

Enhanced Delta-Sigma Analog-to-Digital Converter (EDSADC)

33.14 Summary of Registers and Locations

The EDSADC is built from a series of channels that are controlled in an identical way. This makes programming versatile and scalable. The corresponding registers, therefore, have an individual offset assigned (see [Table 294](#)). The exact register location is obtained by adding the respective register offset to the base address (see product-specific appendix) of the corresponding channel.

Due to the regular structure, several registers appear within each channel. This is indicated in the register overview table by formulas.

Registers with write access mode "...M" can additionally be protected from unintended write access by setting the corresponding protection bit in register ACCPROT. Refer to ["Register Access Control" on Page 14](#) for more details and an association table.

Table 294 Register Overview - EDSADC (ascending Offset Address)

Short Name	Long Name	Offset Address	Access Mode		Reset	Page Number
			Read	Write		
CLC	Clock Control Register	0000 _H	U,SV	SV,E,P	Application Reset	9
ID	Module Identification Register	0008 _H	U,SV	BE	PowerOn Reset	7
OCS	OCDS Control and Status Register	0028 _H	U,SV	SV,P,OEN	See page 9	9
KRSTCLR	Kernel Reset Status Clear Register	002C _H	U,SV	SV,E,P	Application Reset	13
KRST1	Kernel Reset Register 1	0030 _H	U,SV	SV,E,P	Application Reset	13
KRST0	Kernel Reset Register 0	0034 _H	U,SV	SV,E,P	Application Reset	12
ACCEN0	Access Enable Register 0	003C _H	U,SV	SV,SE	Application Reset	11
GLOBCFG	Global Configuration Register	0080 _H	U,SV	U,SV,P,M	Application Reset	16
GLOBRC	Global Run Control Register	0088 _H	U,SV	U,SV,P,M	Application Reset	17
ACCPROT	Access Protection Register	0090 _H	U,SV	SV,SE,P	Application Reset	14
CGCFG	Carrier Generator Configuration Register	00A0 _H	U,SV	U,SV,P,M	Application Reset	88
EVFLAG	Event Flag Register	00E0 _H	U,SV	U,SV,P,M	Application Reset	83
EVFLAGCLR	Event Flag Clear Register	00E4 _H	U,SV	U,SV,P,M	Application Reset	84
MODCFGx	Modulator Configuration Register x	0100 _H +x *100 _H	U,SV	U,SV,P,M	Application Reset	27
DICFGx	Demodulator Input Config. Register x	0108 _H +x *100 _H	U,SV	U,SV,P,M	Application Reset	30

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Table 294 Register Overview - EDSADC (ascending Offset Address) (cont'd)

Short Name	Long Name	Offset Address	Access Mode		Reset	Page Number
			Read	Write		
FCFGMx	Filter Configuration Register x, Main	0110 _H +x *100 _H	U,SV	U,SV,P,M	Application Reset	63
FCFGCx	Filter Configuration Register x, CIC Filter	0114 _H +x *100 _H	U,SV	U,SV,P,M	Application Reset	65
FCNTCx	Filter Counter Register x, CIC Filter	0118 _H +x *100 _H	U,SV	BE	Application Reset	66
OVSCFGx	Overshoot Compensation Cfg. Register x	011C _H +x *100 _H	U,SV	U,SV,P,M	Application Reset	49
IWCTRx	Integration Window Control Register x	0120 _H +x *100 _H	U,SV	U,SV,P,M	Application Reset	57
IIVALx	Intermediate Integration Value	0124 _H +x *100 _H	U,SV	BE	Application Reset	59
ISTATx	Integrator Status Register x	0128 _H +x *100 _H	U,SV	BE	Application Reset	59
RFCx	Result FIFO Control Register x	012C _H +x *100 _H	U,SV	U,SV,P,M	Application Reset	74
RESMx	Result Register x Main	0130 _H +x *100 _H	U,SV	BE	Application Reset	75
OFFCOMPx	Offset Compensation Register x	0138 _H +x *100 _H	U,SV	U,SV,P,M	Application Reset	54
GAINCALx	Gain Calibration Register x	013C _H +x *100 _H	U,SV	U,SV,P,M	Application Reset	38
GAINCTRx	Gain Control Register x	0140 _H +x *100 _H	U,SV	U,SV,P,M	Application Reset	38
GAINCORRx	Gain Correction Register x	0144 _H +x *100 _H	U,SV	U,SV,P,M	Application Reset	47
TSTMPx	Time-Stamp Register x	0150 _H +x *100 _H	U,SV	BE	Application Reset	69
TSCNTx	Time-Stamp Counter x	0154 _H +x *100 _H	U,SV	U,SV,P,M	Application Reset	70
FCFGAx	Auxiliary Filter Configuration Register x	0170 _H +x *100 _H	U,SV	U,SV,P,M	Application Reset	68
BOUNDSELx	Boundary Select Register x	0178 _H +x *100 _H	U,SV	U,SV,P,M	Application Reset	80
RESAx	Result Register x Auxiliary	0180 _H +x *100 _H	U,SV	BE	Application Reset	67
CGSYNCx	Carrier Generator Synchronization Reg. x	01A0 _H +x *100 _H	U,SV	U,SV,P,M	Application Reset	90

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Table 294 Register Overview - EDSADC (ascending Offset Address) (cont'd)

Short Name	Long Name	Offset Address	Access Mode		Reset	Page Number
			Read	Write		
RECTCFGx	Rectification Configuration Register x	01A8 _H +x *100 _H	U,SV	U,SV,P,M	Application Reset	92
VCMx	Common Mode Voltage Register x	01B0 _H +x *100 _H	U,SV	U,SV,P,M	Application Reset	34