Thermal 3 vs Thermal 2 Errors – Error List by Subsystem – Field Access

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
ACT			08000	The ACT is in use by another task
			08001	Actuator initialization failed
			08002	The board version is not supported
			08003	The shutter control is invalid
			08004	The stepper driver is invalid
			08005	The number of steps is invalid
			08006	The shutter state is unknown
			08007	The stepper driver is active
			08008	Timeout actuating the stepper driver
			08009	The fast shutter was not open for imaging
			08010	Unexpected software failure
ADC	00100	The A/D conversions have been disabled		
	00101	Timeout waiting for the A/D conversion		
	00102	The sample element is invalid		
	00103	The control mode is invalid		
BBS	00200	The BBS is in use by another task	06400	The BBS is in use by another task
	00201	Beam-balance initialization failed	06401	Beam-balance initialization failed
	00202	The shutter control is invalid	06409	The shutter control is invalid
	00203	Failure determining the shutter state		
	00204	The beam-balance sensor calibration is invalid		
	00205	The head power mode is invalid	06408	The head power mode is invalid
	00206	Failure opening the media	06402	Failure opening the media
	00207	Failure closing the media	06403	Failure closing the media
	00208	The mode/state of the laser diode is invalid	06404	The mode/state of the laser diode is invalid
	00209	The mode/state of the beam-pointing is invalid	06405	The mode/state of the beam-pointing is invalid
	00210	The mode of the light valve is invalid	06406	The mode of the light valve is invalid
	00211	Timeout waiting for the sample acquisition	06420	Timeout waiting for the sample acquisition
	00212	Timeout waiting for the sample accumulation		
			06410	The spot increment is invalid
			06412	The polarity could not be configured
	00213	Failure configuring the specified spot(s)	06411	The specified spots could not be configured
	00214	Failure configuring the beam-balance sensor		
	00215	Failure calibrating the beam-balance sensor		
	00216	Beam-balance prevented by the range of pulse heights	06415	Beam-balance prevented by the range of pulse heights
	00217	Beam-balance prevented by drift errors	06416	Beam-balance prevented by drift errors

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
BBS Cont'd	00218	Beam-balance error exceeds the maximum error	06417	Beam-balance error exceeds the maximum error
			06418	Insufficient signal for the beam-balance
	00219	The beam-balance sensor samples are saturated	06419	The beam-balance sensor samples are saturated
	00220	The beam-balance sensor shutter could not be opened		
	00221	The beam-balance sensor shutter could not be closed		
	00222	Insufficient signal at maximum gain		
	00223	The control mode is invalid	06407	The control mode is invalid
	00224	A beam-balance is in progress	06413	A beam-balance is in progress
	00225	The beam-balance has been aborted	06414	The beam-balance has been aborted
			06421	The polarity state is invalid
			06422	The beam piston is invalid
			06424	Imaging may be affected by a dead pixel
	00226	Unexpected software failure	06425	Unexpected software failure
BNK	00300	The bank is in use by another task		
	00301	The memory address is invalid		
	00302	Requested memory size is unavailable		
	00303	The block address is invalid		
	00304	The search of the bank is complete		
BPD	00400	The BPD is in use by another task	04400	The BPD is in use by another task
	00401	Beam-pointing initialization failed	04401	Beam-pointing initialization failed
	00402	The control mode is invalid	00402	The control mode is invalid
	00403	Timeout waiting for the sample acquisition		
			04403	The laser mode is invalid
	00404	The beam-pointing control loop is unstable		
	00405	The beam-pointing actuator is over current		
			04404	The sensor mode is invalid
			04405	The DBPS configuration is invalid
			04406	The DBPS configuration is unknown
			04407	Timeout waiting for the sample acquisition
			04408	The beam-pointing controller is invalid
			04409	The beam-pointing actuator is invalid
			04410	Invalid function parameter
			04411	The sample data is preventing a linear fit
			04412	The calibrated values are out of range

