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Purpose

This document contains an overview of Profile Identifiers specified for IO-Link. The document is intended as a reference for use of IO-Link profile devices and functions within user applications.

The Profile Identifiers are referenced in IO-Link profile devices:

- within IODD: node 'Features', attribute 'profileCharacteristic'
- within Device: variable 'Profile Characteristic' (index 13)

Device Profiles

ProfileID hex	ProfileID dec	Name short	Name long	Type	Reference
0x0001	1	GPS	Generic Profiled Sensor	SSP 0	Smart Sensor [2]
0x0002	2	FSS	Fixed Switching Sensor	SSP 1.1	Smart Sensor [2]
0x0003	3	FSS	Fixed Switching Sensor, disable function	SSP 1.2	Smart Sensor [2]
0x0004	4	AdSS	Adjustable Switching Sensor, single value teach	SSP 2.1	Smart Sensor [2]
0x0005	5	AdSS	Adjustable Switching Sensor, two value teach	SSP 2.2	Smart Sensor [2]
0x0006	6	AdSS	Adjustable Switching Sensor, dynamic teach	SSP 2.3	Smart Sensor [2]
0x0007	7	AdSS	Adjustable Switching Sensor, single value teach, disable function	SSP 2.4	Smart Sensor [2]
0x0008	8	AdSS	Adjustable Switching Sensor, two value teach, disable function	SSP 2.5	Smart Sensor [2]
0x0009	9	AdSS	Adjustable Switching Sensor, dynamic teach, disable function	SSP 2.6	Smart Sensor [2]
0x000A	10	DMSS	Measuring Sensor	SSP 3.1	Smart Sensor [2]
0x000B	11	DMSS	Measuring Sensor, high resolution	SSP 3.2	Smart Sensor [2]
0x000C	12	DMSS	Measuring Sensor, disable function	SSP 3.3	Discontinued
0x000D	13	DMSS	Measuring Sensor, high resolution, disable function	SSP 3.4	Discontinued
0x000E	14	AdSS	Adjustable Switching Sensor, 2 channel	SSP 2.7	Smart Sensor [2]
0x000F	15				
0x0010	16	DMSS	Measuring and Switching Sensor, 1 channel	SSP 4.1.1	Smart Sensor [2]
0x0011	17	DMSS	Measuring and Switching Sensor, 2 channel	SSP 4.1.2	Smart Sensor [2]
0x0012	18	DMSS	Measuring and Switching Sensor, 3 channel	SSP 4.1.3	Smart Sensor [2]
0x0013	19	DMSS	Measuring and Switching Sensor, 4 channel	SSP 4.1.4	Smart Sensor [2]
0x0014	20	DMSS	Measuring and Switching Sensor, high resolution, 1 channel	SSP 4.2.1	Smart Sensor [2]
0x0015	21	DMSS	Measuring and Switching Sensor, high resolution, 2 channel	SSP 4.2.2	Smart Sensor [2]
0x0016	22	DMSS	Measuring and Switching Sensor, high resolution, 3 channel	SSP 4.2.3	Smart Sensor [2]
0x0017	23	DMSS	Measuring and Switching Sensor, high resolution, 4 channel	SSP 4.2.4	Smart Sensor [2]

ProfileID hex	ProfileID dec	Name short	Name long	Type	Reference
0x0018	24	DMSS	Measuring and Switching Sensor, floating point, 1 channel	SSP 4.3.1	Smart Sensor [2]
0x0019	25	DMSS	Measuring and Switching Sensor, floating point, 2 channel	SSP 4.3.2	Smart Sensor [2]
0x001A	26	DMSS	Measuring and Switching Sensor, floating point, 3 channel	SSP 4.3.3	Smart Sensor [2]
0x001B	27	DMSS	Measuring and Switching Sensor, floating point, 4 channel	SSP 4.3.4	Smart Sensor [2]

Common Application Profiles

ProfileID hex	ProfileID dec	Name short	Name long	Reference
0x0030	48	BLOB	BLOB transfer	Blob & FW Update [4]
0x0031	49	FWUPD	Firmware Update	Blob & FW Update [4]
0x4000	16384	I&D	Identification & Diagnosis	Common Profile [1]
0x4001	16385		IO-Link Safety – FS-Device	IO-Link Safety [3]
0x4002	16386		IO-Link Wireless – W-Device	IO-Link Wireless [5]

Function Classes

ProfileID hex	ProfileID dec	Name short	Name long	Reference
0x8000	32768		Device Identification	Common Profile [1]
0x8001	32769		Multi-channel, two setpoint switching sensor	Discontinued
0x8002	32770	PDV	Process Data Variable	Common Profile [1]
0x8003	32771		Device Diagnosis	Common Profile [1]
0x8004	32772		Teach Channel	Discontinued
0x8005	32773		Fixed Switching Signal Channel	Smart Sensor [2]
0x8006	32774		Adjustable Switching Signal Channel	Smart Sensor [2]
0x8007	32775		Teach single value	Smart Sensor [2]
0x8008	32776		Teach two value	Smart Sensor [2]
0x8009	32777		Teach dynamic	Smart Sensor [2]
0x800A	32778		Measurement Data Channel, (standard resolution)	Smart Sensor [2]
0x800B	32779		Measurement Data Channel, (high resolution)	Smart Sensor [2]
0x800C	32780		Sensor Control	Smart Sensor [2]
0x800D	32781		Multiple Adjustable Switching Signal Channel	Smart Sensor [2]
0x800E	32782		Measurement Data Channel, (floating point)	Smart Sensor [2]
0x800F	32783		Sensor Control Wide	Smart Sensor [2]
0x8010	32784		Multi Teach Single Value	Smart Sensor [2]

ProfileID hex	ProfileID dec	Name short	Name long	Reference
0x8011	32785		Multi Teach Two Value Extension	Smart Sensor [2]
0x8012	32786		Multi Teach Dynamic Extension	Smart Sensor [2]
0x8013	32787		Object detection	Smart Sensor [2]
0x8014	32788		Quantity detection	Smart Sensor [2]
0x8020	32800		Reserved for Safety	IO-Link Safety [3]
0x8030	32816		IO-Link Wireless Bridge	IO-Link Wireless [5]
0x8100	33024		Extended Identification	Common Profile [1]
0x8101	33025		Locator	Common Profile [1]
0x8102	33026		ProductURI	Common Profile [1]
0x8F00	36608		BlobTransfer	Blob & FW Update [4]

References:

- [1] [IO-Link Common Profile, Version 1.1, December 2021, Order No. 10.072](#)
- [2] [IO-Link Smart Sensor Profile 2nd Edition, Version 1.1, September 2021, Order No: 10.042](#)
- [3] [IO-Link Safety Extensions with SMI, Version 1.1.3, March 2022, Order No: 10.092](#)
- [4] [IO-Link Profile BLOB Transfer & Firmware Update, Version 1.1, September 2019, Order No: 10.082](#)
- [5] [IO-Link Wireless System Extensions, Version 1.1.3, June 2022, Order No.: 10.112](#)

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