

Usefull SmartData Units

Software/Hardware Integration Lab at UFSC

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The formation rules for SmartData Units are available in the [EPOS user guide](#).
Some useful SI units are:

SI Unit	SI Quantity	UNIT	Remarks / Other names
mol	Amount of Substance	0x8492492c	
rad/s	Angular Velocity	0x84B23924	
m²	Area	0x849a4924	
A	Current	0x84924b24	Electric Current
N	Force	0x8496A924	
kg/m³	Humidity	0x8486C924	
W/m²	Irradiance	0x84929924	
m	Length	0x84964924	
cd	Luminous Intensity	0x84924925	
kg	Mass	0x8492c924	
W	Power	0x849A9924	
Pa	Pressure	0x848eA924	
m/s	Velocity	0x84963924	Speed
W/m²	Sound Intensity	0x84929924	
K	Temperature	0x84924964	
s	Time	0x84925924	
V	Voltage	0x849a9724	
m³	Volume	0x849e4924	
m³/s	Water Flow	0x849e3924	
-	ratio	0xF8000000	not an SI unit

SI Unit	SI Quantity	UNIT	Remarks / Other names
%	Percentage	0xF8000001	not an SI unit
-	PPM	0xF8000002	not an SI unit
-	PPB	0xF8000003	not an SI unit
-	Relative Humidity	0xF8000004	not an SI unit
-	Power Factor	0xF8000005	not an SI unit
-	Counter	0xF8000006	not an SI unit

Some useful Digital units are:

Class	Type	Subtype	Length	UNIT	Remarks
Switch	0	0	1	0x00000000	
RFID32	1	0	4	0x00000000	RFIDs and SmartCartds

Class	Type	Subtype	Length	UNIT	A/V	Hz	Ch	RTP Reference
PCMU	2	0	1	0x00000000 + 1	A	8000	1	RFC3551
GSM	2	3	1	0x00000000 + 1	A	8000	1	RFC3551
G723	2	4	1	0x00000000 + 1	A	8000	1	Vineet_Kumar, RFC3551
DVI4_8	2	5	1	0x00000000 + 1	A	8000	1	RFC3551
DVI4_16	2	6	1	0x00000000 + 1	A	16000	1	RFC3551
LPC	2	7	1	0x00000000 + 1	A	8000	1	RFC3551
PCMA	2	8	1	0x00000000 + 1	A	8000	1	RFC3551
G722	2	9	1	0x00000000 + 1	A	8000	1	RFC3551
L16_2	2	10	1	0x00000000 + 1	A	44100	2	RFC3551
L16_1	2	11	1	0x00000000 + 1	A	44100	1	RFC3551
QCELP	2	12	1	0x00000000 + 1	A	8000	1	RFC3551

Class	Type	Subtype	Length	UNIT	A/V	Hz	Ch	RTP Reference
CN	2	13		0x00000000 +	A	8000	1	RFC3389
MPA	2	14		0x00000000 +	A	90000		RFC3551, RFC2250
G728	2	15		0x00000000 +	A	8000	1	RFC3551
DVI4_11	2	16		0x00000000 +	A	11025	1	Joseph_Di_Pol
DVI4_22	2	17		0x00000000 +	A	22050	1	Joseph_Di_Pol
G729	2	18		0x00000000 +	A	8000	1	RFC3551
CelB	2	25		0x00000000 +	V	90000		RFC2029
JPEG	2	26		0x00000000 +	V	90000		RFC2435
nv	2	28		0x00000000 +	V	90000		RFC3551
H261	2	31		0x00000000 +	V	90000		RFC4587
MPV	2	32		0x00000000 +	V	90000		RFC2250
MP2T	2	33		0x00000000 +	AV	90000		RFC2250
H263	2	34		0x00000000 +	V	90000		Chunrong_Zhu
WAV (FLAC)	2	35		0x00000000 +	A	20000		WAV - FLAC compressed at server

The WAV (FLAC) type uses on-the-fly compression/decompression for acoustic data with specific characteristics, as described [here](#).

To generate the code for a personalized unit, fill out the parameters in the fields below, and press **Generate** to view the SmartData Unit code. As an example, the current values in the fields denote the Acceleration unit (m / s²):

SI

Data type

mod

sr rad m kg s A K mol cd

DIGITAL

▼

I32

▼

DIR

▼

Generate

Binary: ☐ Hexa: ☐ Decimal: ☐