Thermal 3 vs Thermal 2 Errors – Error List by Subsystem – Field Access

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
BPD Cont'd			04413	The beam-pointing signal level is invalid
			04414	The beam-pointing actuator is saturated
			04415	The beam-pointing controller is unstable
			04416	The configuration is not supported
	00406	Unexpected software failure	04417	Unexpected software failure
DBG	00500	The trace mode is invalid	06600	The trace mode is invalid
	00501	The trace buffer is invalid	06601	The trace buffer is invalid
			06602	The memory test buffer specification is invalid
			06603	The memory test failed
			06604	The Ethernet controller data bit walk test failed
			06605	The address bus bit walk test failed
			06606	The relative clock frequency test failed
DGS			04800	The diagnostic stream is in use by another task
			04801	Failure opening a socket
			04802	Failure setting the socket options
			04803	Failure binding the socket
			04804	Failure listening to the socket
			04805	Failure accepting the socket
			04806	Failure sending the stream data
			04807	Unexpected software failure
DIR	00700	Directory initialization failed		
	00701	The flash sector organization failed		
	00702	Firmware directory section is corrupt		
	00703	Firmware directory section has been erased		
	00704	Section type is invalid	00200	Section type is invalid
	00705	Section address is invalid	00201	Section address is invalid
			00202	Directory does not exist
	00706	FCB checksum is invalid	00203	FCB checksum is invalid
	00707	File checksum is invalid	00204	File checksum is invalid
			00205	End of directory has been found
	00708	File not found	00206	File not found
	00709	File is at EOF	00207	File is at EOF
			00208	The compressed file is corrupt
			00209	Unexpected software failure

Thermal 3 vs Thermal 2 Errors – Error List by Subsystem – Field Access

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
DTL	04800	The DTL is in use by another task	07000	The DTL is in use by another task
	04801	The datalink port state is invalid	07001	The datalink port state is invalid
	04802	The logical channel is invalid	07002	The logical channel is invalid
	04803	The datalink has lost synchronization	07003	The datalink has lost synchronization
	04804	The datalink port is not idle	07004	The datalink port is not idle
			07005	The datalink has been corrupted
			07006	Failure opening a socket
			07007	Failure setting the socket options
			07008	Failure binding the socket
			07009	Failure listening to the socket
			07010	Failure accepting the socket
			07011	Failure receiving the character(s)
			07012	Failure sending the character(s)
	04805	Unexpected software failure	07013	Unexpected software failure
EED	01100	The registry is in use by another task		
	01101	The entry size is invalid		
	01102	A registry key was not found		
	01103	The write verify indicates a write failure		
	01104	The registry section checksum is invalid		
	01105	The registry sections are different		
	01106	Both parameter sections are corrupt		
	01107	The primary parameter section was recovered		
	01108	The primary parameter section is corrupt		
	01109	The secondary parameter section was recovered		
	01110	The secondary parameter section is corrupt		
	01111	The search of the registry is complete		
ERR	01200	Invalid function parameter	00400	Invalid function parameter
	01201	Invalid subsystem ID	00401	Invalid subsystem ID
	01202	Subsystem registration error	00402	Subsystem registration error
	01203	Invalid subsystem table	00403	Invalid subsystem table
	01204	Duplicate error code found	00404	Duplicate error code found
	01205	Invalid error code	00405	Invalid error code
	01206	Error code was not found	00406	Error code was not found
	01207	The subsystem has not registered information	00407	The subsystem has not registered information
	01208	The search is complete	00408	The search is complete

Thermal 3 vs Thermal 2 Errors – Error List by Subsystem – Field Access

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
EVT			05000	The event logger is in use by another task
			05001	Event logger initialization failed
			05002	The event point is invalid
			05003	The cache state is invalid
			05004	Invalid function parameter
			05005	Unexpected software failure
FBT			00600	Boot level is invalid
			00601	Section type is invalid
			00602	Unexpected software failure
FLS	01500	Flash type not recognized	00800	Flash type not recognized
			00801	Flash section invalid
	01501	Flash address invalid	00802	Flash address invalid
	01502	Attempt to program failed	00803	Attempt to program failed
	01503	Attempt to erase failed	00804	Attempt to erase failed
	01504	Program/erase command failed		
	01505	Attempt to program/erase timed out	00805	Attempt to program/erase timed out
	01506	The flash is in use by another task	00806	The flash is in use by another task
FOC			01000	Focus subsystem internal error
	01300	Invalid function parameter	01001	Invalid function parameter
	01301	Unexpected software failure		
	01302	Timeout waiting for the sample acquisition		
	01303	+5V out of range		
	01304	-5V out of range		
	01305	Actuator drive supply out of range		
	01306	Checksum of waveform data invalid		
	01307	Timeout waiting for focus OK		
	01308	Shutdown due to lens position instability		
	01309	Matrix inversion error: Unable to find SVF coefficients		
	01310	Polynomial fit error: Unable to find SVF coefficients		
	01311	Poles not complex: Unable to find SVF coefficients		
	01312	Damping factor invalid: Unable to find SVF coefficients		
	01313	Focus error: Media out of range		
	01314	Focus signal too low: Image may be off media		

