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SkyeTek Host Interface Board Reference Guide



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Host Interface Board v5.1 Reference

Overview

The SkyeTek host interface board offers:

- SkyeModule M2, M4, M7, M9 or M10 compatibility for Mounting Hole form factor
- RoHS compliant board and components

Hardware Required

- Six-volt, 3A power supply
- Serial/USB cable
- Five two-pin 100 mil jumpers (provided)
- Additional cable/wires as necessary to connect to the other interfaces (SPI and I2C)

Mechanical Specifications

Note – All drawing dimensions are in millimeters. Production units may vary slightly from the measurements given.

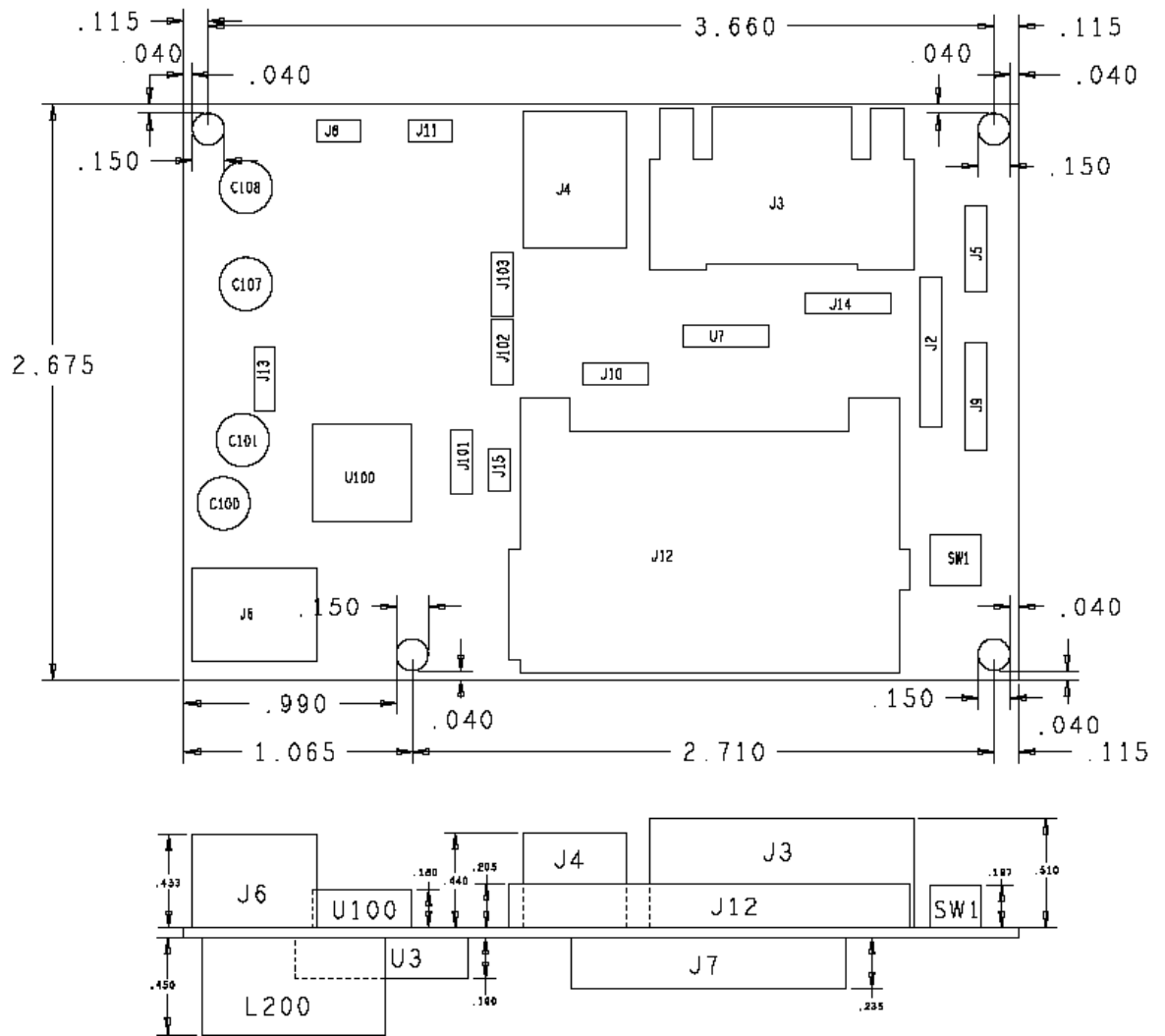
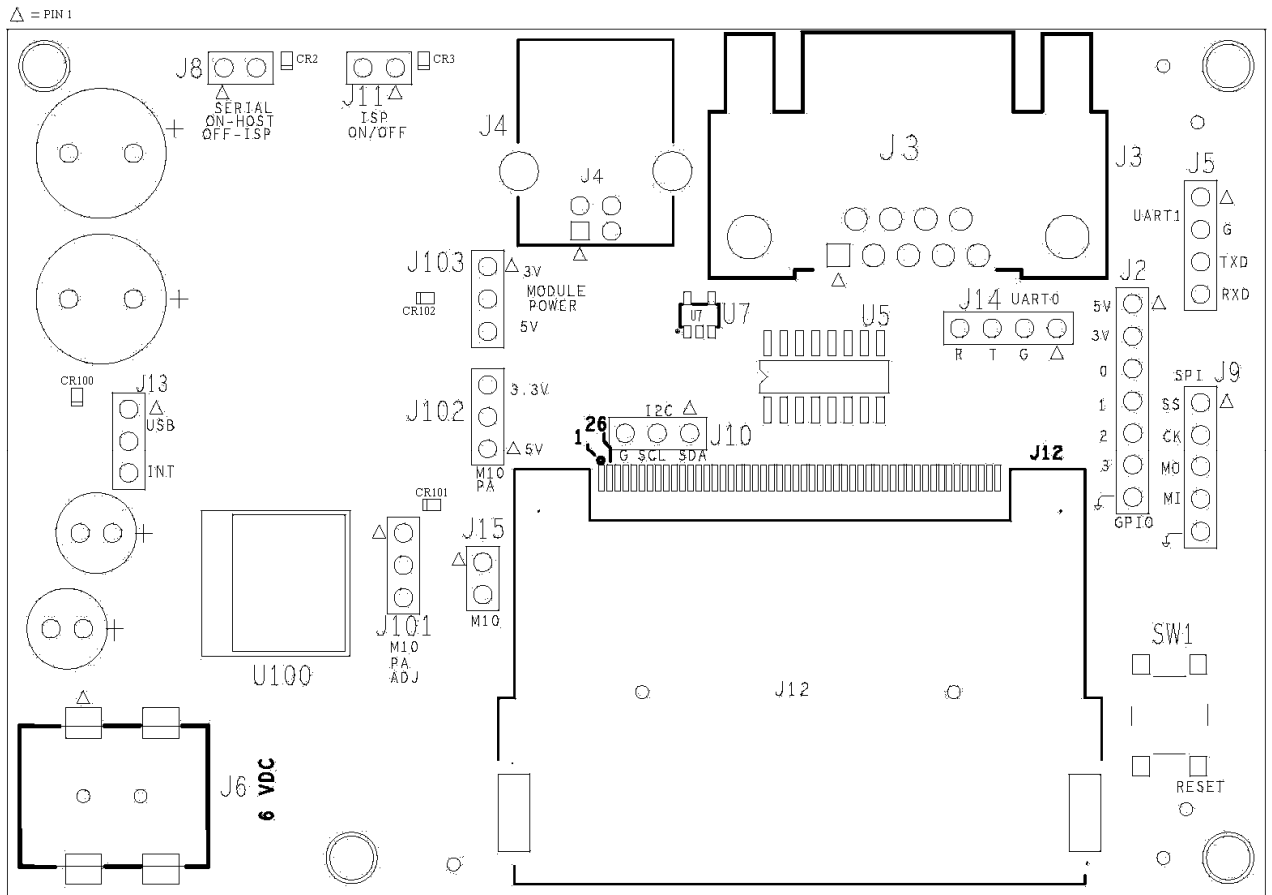


Figure A-1 Host Interface Board Dimensions

Figure A-2 shows a top view of the host interface board including connectors.



