	ALL_FF			empty	0x53D36BD2	
0x327	ALL_FF			empty	0x53D36BD2	
0x328	ALL_FF			empty	0x53D36BD2	
0x329	ALL_FF			empty	0x53D36BD2	
0x32A	ALL_FF			empty	0x53D36BD2	
0x32B	ALL_FF			empty	0x53D36BD2	
0x32C	ALL_FF			empty	0x53D36BD2	
0x32D	ALL_FF			empty	0x53D36BD2	
0x32E	ALL_FF			empty	0x53D36BD2	
0x32F	ALL_FF			empty	0x53D36BD2	
0x330	ALL_FF			empty	0x53D36BD2	
0x331	ALL_FF			empty	0x53D36BD2	
0x332	ALL_FF			empty	0x53D36BD2	
0x333	ALL_FF			empty	0x53D36BD2	
0x334	ALL_FF			empty	0x53D36BD2	
0x335	ALL_FF			empty	0x53D36BD2	
0x336	ALL_FF			empty	0x53D36BD2	
0x337	ALL_FF			empty	0x53D36BD2	
0x338	ALL_FF			empty	0x53D36BD2	
0x339	ALL_FF			empty	0x53D36BD2	
0x33A	ALL_FF			empty	0x53D36BD2	
0x33B	ALL_FF			empty	0x53D36BD2	
0x33C	ALL_FF			empty	0x53D36BD2	
0x33D	ALL_FF			empty	0x53D36BD2	
0x33E	ALL_FF			empty	0x53D36BD2	
0x33F	ALL_FF			empty	0x53D36BD2	
0x340	ALL_FF			empty	0x53D36BD2	
0x341	ALL_FF			empty	0x53D36BD2	
0x342	ALL_FF			empty	0x53D36BD2	
0x343	ALL_FF			empty	0x53D36BD2	
0x344	ALL_FF			empty	0x53D36BD2	
0x345	ALL_FF			empty	0x53D36BD2	

0x346	ALL_FF			empty	0x53D36BD2	
0x347	ALL_FF			empty	0x53D36BD2	
0x348	ALL_FF			empty	0x53D36BD2	
0x349	ALL_FF			empty	0x53D36BD2	
0x34A	ALL_FF			empty	0x53D36BD2	
0x34B	ALL_FF			empty	0x53D36BD2	
0x34C	ALL_FF			empty	0x53D36BD2	
0x34D	ALL_FF			empty	0x53D36BD2	
0x34E	ALL_FF			empty	0x53D36BD2	
0x34F	ALL_FF			empty	0x53D36BD2	
0x350	ALL_FF			empty	0x53D36BD2	
0x351	ALL_FF			empty	0x53D36BD2	
0x352	ALL_FF			empty	0x53D36BD2	
0x353	ALL_FF			empty	0x53D36BD2	
0x354	ALL_FF			empty	0x53D36BD2	
0x355	ALL_FF			empty	0x53D36BD2	
0x356	ALL_FF			empty	0x53D36BD2	
0x357	ALL_FF			empty	0x53D36BD2	
0x358	ALL_FF			empty	0x53D36BD2	
0x359	ALL_FF			empty	0x53D36BD2	
0x35A	ALL_FF			empty	0x53D36BD2	
0x35B	ALL_FF			empty	0x53D36BD2	
0x35C	ALL_FF			empty	0x53D36BD2	
0x35D	ALL_FF			empty	0x53D36BD2	
0x35E	ALL_FF			empty	0x53D36BD2	
0x35F	ALL_FF			empty	0x53D36BD2	
0x360	ALL_FF			empty	0x53D36BD2	
0x361	ALL_FF			empty	0x53D36BD2	
0x362	ALL_FF			empty	0x53D36BD2	
0x363	ALL_FF			empty	0x53D36BD2	
0x364	ALL_FF			empty	0x53D36BD2	
0x365	ALL_FF			empty	0x53D36BD2	
0x366	ALL_FF			empty	0x53D36BD2	
0x367	ALL_FF			empty	0x53D36BD2	
0x368	ALL_FF			empty	0x53D36BD2	
0x369	ALL_FF			empty	0x53D36BD2	
0x36A	ALL_FF			empty	0x53D36BD2	
0x36B	ALL_FF			empty	0x53D36BD2	
0x36C	ALL_FF			empty	0x53D36BD2	
0x36D	ALL_FF			empty	0x53D36BD2	
0x36E	ALL_FF			empty	0x53D36BD2	
0x36F	ALL_FF			empty	0x53D36BD2	
0x370	ALL_FF			empty	0x53D36BD2	
0x371	ALL_FF			empty	0x53D36BD2	
0x372	ALL_FF			empty	0x53D36BD2	