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
FOC Cont'd	01315	Focus timeout waiting for drum synchronization (check head cabling)		
	01316	Actuator movement too small to determine SVF coefficients		
	01317	Too few oscillations to determine SVF coefficients		
	01318	Unable to determine SVF coefficients from data		
	01319	Actuator movement too small to determine LUT		
	01320	Unable to determine LUT from data		
	01321	Focus laser calibration out of range: Check calibration resistor		
	01322	Actuator is not in force mode		
	01323	Actuator is not in current mode		
	01324	Initial lens is out of position		
	01325	Two solutions for best gap value – unable to continue		
	01326	Gap solutions are complex – unable to continue		
	01327	No gap solution within range – unable to continue		
	01328	Unable to setup sample clock: SCLK freq too high		
	01329	Unable to turn on focus laser: Safety loop open		
	01330	Focus laser not turning on		
	01331	Ignoring some image parameters: Focus is on		
	01332	HC board version is too low		
	01333	Focus laser must be in current mode		
	01334	Unable to find lasing threshold		
	01335	Focus laser not turning off		
	01336	Focus signal too High: Media too reflective or rcvrgain too high		
	01337	Media thickness is out of range		
	01338	Media reflectivity out of range		
	01339	Focus receiver gain out of range		
	01340	Focus surface depth out of range		
	01341	Image size/clamp shadows invalid		
	01342	Focus mode is invalid		
	01343	Total swaths exceeded: holding for remainder of image		
	01344	Images too small: Not enough focus samples		

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
FOC Cont'd	01345	SCLK not detected		
	01346	Mismatch between specified and measured pixels per rotation		
	01347	Insufficient focus memory available for set image parameters		
	01348	Mismatch between total focus samples/cycle and image parameters		
	01349	Mismatch between focus samples/image area and image parameters		
	01350	Featureless edge detect timeout		
	01351	Featureless edge detect data index out of range		
	01352	Featureless edge detect before edge buffer already full		
	01353	Featureless edge detect before edge buffer not full		
	01354	Unable to find error step at edge of plate		
	01355	Data is too noisy to find plate surface		
	01356	Unable to find sum based edge		
	01357	Overflow during featureless edge detect		
	01358	Featureless edge detect after edge buffer full		
	01359	Commanded lens position exceeds travel limit		
	01363	Focus laser incompatibility, or focus laser circuit faulty		
			01002	Invalid command line argument
			01003	Failure opening a socket
			01004	Failure setting the socket options
			01005	Failure binding the socket
			01006	Failure listening to the socket
			01007	Failure accepting the socket
			01008	Failure sending the stream data
			01009	Failure receiving the stream data
			01010	End of stimulus data file reached
			01011	Stimulus table filled before download complete
			01012	Stimulus table is empty
			01013	LVDT primary offset out of range
			01014	LVDT primary amplitude out of range
			01015	LVDT primary phase out of range
			01016	LVDT secondary offset out of range

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
FOC Cont'd			01017	LVDT secondary amplitude out of range
			01018	Unsafe to execute command in the current state
			01019	The current focus mode is invalid
			01020	Timeout initializing focus lens tube
			01021	Excessive travel during focus lens tube init
			01022	Insufficient travel during focus lens tube init
			01023	Focus lens actuator offset current out of range
			01024	Focus drive system not initialized
			01025	Focus drive update timeout
			01026	Focus drive control signal out of range
			01027	LVDT sensor not calibrated
			01028	Timeout waiting to enter edge ISR state
			01029	Timeout waiting to learn focus
			01030	Focus Tracking Error
			01031	Timeout entering sine state in Bode analysis
			01032	Timeout entering park state in Bode analysis
			01033	Learn 2 not allowed twice in a row
			01034	Learn 1 must precede learn 2
			01035	Timeout waiting for fixed lens position
			01036	Timeout entering parked lens position
			01037	Total swaths exceeded: holding for remainder of image
HDW			01200	Unexpected software failure
			01201	FPGA programming: 'Init pin' asserted before config load done.
			01202	FPGA programming: 'Done pin' not asserted after config loaded
			01203	FPGA programming: Timeout on 'Init pin' deassert after 'Prg pin' deassert
			01204	FPGA programming: Timeout on 'Init init' assert after 'Pgm pin' assert
			01205	FPGA programming: Timeout on PLL lock status after reset
			01206	SAT: Timeout on satellite register update
			01207	Invalid command line argument
			01208	Satellite not detected during system initialization
			01209	Polled read satellite interface read timeout
			01210	Polled read satellite interface received framing error
			01211	Polled read satellite interface received parity error

