

MIPI I3C Device Characteristics Register

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Device ID										Function	Common category	Secondary category	Tertiary category	Category explanation	Added to DCR
Dec	Hex	Binary								Function	Common category	Secondary category	Tertiary category	Category explanation	Added to DCR
0	00	0	0	0	0	0	0	0	0	Generic (for v1.0 Devices)	Medical			All v1.0 Devices use this ID	18-Nov-2016
1	01	0	0	0	0	0	0	0	1	Do Not Use	Medical			Medical, health, biometrics	
2	02	0	0	0	0	0	0	1	0	Heart Rate Sensor	Medical	Law Enforcement	Sensor		25-Jan-2017
3	03	0	0	0	0	0	0	1	1	ECG sensor	Medical		Sensor		25-Jan-2017
4	04	0	0	0	0	0	0	1	0	EKG sensor	Medical		Sensor		25-Jan-2017
5	05	0	0	0	0	0	1	0	1	GSR (Galvanic Skin Response)	Medical	Law Enforcement	Sensor		25-Jan-2017
6	06	0	0	0	0	0	1	1	0	Breathalyzer	Medical	Automotive Ignition Inter	Law Enforcement		25-Jan-2017
7	07	0	0	0	0	0	1	1	1	Glucose (Blood Glucose)	Medical	Health	Sensor		25-Jan-2017
8	08	0	0	0	0	1	0	0	0	Oxymeter (Blood Oxygenation)	Medical	Health	Sensor		25-Jan-2017
32	20	0	0	1	0	0	0	0	0	Do Not Use	Human Machine Interface				Includes displays, alarms, indicators etc to provide a means to interact with the system involving human senses and providing a means to interact with the system
33	21	0	0	1	0	0	0	0	1	Touch	Human Machine Interface		Sensor	25-Jan-2017	
34	22	0	0	1	0	0	0	1	0	Gesture (Touchless)	Human Machine Interface		Sensor	25-Jan-2017	
35	23	0	0	1	0	0	0	1	1	Grip	Human Machine Interface		Sensor	25-Jan-2017	
36	24	0	0	1	0	0	1	0	0	Fingerprint	Human Machine Interface		Sensor	25-Jan-2017	
37	25	0	0	1	0	0	1	0	1	Haptic	Human Machine Interface		Transducer	25-Jan-2017	
38	26	0	0	1	0	0	1	1	0	Gesture (Acoustic Ultrasonic)	Human Machine Interface		Combination	25-Jan-2017	
39	27	0	0	1	0	0	1	1	1	Audio Alarm	Human Machine Interface		Transducer	25-Jan-2017	
40	28	0	0	1	0	1	0	0	0	HID (Human Interface Device)	Human Machine Interface			17-Oct-2024	
64	40	0	1	0	0	0	0	0	0	Do Not Use	Navigation			Inertial navigation. Pedometers. Can wrk in conjunction with GPS. Avionics (roll, pitch, yaw, azimuth). Stabilized platform for inertial guidance.	
65	41	0	1	0	0	0	0	0	1	Accelerometer	Navigation	Industrial Mechanical	Sensor		25-Jan-2017
66	42	0	1	0	0	0	0	1	0	Gyroscope	Navigation	Industrial Mechanical	Sensor		25-Jan-2017
67	43	0	1	0	0	0	0	1	1	Magnetometer	Navigation	Industrial	Sensor		25-Jan-2017
68	44	0	1	0	0	0	1	0	0	Accel/Gyro Combo	Navigation	Industrial Mechanical	Sensor		25-Jan-2017
69	45	0	1	0	0	0	1	0	1	Accel/Mag Combo	Navigation	Industrial Mechanical	Sensor		25-Jan-2017
70	46	0	1	0	0	0	1	1	0	Accel/Gyro/Mag Combo	Navigation	Industrial Mechanical	Sensor	25-Jan-2017	
96	60	0	1	1	0	0	0	0	0	Do Not Use	Environment			Environmental monitoring. Weather station. Monitor CO2, CO, RADON levels.	
