

DM385 Car BlackBox Reference Design BOM

Function	Description	Device	Manufacturer	Qty
Base Functions	DM385 Davinci Digital Media Processor	DM385	TI	1
	System Reset IC	TPS3801E18DCK	TI	1
	Real-Time Clock	BQ32000DR	TI	1
	DDR3-1600, 128Mx16bit	K4B2G1646C-HCH9	SAMSUNG	2
	NAND, 2Gb, SLC	MT29F2G16ABBEAH4:E	Micron	1
	8CH ESD Array	TPD8E003DQD	TI	1
	4-Wire Touch Screen Controller	TSC2004IRTJR	TI	1
	I2C Voltage Translator	PCA9306DCT	TI	2
	USB ESD and Over-Voltage Protection	TPD4S014DSQ	TI	1
	Backup Battery	ML414HIV01E	SII	1
	LVDS Deserializer	DS90UB914QSQ	TI	1
	PCB			1
	Miscellaneous			1
Power	Voltage Supervisor	TPS3895PDRYT	TI	2
	Supervisory Circuit	TPS3839G33DQN	TI	1
	DDR Regulator 2A	TPS51206DSQT	TI	1
	3A DCDC	TPS5430QDDARQ1	TI	1
	3A DCDC	TPS54319RTE	TI	1
	3A DCDC	TPS5432DDA	TI	5
	LDO, 1.1V	TPS71711DCKR	TI	1
	LDO, 3.3V, 200mA	TPS73033DBV	TI	1
	LDO, Adj, 250mA	TPS73201DBV	TI	5
	Supercap, Vr=2.7V			2
	Miscellaneous			1
Front Sensor Module	Front Sensor	IMX122	SONY	1
	Miscellaneous			1
LCD	LED Driver	TPS61161DRV	TI	1
	3.5" LCD + Touch Module	TM035WDH01-V1.0	TIANMA	1
	32bit Voltage Translator	SN74AVC32T245GKE	TI	1
	Miscellaneous			1
Video Out	Low-Voltage Adjustable Precision Shunt Resistor	TLV431ACDBZR	TI	1
	HDMI Companion IC	TPD125016PWR	TI	1
	Video AMP with 6dB Gain and Filter	OPA360DCK	TI	1
	Miscellaneous			1
WIFI/GPS	WLAN/BT ANT	H2P14WGHBQ0100	Jorjin	1
	GPS ANT	H2P14UGHAQ0100	Jorjin	1
	LDO, 3.3V, 200mA	TPS73033DBV	TI	1
	2-Bit Voltage Translator	TXB0102DCTR	TI	1
	SD Card Voltage Translator	TXS0108ERGY	TI	1
	WLAN/BT/FM/GPS Module	WG7500-00	Jorjin	1
Miscellaneous			1	
Rear Sensor Module	LVDS serializer	DS90UB913QSQ	TI	1
	Rear Sensor			1
	LVDS cable, 5m	MiniUSB Cable		1
	Miscellaneous			1
Env Sensors	Accelometer Sensor	BMA250	Bosch Sensortec	1
	I2C Voltage Translator	PCA9306DCT	TI	1
	Miscellaneous			1
Audio	Stereo Audio Codec	TLV320AIC3110IRHBT	TI	1
	Speaker		Sanico	1
	Microphone	COB627P-2042-10-EB-H	Sanico	1
	Miscellaneous			1
MSP430	MSP430, 32KB+256B Flash	MSP430F22474RHA	TI	1
	I2C Voltage Translator	PCA9306DCT	TI	1
	Miscellaneous			1
Accessories	uSD card, 4GB, Class 10	SDSDAC-004G	SANDISK	1
	Car Power Adaptor (12V, 1A)			1

Function Categories:

Baseline Required	Base Functions = DM383, DDR3, Flash, SD, RTC, Touch
	Power = Baseline Power Front Sensor LCD
Optional	Video Out (HDMI and SD Composite outputs)
	WiFi/GPS
	Rear Sensor
	Env Sensors
	Audio MSP430 Accessories
Miscellaneous Components	Resistors
	Capacitors
	Inductors
	Connectors
	LEDs
	Diodes Crystals
Debug Board	Debug