0x373	ALL_FF			empty	0x53D36BD2	
0x374	ALL_FF			empty	0x53D36BD2	
0x375	ALL_FF			empty	0x53D36BD2	
0x376	ALL_FF			empty	0x53D36BD2	
0x377	ALL_FF			empty	0x53D36BD2	
0x378	ALL_FF			empty	0x53D36BD2	
0x379	ALL_FF			empty	0x53D36BD2	
0x37A	ALL_FF			empty	0x53D36BD2	
0x37B	ALL_FF			empty	0x53D36BD2	
0x37C	ALL_FF			empty	0x53D36BD2	
0x37D	ALL_FF			empty	0x53D36BD2	
0x37E	ALL_FF			empty	0x53D36BD2	
0x37F	ALL_FF			empty	0x53D36BD2	
0x380	ALL_FF			empty	0x53D36BD2	
0x381	ALL_FF			empty	0x53D36BD2	
0x382	ALL_FF			empty	0x53D36BD2	
0x383	ALL_FF			empty	0x53D36BD2	
0x384	ALL_FF			empty	0x53D36BD2	
0x385	ALL_FF			empty	0x53D36BD2	
0x386	ALL_FF			empty	0x53D36BD2	
0x387	ALL_FF			empty	0x53D36BD2	
0x388	ALL_FF			empty	0x53D36BD2	
0x389	ALL_FF			empty	0x53D36BD2	
0x38A	ALL_FF			empty	0x53D36BD2	
0x38B	ALL_FF			empty	0x53D36BD2	
0x38C	ALL_FF			empty	0x53D36BD2	
0x38D	ALL_FF			empty	0x53D36BD2	
0x38E	ALL_FF			empty	0x53D36BD2	
0x38F	ALL_FF			empty	0x53D36BD2	
0x390	ALL_FF			empty	0x53D36BD2	
0x391	ALL_FF			empty	0x53D36BD2	
0x392	ALL_FF			empty	0x53D36BD2	
0x393	ALL_FF			empty	0x53D36BD2	
0x394	ALL_FF			empty	0x53D36BD2	
0x395	ALL_FF			empty	0x53D36BD2	
0x396	ALL_FF			empty	0x53D36BD2	
0x397	ALL_FF			empty	0x53D36BD2	
0x398	ALL_FF			empty	0x53D36BD2	
0x399	ALL_FF			empty	0x53D36BD2	
0x39A	ALL_FF			empty	0x53D36BD2	
0x39B	ALL_FF			empty	0x53D36BD2	
0x39C	ALL_FF			empty	0x53D36BD2	
0x39D	ALL_FF			empty	0x53D36BD2	
0x39E	ALL_FF			empty	0x53D36BD2	
0x39F	ALL_FF			empty	0x53D36BD2	

