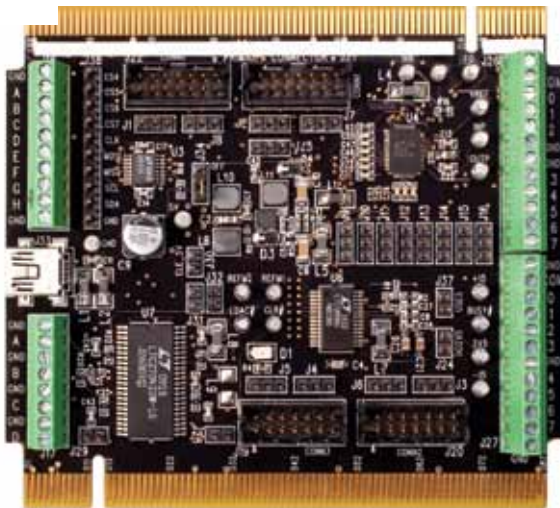




Module for TWR-ADCDAC-LTC

TOWER SYSTEM



TWR-ADCDAC-LTC

Analog module



freescale[™]
semiconductor





Get to know the TWR-ADCDAC-LTC

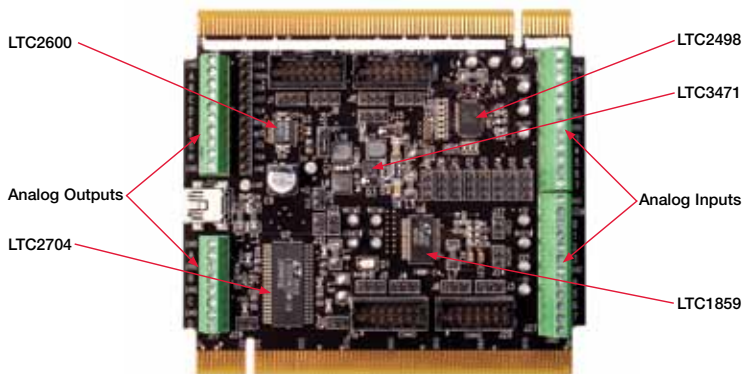


Figure 1: Front Side of TWR-ADCDAC-LTC Module.



TWR-ADCDAC-LTC

The TWR-ADCDAC-LTC precision data converter module is part of the Freescale Tower System, a modular development platform that enables rapid prototyping and tool re-use through reconfigurable hardware. Take your design to the next level and begin constructing your Tower System today by visiting freescale.com/Tower for additional Tower System microcontroller modules and compatible peripherals.



IWR-ADC DAC-LTC Features

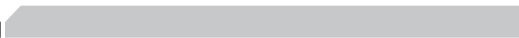
- Freescale Tower compatible high-precision analog peripheral module
- Controllable by any Freescale Tower controller module with an SPI interface
- Two Linear Technology digital-to-analog converters (DACs)
 - LTC2704-16: Quad 16-bit voltage output SoftSpan™ DAC with readback
 - LTC2600: Octal 16-bit rail-to-rail DACs
- Two Linear Technology analog-to-digital converters (ADCs)
 - LTC1859: 8-channel, 16-bit, 100 ksps SoftSpan ADC with shutdown
 - LTC2498: 24-bit 8-/16-channel delta sigma ADC with Easy Drive™ input current cancellation
- Linear Technology voltage regulator
 - LTC3471: Dual 1.3A, 1.2 MHz boost/inverter
- Linear Technology voltage reference
 - LTC6655-5: 0.25 ppm noise, low drift precision buffered 5V reference
- Four 14-pin headers for connecting to any Linear Technology QuikEval™ demonstration board



TWR-ADCDAC-LTC Jumper Options

The following is a list of all the options selectable by jumpers. The **default** installed jumper shunt settings are shown in **bold**.

Jumper	Option	Setting	Description
J1–J8	QuikEval I ² C/SPI Selection	1-2	Connect I ² C signals to QuikEval header
		2-3	Connect SPI signals to QuikEval header
J9	SPI Port Selection -- SPI_CLK	1-2	Use SPI_CLK signal from SPI0
		2-3	Use SPI_CLK signal from SPI1
J10	SPI Port Selection -- SPI0_CSx	1-2	Select SPI0_CS0
		2-3	Select SPI0_CS1
J11	SPI Port Selection -- SPI1_CSx	1-2	Select SPI1_CS0
		2-3	Select SPI1_CS1
J12	SPI Port Selection -- SPI_MOSI	1-2	Use SPI_MOSI signal from SPI0
		2-3	Use SPI_MOSI signal from SPI1
J13	SPI Port Selection -- SPI_MISO	1-2	Use SPI_MISO signal from SPI0
		2-3	Use SPI_MISO signal from SPI1
J25	SPI Port Selection -- SPI_CS	1-2	Use SPI0_CSx (see J10)
		2-3	Use SPI1_CSx (see J11)



Jumper	Option	Setting	Description
J14	SPI Chip-Select Encoding Bit 0 Setting	1-2	Connected to 3.3V
		2-3	Connected to GND
		OFF	Driven by GPIO9
J15	SPI Chip-Select Encoding Bit 1 Setting	1-2	Connected to 3.3V
		2-3	Connected to GND
		OFF	Driven by GPIO8
J16	SPI Chip-Select Encoding Bit 2 Setting	1-2	Connected to 3.3V
		2-3	Connected to GND
		OFF	Driven by GPIO7
J28, J29 J31, J32	LTC2704 VOSx GND Connection	ON	Connect VOSA, VOSB, VOSC, VOSD to GND
		OFF	Disconnect VOSx from GND
J30	Tower Power Connection	ON	Connect on-board 5V rail to Tower System
		OFF	Isolate on-board 5V rail from Tower System
J34	LT3471 Shutdown	1-2	LT3471 voltage regulator enabled
		2-3	LT3471 voltage regulator disabled
J37	LTC1859 Reference Voltage Selection	ON	Use output of LTC6655-5 as reference
		OFF	Use GND as reference





**Analog and Mixed
Signal Integrated Circuit**

To learn more about the TWR-ADC DAC-LTC and other modules within the Tower System, go to **freescale.com/Tower**. To become a member of the online Tower Geeks community, go to **towergeeks.org**.

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