97	61	0	1	1	0	0	0	0	1	Ambient Light	Environment		Sensor		25-Jan-2017
98	62	0	1	1	0	0	0	1	0	Pressure	Environment		Sensor		25-Jan-2017
99	63	0	1	1	0	0	0	1	1	Temperature	Environment		Sensor		25-Jan-2017
100	64	0	1	1	0	0	1	0	0	Humidit	Environment		Sensor		25-Jan-2017
101	65	0	1	1	0	0	1	0	1	UV sensor	Environment		Sensor		25-Jan-2017
102	66	0	1	1	0	0	1	1	0	Air Quality	Environment		Sensor		25-Jan-2017
103	67	0	1	1	0	0	1	1	1	IR sensor	Environment	Communication	Sensor		25-Jan-2017
128	80	1	0	0	0	0	0	0	0	Do Not Use	Industrial, Automotive				
129	81	1	0	0	0	0	0	0	1	Proximity	Industrial, Automotive		Sensor	25-Jan-2017	
130	82	1	0	0	0	0	0	1	0	RGB	Industrial, Automotive	Color Matching	Sensor	25-Jan-2017	
131	83	1	0	0	0	0	0	1	1	Accelerometer (Mechanical Shock)	Industrial, Automotive		Sensor	25-Jan-2017	

Device ID									Function by Category			Category explanation	Added to DCR	
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132	84	1	0	0	0	0	1	0	Oxygen sensor	Industrial, Automotive		Sensor	Industrial use sensors, mechanical actuators, servo's, proximity detectors, etc for industrial automation, robotics. Automotive.	25-Jan-2017
133	85	1	0	0	0	0	1	0	Mass flow sensor	Industrial, Automotive		Sensor		25-Jan-2017
134	86	1	0	0	0	0	1	1	Switch or Solenoid Valve Control	Industrial, Automotive		Actuator		25-Jan-2017
135	87	1	0	0	0	0	1	1	Goniometer	Industrial, Automotive		Sensor		25-Jan-2017
136	88	1	0	0	0	1	0	0	Position sensor	Industrial, Automotive		Sensor		25-Jan-2017
137	89	1	0	0	0	1	0	0	Throttle Control	Industrial, Automotive		Actuator		25-Jan-2017
138	8A	1	0	0	0	1	0	1	Force/Stress sensor	Industrial, Automotive	Human Machine Interface	Sensor		19-Feb-2020
160	A0	1	0	1	0	0	0	0	Do Not Use	Communication			Data communication, transmit, receive, emit, detect.for relatively low data-rate communication. Communication can be through various means to suit the application which might include RF, Optical (including IR), acoustic.	
161	A1	1	0	1	0	0	0	0	NFC (Near Field Communication)	Communication		Combination (Sensor/Transducer)		25-Jan-2017
162	A2	1	0	1	0	0	0	1	IR data link	Communication		Combination		25-Jan-2017
163	A3	1	0	1	0	0	0	1	RF data link	Communication		Combination		25-Jan-2017
164	A4	1	0	1	0	0	1	0	RF link for ranging and localization	Communication		Combination	Data communication with moderate communication speed primarily used for ranging and localization by measuring the distance between 2 or more devices using a radio link	2-Feb-2024
184	B8	1	0	1	1	1	0	0	Do Not Use	Security				
186	BA	1	0	1	1	1	0	1	Security device	Security	ETSI SSP	SSP Rel.17 and onward	Security device used for network authentication in mobile communication networks	16-Feb-2022
187	BB	1	0	1	1	1	0	1	Security device	Security	ETSI UICC	UICC Rel.18 and onward		6-Dec-2023
188	BC	1	0	1	1	1	1	0	Security device	Security	eSE [Embedded Secure Element]	Combination	A Secure Element (SE) is a microprocessor chip that can store sensitive data and run secure apps.	2-Feb-2024