0x3A0	ALL_FF			empty	0x53D36BD2
0x3A1	ALL_FF			empty	0x53D36BD2
0x3A2	ALL_FF			empty	0x53D36BD2
0x3A3	ALL_FF			empty	0x53D36BD2
0x3A4	ALL_FF			empty	0x53D36BD2
0x3A5	ALL_FF			empty	0x53D36BD2
0x3A6	ALL_FF			empty	0x53D36BD2
0x3A7	ALL_FF			empty	0x53D36BD2
0x3A8	ALL_FF			empty	0x53D36BD2
0x3A9	ALL_FF			empty	0x53D36BD2
0x3AA	ALL_FF			empty	0x53D36BD2
0x3AB	ALL_FF			empty	0x53D36BD2
0x3AC	ALL_FF			empty	0x53D36BD2
0x3AD	ALL_FF			empty	0x53D36BD2
0x3AE	ALL_FF			empty	0x53D36BD2
0x3AF	ALL_FF			empty	0x53D36BD2
0x3B0	ALL_FF			empty	0x53D36BD2
0x3B1	ALL_FF			empty	0x53D36BD2
0x3B2	ALL_FF			empty	0x53D36BD2
0x3B3	ALL_FF			empty	0x53D36BD2
0x3B4	ALL_FF			empty	0x53D36BD2
0x3B5	ALL_FF			empty	0x53D36BD2
0x3B6	ALL_FF			empty	0x53D36BD2
0x3B7	ALL_FF			empty	0x53D36BD2
0x3B8	ALL_FF			empty	0x53D36BD2
0x3B9	ALL_FF			empty	0x53D36BD2
0x3BA	ALL_FF			empty	0x53D36BD2
0x3BB	ALL_FF			empty	0x53D36BD2
0x3BC	ALL_FF			empty	0x53D36BD2
0x3BD	ALL_FF			empty	0x53D36BD2
0x3BE	ALL_FF			empty	0x53D36BD2
0x3BF	ALL_FF			empty	0x53D36BD2
0x3C0	ALL_FF			empty	0x53D36BD2
0x3C1	ALL_FF			empty	0x53D36BD2
0x3C2	ALL_FF			empty	0x53D36BD2
0x3C3	ALL_FF			empty	0x53D36BD2
0x3C4	ALL_FF			empty	0x53D36BD2
0x3C5	ALL_FF			empty	0x53D36BD2
0x3C6	ALL_FF			empty	0x53D36BD2
0x3C7	ALL_FF			empty	0x53D36BD2
0x3C8	ALL_FF			empty	0x53D36BD2
0x3C9	ALL_FF			empty	0x53D36BD2
0x3CA	ALL_FF			empty	0x53D36BD2
0x3CB	ALL_FF			empty	0x53D36BD2
0x3CC	ALL_FF			empty	0x53D36BD2

0x3CD	ALL_FF			empty	0x53D36BD2	
0x3CE	ALL_FF			empty	0x53D36BD2	
0x3CF	ALL_FF			empty	0x53D36BD2	
0x3D0	ALL_FF			empty	0x53D36BD2	
0x3D1	ALL_FF			empty	0x53D36BD2	
0x3D2	ALL_FF			empty	0x53D36BD2	
0x3D3	ALL_FF			empty	0x53D36BD2	
0x3D4	ALL_FF			empty	0x53D36BD2	
0x3D5	ALL_FF			empty	0x53D36BD2	
0x3D6	ALL_FF			empty	0x53D36BD2	
0x3D7	ALL_FF			empty	0x53D36BD2	
0x3D8	ALL_FF			empty	0x53D36BD2	
0x3D9	ALL_FF			empty	0x53D36BD2	
0x3DA	ALL_FF			empty	0x53D36BD2	
0x3DB	ALL_FF			empty	0x53D36BD2	
0x3DC	ALL_FF			empty	0x53D36BD2	
0x3DD	ALL_FF			empty	0x53D36BD2	
0x3DE	ALL_FF			empty	0x53D36BD2	
0x3DF	ALL_FF			empty	0x53D36BD2	
0x3E0	ALL_FF			empty	0x53D36BD2	
0x3E1	ALL_FF			empty	0x53D36BD2	
0x3E2	ALL_FF			empty	0x53D36BD2	
0x3E3	ALL_FF			empty	0x53D36BD2	
0x3E4	ALL_FF			empty	0x53D36BD2	
0x3E5	ALL_FF			empty	0x53D36BD2	
0x3E6	ALL_FF			empty	0x53D36BD2	
0x3E7	ALL_FF			empty	0x53D36BD2	
0x3E8	ALL_FF			empty	0x53D36BD2	
0x3E9	ALL_FF			empty	0x53D36BD2	
0x3EA	ALL_FF			empty	0x53D36BD2	
0x3EB	ALL_FF			empty	0x53D36BD2	
0x3EC	ALL_FF			empty	0x53D36BD2	
0x3ED	ALL_FF			empty	0x53D36BD2	
0x3EE	ALL_FF			empty	0x53D36BD2	
0x3EF	ALL_FF			empty	0x53D36BD2	
0x3F0	ALL_FF			empty	0x53D36BD2	
0x3F1	ALL_FF			empty	0x53D36BD2	
0x3F2	ALL_FF			empty	0x53D36BD2	
0x3F3	ALL_FF			empty	0x53D36BD2	
0x3F4	ALL_FF			empty	0x53D36BD2	
0x3F5	ALL_FF			empty	0x53D36BD2	
0x3F6	ALL_FF			empty	0x53D36BD2	
0x3F7	ALL_FF			empty	0x53D36BD2	
0x3F8	ALL_FF			empty	0x53D36BD2	
0x3F9	ALL_FF			empty	0x53D36BD2	