Total Price

Debug Board				
Debug	3-V TO 5.5-V MULTICHANNEL RS-232 LINE	MAX3223MDBREP	TI	1
	I2C Voltage Translator	PCA9306DCT	TI	1
	LDO, 1.8V, 200mA	TPS73018DBV	TI	1
	LDO, 3.3V, 200mA	TPS73033DBV	TI	1
	8bit Bidirection Voltage Translator	TXB0108PW	TI	1
	2-Bit Voltage Translator	TXS0102DCU	TI	1
		TXS0102DCU	TI	1
	PCB			1
	Miscellaneous	* USB connector, JTAG connector*2, phone jack*2, KEY*3, Slide switch * phone jack plug to RS-232 Connector(300mm)		1

Total Price

IMPORTANT NOTICE FOR TI REFERENCE DESIGNS

Texas Instruments Incorporated ("TI") reference designs are solely intended to assist designers ("Buyers") who are developing systems that incorporate TI semiconductor products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, evaluation and judgment in designing Buyer's systems and products.

TI reference designs have been created using standard laboratory conditions and engineering practices. **TI has not conducted any testing other than that specifically described in the published documentation for a particular reference design.** TI may make corrections, enhancements, improvements and other changes to its reference designs.

Buyers are authorized to use TI reference designs with the TI component(s) identified in each particular reference design and to modify the reference design in the development of their end products. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER TI INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN, including but not limited to any patent right, copyright, mask work right, or other intellectual property right relating to any combination, machine, or process in which TI components or services are used. Information published by TI regarding third-party products or services does not constitute a license to use such products or services, or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

TI REFERENCE DESIGNS ARE PROVIDED "AS IS". TI MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE REFERENCE DESIGNS OR USE OF THE REFERENCE DESIGNS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. TI DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO TI REFERENCE DESIGNS OR USE THEREOF. TI SHALL NOT BE LIABLE FOR AND SHALL NOT DEFEND OR INDEMNIFY BUYERS AGAINST ANY THIRD PARTY INFRINGEMENT CLAIM THAT RELATES TO OR IS BASED ON A COMBINATION OF COMPONENTS PROVIDED IN A TI REFERENCE DESIGN. IN NO EVENT SHALL TI BE LIABLE FOR ANY ACTUAL, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR INDIRECT DAMAGES, HOWEVER CAUSED, ON ANY THEORY OF LIABILITY AND WHETHER OR NOT TI HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, ARISING IN ANY WAY OUT OF TI REFERENCE DESIGNS OR BUYER'S USE OF TI REFERENCE DESIGNS.

TI reserves the right to make corrections, enhancements, improvements and other changes to its semiconductor products and services per JESD46, latest issue, and to discontinue any product or service per JESD48, latest issue. Buyers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All semiconductor products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its components to the specifications applicable at the time of sale, in accordance with the warranty in TI's terms and conditions of sale of semiconductor products. Testing and other quality control techniques for TI components are used to the extent TI deems necessary to support this warranty. Except where mandated by applicable law, testing of all parameters of each component is not necessarily performed.

TI assumes no liability for applications assistance or the design of Buyers' products. Buyers are responsible for their products and applications using TI components. To minimize the risks associated with Buyers' products and applications, Buyers should provide adequate design and operating safeguards.

Reproduction of significant portions of TI information in TI data books, data sheets or reference designs is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. TI is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.

Buyer acknowledges and agrees that it is solely responsible for compliance with all legal, regulatory and safety-related requirements concerning its products, and any use of TI components in its applications, notwithstanding any applications-related information or support that may be provided by TI. Buyer represents and agrees that it has all the necessary expertise to create and implement safeguards that anticipate dangerous failures, monitor failures and their consequences, lessen the likelihood of dangerous failures and take appropriate remedial actions. Buyer will fully indemnify TI and its representatives against any damages arising out of the use of any TI components in Buyer's safety-critical applications.

In some cases, TI components may be promoted specifically to facilitate safety-related applications. With such components, TI's goal is to help enable customers to design and create their own end-product solutions that meet applicable functional safety standards and requirements. Nonetheless, such components are subject to these terms.

No TI components are authorized for use in FDA Class III (or similar life-critical medical equipment) unless authorized officers of the parties have executed an agreement specifically governing such use.

Only those TI components that TI has specifically designated as military grade or "enhanced plastic" are designed and intended for use in military/aerospace applications or environments. Buyer acknowledges and agrees that any military or aerospace use of TI components that have **not** been so designated is solely at Buyer's risk, and Buyer is solely responsible for compliance with all legal and regulatory requirements in connection with such use.

TI has specifically designated certain components as meeting ISO/TS16949 requirements, mainly for automotive use. In any case of use of non-designated products, TI will not be responsible for any failure to meet ISO/TS16949.