↑
MH-style connector (J7)
for SkyeModule reader
on bottom of interface

Figure A-2 Host Interface Board, Top View

Connector Descriptions

This section describes the electrical connections of the SkyeTek host interface board. Table B-1 lists the connectors (jumpers) on the host interface board.

Table B-1 Jumper/Pin Connections on the Host Interface Board

Jumper	Description/Notes	
Δ	NOTE: Δ indicates pin 1 for each connection	
J2	GPIO block (also used for MUX control) – see “GPIO Connections” on page 7 for details.	
J3	RS-232 connector	
J4	USB connector	
J5	UART1 – for external UART connection with TTL/RS-232 host interface	
J6	AC power connector	
J7	24-pin, double row connector for SkyeModule mounting hole (MH) form factor, located on bottom of host interface board. Please consult the reference guide for your SkyeModule reader to get the pin mapping information appropriate to your reader.	
J8	Serial port selector	
	ON (jumpared)	<ul style="list-style-type: none"> ● (Default) Enables serial port operations ● LED (CR2) should light when board has power
	OFF	Disables serial power communications
J9	SPI interface	
	SS (1)	Slave select (pulled up by R7)
	CK (2)	Serial clock
	MO (3)	Master out/slave in (host out/module in)
	MI (4)	Master in/slave out (host in/module out)
	GND (5)	Ground
J10	I ² C interface	
	SDA (1)	Serial data
	SCL (2)	Serial clock
	G (3)	Ground
J11	ISP mode	
	OFF	(Default) ISP mode off
	ON (if jumpared)	<ul style="list-style-type: none"> ● ISP mode on. ● LED (CR3) should light when board has power. ● Requires reset or power-on to take effect.

Jumper	Description/Notes	
J12	Uninstalled/Optional SkyeModule connector for Compact Flash (CF) form factor.	
J13	USB power selection	
	1 and 2	Power provided through USB (not supported on M10)
	2 and 3	(Default) External power supply
J14	UART0 – for internal use only	
J15	M10 PA Power	
	ON (jumpered)	(Default) Provides power to M10 PA (only used for M10)
	OFF	PA power off, M7 and M9 have regular power and PA power tied on the module (M2/M4/M7/M9)
J101	No jumper used, RFU – M10 PA adjust	
J102	PA voltage selection (only used for the M10)	
	1 and 2	(Default) Sets PA voltage to 3.3V
	2 and 3	Sets PA voltage to 5V
J103	Module voltage selector	
	1 and 2 (right)	(Default) Jumpered for 3.3V operation (M10 only)
	2 and 3 (left)	Jumpered for 5 V operation (M2/M4/M7/M9)
SW1	RESET	Resets power to the module when pushed down

GPIO Connections

Table B-2 lists the J2 pin connections, which are used for GPIO control.

Table B-2 J2 – GPIO

Pin	Description
1	5 V
2	3V
3	GPIO 0
4	GPIO 1
5	GPIO 2
6	GPIO3
7	Ground

Host Interface Board v3.0 Reference

Overview

The Skyetek host interface board offers:

- SkyeModule M2, M4, M7, or M9 compatibility for both Mounting Hole and Compact Flash form factors (**M10 is not supported with host interface board v3.0**)
- RoHS compliant board and components

Hardware Required

- Nine-volt, 1A power supply
- USB cable
- Two two-pin 100 mil jumpers (provided)
- Additional cable/wires as necessary to connect to the other interfaces (SPI and I2C)

Mechanical Specifications

- Four 3.0 mm mounting holes, each located approximately 1.3 mm from the edge of the board.
- Board is 78.5 mm wide x 68.2 mm long.
- Center-to-center from mounting holes is 72.5 mm x 65.2 mm.
- RS-232 connector is tallest component on top of board at 12.8 mm.
- 24-pin MH connector is tallest component on bottom of board at 6.0 mm.
- Connecting a SkyeModule M2, M4, M7, or M9 increases the length to approximately 82.0 mm.