0x3FA	ALL_FF			empty	0x53D36BD2	
0x3FB	ALL_FF			empty	0x53D36BD2	
0x3FC	ALL_FF			empty	0x53D36BD2	
0x3FD	ALL_FF			empty	0x53D36BD2	
0x3FE	ALL_FF			empty	0x53D36BD2	
0x3FF	ALL_FF			empty	0x53D36BD2	
0x800				41C Registers 0-3FF		
0x801				Registers 400-FFF (not utilized by the OS)		
0x802						
0x803						
0x804				41CL MMU registers		
0x805		YBFR		Memory Buffer		
0x806		CFDB		Memory Buffer or CFLDB location		
0x807						
0x808						
0x809						
0x80A						
0x80B						
0x80C						
0x80D						
0x80E						
0x80F						
0x810				Page 0 of Sector Buffer		
0x811				Page 1 of Sector Buffer		
0x812				Page 2 of Sector Buffer		
0x813				Page 3 of Sector Buffer		
0x814				Page 4 of Sector Buffer		
0x815				Page 5 of Sector Buffer		
0x816				Page 6 of Sector Buffer		
0x817				Page 7 of Sector Buffer		
0x818						
0x819						
0x81A						
0x81B						
0x81C						
0x81D						
0x81E						
0x81F						
0x820						
0x821						
0x822						
0x823						
0x824						
0x825						
0x826						

0x827						
0x828						
0x829						
0x82A						
0x82B						
0x82C						
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0x830						
0x831						
0x832						
0x833						
0x834						
0x835						
0x836						
0x837						
0x838						
0x839						
0x83A						
0x83B						
0x83C						
0x83D						
0x83E						
0x83F						
0x840						
0x841						
0x842						
0x843						
0x844						
0x845						
0x846						
0x847						
0x848						
0x849						
0x84A						
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0x84E						
0x84F						
0x850						
0x851						
0x852						
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0x854						
0x855						
0x856						
0x857						
0x858						
0x859						
0x85A						
0x85B						
0x85C						
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0x85E						
0x85F						
0x860						
0x861						
0x862						
0x863						
0x864						
0x865						
0x866						
0x867						
0x868						
0x869						
0x86A						
0x86B						
0x86C						
0x86D						
0x86E						
0x86F						
0x870						
0x871						
0x872						
0x873						
0x874						
0x875						
0x876						
0x877						
0x878						
0x879						
0x87A						
0x87B						
0x87C						
0x87D						
0x87E						
0x87F						

NOTES:

1. Flash memory starts at page 0x000, and RAM memory starts at page 0x800.
2. This memory map (for Flash memory only) does not apply to V2 41CL boards. Although much of the mapping is identical, there is a separate Memory Reference for V2 41CL boards.
3. **V3 and V4 41CL boards contain Flash memory with addresses 0x000000 through 0x1FFFFFF. Only V5 41CL boards contain Flash memory with addresses 0x200000 through 0x3FFFFFF.**
4. A blank page in Flash memory is different from an empty page in Flash memory. A blank page contains 0x0000 in every location, and can be safely plugged into a Port. An empty (erased or unprogrammed) page contains 0xFFFF in every location, which will lock up the 41CL when plugged into a Port. A blank page has a YCRC value of 0xD666D0E4, while an empty page has a YCRC value of 0x53D36BD2.
5. Flash memory is always erased by sectors. Normally a sector consists of eight pages, and sector boundaries are highlighted in the table. Either the the top sector or the bottom sector is unique, and is erased by subsector. Refer to the *41CL Update Functions* documentation for the details.

