



# TXS Option Sheet

## How to use this Option Sheet:

1. Please fill-in this Option Sheet carefully. In case you have questions, we advise contacting ISISPACE prior to sending the Option Sheet at: [sales@isispace.nl](mailto:sales@isispace.nl). Note that you are responsible to make sure the inputs you make are correct, since ISISPACE will produce the product accordingly, and shall not be responsible to verify your inputs or liable to provide refunds, make alterations or send a new product in case your input does not reflect your needs correctly.
2. Fill in the form digitally. You will need to have Adobe Acrobat reader installed (free download available at <http://get.adobe.com/reader/>)
3. Press the check button at the end to verify if your Option Sheet is complete.
4. Once you are ready, press the Enable Read Only button to prevent accidental changes, save the changes and send the digitally filled-in Option Sheet by email to your Sales Representative.

## Customer Contact Information

Contact Name:	
Email Address:	
Phone Nr:	
Organization / Company / Institution	
Address:	
Address (Cont'd):	
Country:	

## Additional Information (Optional)

Intended use (EM/FM/QM)	
Mission name	

## For ISISPACE Use – Leave Blank –

Order Confirmation:	
Allocated WO:	
Sales responsible:	
Project/Ref.:	

## Electrical Configuration

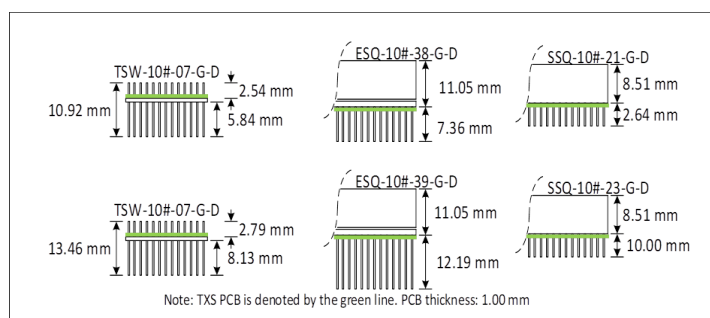
TXS makes use of a Cubesat Kit Bus (CSKB) – Lite connector interface which carries the power and I2C data interface.

### CSKB-lite Pin-out

Even though only one I2C bus is used, there are two alternative sets of pins on the CSKB-lite connectors that could be used to connect to the board.

Parameter	Supported values	Customer selected value	Notes
I2C SCL	H1-43 (default) or H1-21		
I2C SDA	H1-41 (default) or H1-23		
Supply voltage line	H2-45 & H2-46 (default) or H1-25 & H1-26 or H1-29 & H1-30		2 adjacent pins are always used in parallel

### CSKB-lite header connector



	H1A, H2A	H1B, H2B	Configuration	Remarks
	TSW-106-07-G-D	TSW-107-07-G-D	Stack termination top. No other subsystems can be stacked possible above the TXS	Default
	TSW-106-14-G-D	TSW-107-14-G-D	Stack termination top. No other subsystems can be stacked possible above the TXS	Additional cost and / or lead time may apply
	ESQ-106-38-G-D	ESQ-107-38-G-D	Stack through. Other subsystems can be stacked above the TXS.	Additional cost and / or lead time may apply
	ESQ-106-39-G-D	ESQ-107-39-G-D	Stack through. Other subsystems can be stacked above the TXS.	Additional cost and / or lead time may apply
	SSQ-106-21-G-D	SSQ-107-21-G-D	Stack through. Other subsystems can be stacked above the TXS.	
	SSQ-106-23-G-D	SSQ-107-23-G-D	Stack through. Other subsystems can be stacked above the TXS.	
	Alternative		Write full SAMTEC product code below	This option must be approved by ISISPACE prior to order confirmation and may have additional cost and / or lead time



## Grounding of mounting holes

The board is mechanically mounted in a CubeSat stack by means of four mounting holes. By default, these are connected too TXS power, data and RF ground via a 0 ohm resistor. Optionally, these resistors can be left out. For alternative grounding schemes or components to be populated, please leave a comment on the Additional Comment section. ISIS will review your request and contact you as soon as possible.

Parameter	Supported values	Customer selected value
Mounting holes connected to power & data GND?	Yes (default) / no	

## Software Configuration

### I2C Protocol Settings

TXS contains two controllers, a supervisor which is always powered, and the MSS microcontroller in the baseband system, which is only powered in "standby" and "TX ON" modes. Both have a unique I2C address and are connected to the I2C housekeeping data interface. The I2C addresses can be any 7-bit number with the exception of reserved addresses, specified in the I2C bus specification ([http://www.nxp.com/documents/user\\_manual/UM10204.pdf](http://www.nxp.com/documents/user_manual/UM10204.pdf)) and listed in the table below.

Slave address (binary)	Slave address (hex)
0000 000	0x00
0000 001	0x01
0000 010	0x02
0000 011	0x03
0000 1XX	0x04 – 0x07
1111 XXX	0x78 – 0x7F

Parameter	Customer selected value (hex)	Notes
Supervisor I2C address		Must be different from MSS I2C address
MSS I2C address		Must be different from Supervisor I2C address



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## Supervisor I2C Watchdog Settings

This watchdog is implemented for safety reasons. If the TXS Supervisor does not receive any command over I2C during the WDT timeout period, the supervisor will reset itself and put TXS into "Supervisor on only" mode.

Parameter	Supported values	Customer selected value	Unit	Notes
Supervisor I2C WDT enable	Yes (default) / no		-	
Supervisor I2C WDT timeout (if enable = "yes")	0-3600, default = 60 secs		seconds	

## Additional Comments

Please use this section in case you have additional comments or remarks. If any further option has been agreed during the sales process, please add it here. Everything listed here is subject to ISISPACE approval before order confirmation.