Figure B-1 shows a top view of the host interface board.

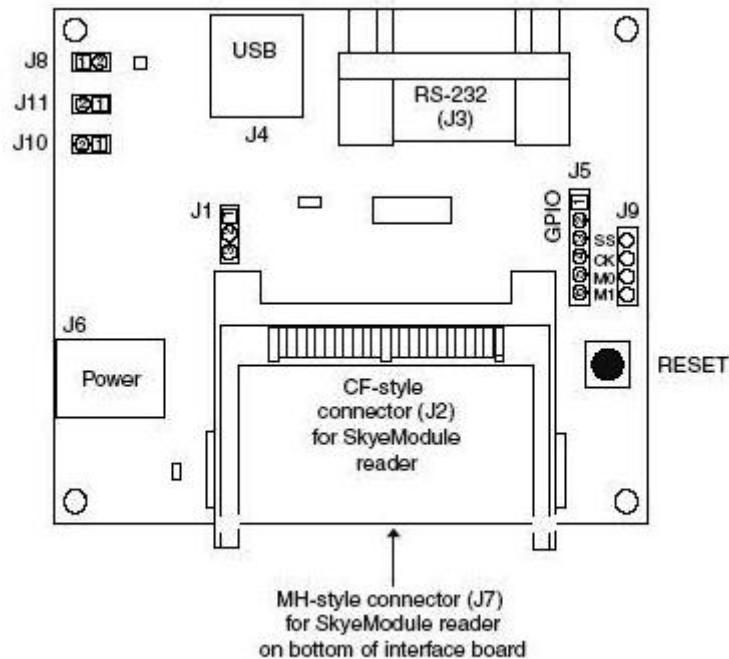


Figure B-1 Host Interface Board, Top View

Connector Descriptions

This section describes the electrical connections of the SkyeTek host interface board. Table B-1 lists the connectors (jumpers) on the host interface board.

Table B-1 Jumper/Pin Connections on the Host Interface Board

Jumper	Description/Notes	
J1	Module voltage selector:	
	1 and 2 (right)	Not used
	2 and 3 (left)	(Default) Jumpered for 5 V operation
J2	SkyeModule connector for Compact Flash (CF) form factor – see “24-Pin and 50-Pin SkyeModule Connectors” on page 11 for details.	
J3	RS-232 connector	
J4	USB connector	
J5	GPIO block (also used for MUX control) – see “GPIO Connections” on page 11 for details.	
J6	AC power connector	
J7	SkyeModule connector for mounting hole (MH) form factor, located on bottom of host interface board – see “24-Pin and 50-Pin SkyeModule Connectors” on page 11 for details	
J8	Serial port selector:	
	ON (jumpered)	<ul style="list-style-type: none"> ● (Default) Enables serial port operations ● Blue LED (CR2) should light when board has power
	OFF	Disables serial power communications
J9	SPI interface	
	SS (1)	Slave select (pulled up by R7)
	CK (2)	Serial clock
	MO (3)	Master out/slave in (host out/module in)
	MI (4)	Master in/slave out (host in/module out)
J10	I ² C interface	
	Pin 1 (right)	SDA – serial data
	Pin 2 (left)	SCL – serial clock
J11	ISP mode:	
	ON (if jumpered)	<ul style="list-style-type: none"> ● ISP mode on. ● Blue LED (CR3) should light when board has power. ● Requires reset or power-on to take effect.
	OFF	(Default) ISP mode off

GPIO Connections

Table B-3 lists the J5 pin connections, which are used for GPIO control.

Table B-3 J5 – GPIO

Pin	Description
1	3.3 V
2	GPIO 0
3	GPIO 1
4	GPIO 2
5	GPIO 3
6	Ground

24-Pin and 50-Pin SkyeModule Connectors

The pin mappings for the 24-pin, double-row connector (location J7 on the bottom of the host interface board) for SkyeModules with the MH form factor and the 50-pin, double-row connector (location J2 on top of the host interface board) for SkyeModules with the CF form factor vary according to the type of SkyeModule you are using. Consult the reference guide for your SkyeModule reader to get the mapping information appropriate to your reader.