RAM Memory Details

Physical Address	Contents	Used for
0x800000 - 0x800003	Register 000	T register
0x800004 - 0x800007	Register 001	Z register
0x800008 - 0x80000B	Register 002	Y register
0x80000C - 0x80000F	Register 003	X register
0x800010 - 0x800013	Register 004	L register
0x800014 - 0x800017	Register 005	ALPHA register 1-7
0x800018 - 0x80001B	Register 006	ALPHA register 8-14
0x80001C - 0x80001F	Register 007	ALPHA register 15-21
0x800020 - 0x800023	Register 008	ALPHA register 22-28
0x800024 - 0x800027	Register 009	temp ALPHA scratch
0x800028 - 0x80002B	Register 00A	OS functions
0x80002C - 0x80002F	Register 00B	
0x800030 - 0x800033	Register 00C	
0x800034 - 0x800037	Register 00D	
0x800038 - 0x80003B	Register 00E	FLAG register
0x80003C - 0x80003F	Register 00F	OS functions
0x800040 - 0x8000FF	Registers 10 - 3F	not visible to OS
0x800100 - 0x800103	Register 040	X-Memory
0x800104 - 0x800107	Register 041	
.	.	
.	.	
0x8002F8 - 0x8002FB	Register 0BE	
0x8002FC - 0x8002FF	Register 0BF	
0x800300 - 0x800303	Register 0C0	
0x800304 - 0x800307	Register 0C1	
.	.	
.	.	
0x8007F8 - 0x8007FB	Register 1FE	Key Assign Buffer, Alarm Buffer, I/O Buffers, Program memory Data
0x8007FC - 0x8007FF	Register 1FF	
0x800800 - 0x800803	Register 200	
0x800804 - 0x800807	Register 201	
0x800808 - 0x80080B	Register 202	X-Memory
.	.	
.	.	
0x800BB8 - 0x800BBB	Register 2EE	
0x800BBC - 0x800BBF	Register 2EF	

0x800BC0 - 0x800C03	Registers 2F0 - 300		not visible to OS
0x800C04 - 0x800C07	Register 301		X-Memory
0x800C08 - 0x800C0B	Register 302		
.	.		
0x800FB8 - 0x800FBB	Register 3EE		
0x800FBC - 0x800FBF	Register 3EF		
0x800FC0 - 0x800FFF	Registers 3F0 - 3FF		not visible to OS
0x801000 - 0x801FFF	Registers 400 - 7FF		Expanded Memory 1
0x802000 - 0x802FFF	Registers 800 - BFF		Expanded Memory 2
0x803000 - 0x803FFF	Registers C00 - FFF		Expanded Memory 3
0x804000	41C Register Address		REGADD
0x804001 - 0x80400B	reserved		
0x80400C	Page 0 MMU registers (only one bank)	set 0	Page 0 MMU data
0x80400D		set 1	
0x80400E		set 2	
0x80400F		set 3	
0x804010 - 0x804017	41CL Extra/Extreme functions internal use		
0x804018	Turbo Mode storage location		Light Sleep
0x804019	41CL Extra/Extreme functions internal use		
0x80401A	CPU ST[14:8] storage location		Light Sleep
0x80401B	reserved		
0x80401C	Page 1 MMU register (only one bank)	set 0	Page 1 MMU data
0x80401D		set 1	
0x80401E		set 2	
0x80401F		set 3	
0x804020 - 0x80402B	41CL Memory Functions internal use		
0x80402C	Page 2 MMU register (only one bank)	set 0	Page 2 MMU data
0x80402D		set 1	
0x80402E		set 2	
0x80402F		set 3	
0x804030	Page 4 MMU register dynamic storage		
0x804031 - 0x80403B	41CL Update Functions internal use		
0x80403C	Page 3 MMU register (only one bank)	set 0	Page 3 MMU data
0x80403D		set 1	
0x80403E		set 2	
0x80403F		set 3	