189	BD	1	0	1	1	1	1	0	OCP(Open Compute Platform) Recovery	Security	Open Compute Platform		Device used to restore firmware to operational state	17-Oct-2024
192	C0	1	1	0	0	0	0	0	Do Not Use	Other				
193	C1	1	1	0	0	0	0	1	Bridge	Other				25-Jan-2017
194	C2	1	1	0	0	0	0	1	Hub	Other				25-Jan-2017
195	C3	1	1	0	0	0	0	1	Bus Monitor	Other				25-Jan-2017

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196	C4	1	1	0	0	0	1	0	0	Secondary Controller	Other			Includes cases related to bus services such as monitoring, expansion to other busses, hubs, bridges, computing, memory devices. These cases don't fall under the general categories of sensors and transducers.	25-Jan-2017
197	C5	1	1	0	0	0	1	0	1	Memory	Other				25-Jan-2017
198	C6	1	1	0	0	0	1	1	0	Microcontroller	Other				25-Jan-2017
199	C7	1	1	0	0	0	1	1	1	PMIC	Other				25-Jan-2017
200	C8	1	1	0	0	1	0	0	0	IO Expander	Other				25-Jan-2017
201	C9	1	1	0	0	1	0	0	1	Debug Target System (TS)	Other				19-Feb-2020
202	CA	1	1	0	0	1	0	1	0	Debug and Test System (DTS)	Other				19-Feb-2020
203	CB	1	1	0	0	1	0	1	1	Dual Role Debug System (TS and DTS)	Other				19-Feb-2020
204	CC	1	1	0	0	1	1	0	0	MCTP	Other				8-Oct-2020
205	CD	1	1	0	0	1	1	0	1	Retimer	CXL/PCIe				Protocol aware device used to extend channel reach
208	D0	1	1	0	1	0	0	0	0	Reserved for JESD403 DTI = 0000	JEDEC			JEDEC DDR5 SidebandBus (JESD403) Compliant Devices, used on the DDR5 DIMMs.	21-Apr-2021
209	D1	1	1	0	1	0	0	0	1	Reserved for JESD403 DTI = 0001	JEDEC				21-Apr-2021
210	D2	1	1	0	1	0	0	1	0	Thermal Sensor - First	JEDEC				21-Apr-2021
211	D3	1	1	0	1	0	0	1	1	Reserved for JESD403 DTI = 0011	JEDEC				21-Apr-2021
212	D4	1	1	0	1	0	1	0	0	Differential DIMM Memory First Buffer	JEDEC				21-Apr-2021
213	D5	1	1	0	1	0	1	0	1	Differential DIMM Memory Second Buffer	JEDEC				21-Apr-2021
214	D6	1	1	0	1	0	1	1	0	Thermal Sensor - Second	JEDEC				21-Apr-2021
215	D7	1	1	0	1	0	1	1	1	Reserved for JESD403 DTI = 0111	JEDEC				21-Apr-2021
216	D8	1	1	0	1	1	0	0	0	PMIC - Second	JEDEC				21-Apr-2021
217	D9	1	1	0	1	1	0	0	1	PMIC - First	JEDEC				21-Apr-2021
218	DA	1	1	0	1	1	0	1	0	SPD Hub	JEDEC				21-Apr-2021
219	DB	1	1	0	1	1	0	1	1	Registered Clock Divider	JEDEC				21-Apr-2021
220	DC	1	1	0	1	1	1	0	0	PMIC - Third	JEDEC				21-Apr-2021
221	DD	1	1	0	1	1	1	0	1	Reserved for JESD403 DTI = 1101	JEDEC				21-Apr-2021
222	DE	1	1	0	1	1	1	1	0	Reserved for JESD403 DTI = 1110	JEDEC				21-Apr-2021
223	DF	1	1	0	1	1	1	1	1	Reserved for JESD403 DTI = 1111	JEDEC			21-Apr-2021	
224	E0	1	1	1	0	0	0	0	0	Do Not Use	Generic			The generic category is for cases which don't fall neatly into any of the others. The example I picked is FPGA configuration. Note that some FPGA's can be configured over an I2C bus. However, the higher data-rate of I3C	
225	E1	1	1	1	0	0	0	0	1	FPGA/PLD Configuration	Generic				25-Jan-2017
226	E2	1	1	1	0	0	0	1	0	Camera Photometer	Generic	Sensor			25-Jan-2017
227	E3	1	1	1	0	0	0	1	1	Camera Shutter Control	Generic	Actuator			25-Jan-2017
228	E4	1	1	1	0	0	1	0	0	Camera Focus Control	Generic	Actuator			25-Jan-2017