0x804040	Page 4, Bank 1 MMU registers	set 0	Page 4 MMU data
0x804041		set 1	
0x804042		set 2	
0x804043		set 3	
0x804044	Page 4, Bank 3 MMU registers	set 0	
0x804046		set 1	
0x804046		set 2	
0x804047		set 3	
0x804048	Page 4, Bank 2 MMU registers	set 0	
0x804049		set 1	
0x80404A		set 2	
0x80404B		set 3	
0x80404C	Page 4, Bank 4 MMU registers	set 0	
0x80404D		set 1	
0x80404E		set 2	
0x80404F		set 3	
0x804050 - 0x804053	Page 5, Bank 1 MMU registers	sets 0-3	Page 5 MMU data
0x804054 - 0x804057	Page 5, Bank 3 MMU registers	sets 0-3	
0x804058 - 0x80405B	Page 5, Bank 2 MMU registers	sets 0-3	
0x80405C - 0x80405F	Page 5, Bank 4 MMU registers	sets 0-3	
0x804060 - 0x804063	Page 6, Bank 1 MMU registers	sets 0-3	Page 6 MMU data
0x804064 - 0x804067	Page 6, Bank 3 MMU registers	sets 0-3	
0x804068 - 0x80406B	Page 6, Bank 2 MMU registers	sets 0-3	
0x80406C - 0x80406F	Page 6, Bank 4 MMU registers	sets 0-3	
.	.	.	.
0x8040E0 - 0x8040E3	Page E, Bank 1 MMU registers	sets 0-3	Page E MMU data
0x8040E4 - 0x8040E7	Page E, Bank 3 MMU registers	sets 0-3	
0x8040E8 - 0x8040EB	Page E, Bank 2 MMU registers	sets 0-3	
0x8040EC - 0x8040EF	Page E, Bank 4 MMU registers	sets 0-3	
0x8040F0 - 0x8040F3	Page F, Bank 1 MMU registers	sets 0-3	Page F MMU data
0x8040F4 - 0x8040F7	Page F, Bank 3 MMU registers	sets 0-3	
0x8040F8 - 0x8040FB	Page F, Bank 2 MMU registers	sets 0-3	
0x8040FC - 0x8040FF	Page F, Bank 4 MMU registers	sets 0-3	
0x804100 - 0x8041FF	MMU registers, sets 4-7		MMU data
0x804200 - 0x8042FF	MMU registers, sets 8-B		MMU data
0x804300 - 0x8043FF	MMU registers, sets C-F		MMU data
0x804400 - 0x804FFF	41CL functions internal use		
0x805000 - 0x805FFF	Memory Buffer (1 4Kx16 page)		
0x806000 - 0x806FFF	CFLDB location		
0x807000 - 0x80FFFF	User RAM (9 4Kx16 pages)		
0x810000 - 0x817FFF	Sector Buffer (8 4Kx16 pages)		
0x818000 - 0x87FFFF	User RAM (104 4Kx16 pages)		

NOTES:

1. Each seven-byte 41C register is stored in four successive memory locations:

bit	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
addr lsb																
00	Byte 1								Byte 0							
01	Byte 3								Byte 2							
10	Byte 5								Byte 4							
11	unused								Byte 6							

2. Each MMU entry is stored in a single memory location:

bit	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	EN	LCK	MULTI	A23	A22	A21	A20	A19	A18	A17	A16	A15	A14	A13	A12	

Bit 15 is the Enable (EN) bit. If this bit is zero, the MMU entry is ignored and the corresponding page and bank will be fetched from a Port.

Bit 14 is the Lock (LCK) bit, used only with the *41CL Extreme Functions*. If this bit is set to one the entry cannot be changed, except with either the **UNLOCK** function or the **MMUCLR** function.

Bits 13 and 12 are the Multi-page Image (MULTI) bits, used only with the *41CL Extreme Functions*. These bits are managed automatically by the **PLUG** and **PPLUG** functions, with the following meanings:

13	12	MULTI
0	0	Not part of a multi-page image
0	1	First page of a multi-page image
1	1	Middle page of a multi-page image
1	0	Last page of a multi-page image

Bits 11-0 hold the twelve address bits to be substituted for the Page address (bits 15-12) portion of the logical address, to create the physical address.

3. MMU register sets 1-F are used only by the *41CL Extreme Functions*. The arrangement of MMU register sets 4-7, 8-B and C-F is identical to the arrangement for sets 0-3 as shown in the RAM Memory Details.