Thermal 3 vs Thermal 2 Errors – Error List by Subsystem – Field Access

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
HIF	04900	The shutter control is invalid	07400	The shutter control is invalid
	04901	The control mode is invalid	07401	The control mode is invalid
	04902	The command packet is invalid	07402	The command packet is invalid
	04903	The command packet length is invalid	07403	The command packet length is invalid
	04904	The command code is not supported	07404	The command code is not supported
	04905	The command parameter is invalid	07405	The command parameter is invalid
	04906	Timeout waiting for the write laser	07406	Timeout waiting for the write laser
	04907	Timeout waiting for the focus	07407	Timeout waiting for the focus
	04908	Timeout waiting for the stroke calibration	07408	Timeout waiting for the stroke calibration
	04909	The NVS parameter is not supported	07409	The NVS parameter is not supported
	04910	Failure reading the NVS parameter	07410	Failure reading the NVS parameter
	04911	Failure writing the NVS parameter	07411	Failure writing the NVS parameter
	04912	Failure constructing the media specifier	07412	Failure constructing the media specifier
	04913	Failure configuring the redirect mode		
	04914	Failure received redirected characters		
	04915	Failure swapping the serial ports		
	04916	Failure translating the error information	07413	Failure translating the error information
	04917	The error information is invalid	07414	The error information is invalid
	04918	Redirection must be disabled for negotiation		
	04919	The requested baud rate is not supported	07415	The requested baud rate is not supported
	04920	The requested baud rate is too low	07416	The requested baud rate is too low
	04921	The unsolicited packet has been blocked	07417	The unsolicited packet has been blocked
	04922	The requested application protocol is not supported	07418	The requested application protocol is not supported
	04923	Unexpected software failure	07419	Unexpected software failure
HLT			03800	Invalid command line argument
			03801	All metric faults now cleared
			03802	Unexpected software failure
			03810	Volt Range Error [mask 0]: HC Board (3.3V)
			03811	Volt Range Error [mask 1]: HC Board (A3.3V)
			03812	Volt Range Error [mask 2]: HC Board (2.5V)
			03813	Volt Range Error [mask 3]: HC Board (G2.5V)
			03814	Volt Range Error [mask 4]: HC Board (1.5V)
			03815	Volt Range Error [mask 5]: HC Board (Vdsp)
			03816	Volt Range Error [mask 6]: HC Board (Vref)

Thermal 3 vs Thermal 2 Errors – Error List by Subsystem – Field Access

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
HLT Cont'd			03817	Volt Range Error [mask 7]: HC Board (Vtt)
			03818	Volt Range Error [mask 8]: HC Board (Vid)
			03819	Volt Range Error [mask 9]: HC Board (GND)
			03820	Volt Range Error [mask 10]: HC Board (Ext)
			03821	Temp Range Error [mask 11]: HC Board (BoardTemp)
			03822	Temp Range Error [mask 12]: HC Board (FpgaTemp)
			03823	Volt Range Error [mask 13]: ACT Board (3.3V)
			03824	Volt Range Error [mask 14]: ACT Board (2.5V)
			03825	Volt Range Error [mask 15]: ACT Board (VDD12)
			03826	Volt Range Error [mask 16]: ACT Board (VDD8)
			03827	Volt Range Error [mask 17]: ACT Board (VSS12)
			03828	Volt Range Error [mask 18]: ACT Board (VSS8)
			03829	Volt Range Error [mask 19]: ACT Board (VDD12FANS)
			03830	Volt Range Error [mask 20]: ACT Board (VBUS)
			03831	Volt Range Error [mask 21]: ACT Board (VPZ)
			03832	Volt Range Error [mask 22]: ACT Board (VPP)
			03833	Temp Range Error [mask 23]: ACT Board (BoardTemp)
			03834	Volt Range Error [mask 24]: ACT Board (Vmid)
			03835	Volt Range Error [mask 25]: ACT Board (1.25 Vref)
			03836	Pres Range Error [mask 26]: ACT Board (AirPress)
			03837	Temp Range Error [mask 27]: ACT Board (AuxTemp)
			03838	Temp Range Error [mask 28]: NPE Board (BoardTemp)
			03839	Temp Range Error [mask 29]: NPE Board (ThermTmp1)
			03840	Temp Range Error [mask 30]: NPE Board (ThermTmp2)
			03841	Temp Range Error [mask 31]: RFE Board (BoardTemp)
			03842	Humi Range Error [mask 32]: IBS Board (Humidity)
			03843	Volt Range Error [mask 33]: WLC Board (3.3V)
			03844	Volt Range Error [mask 34]: WLC Board (2.5V)
			03845	Volt Range Error [mask 35]: WLC Board (VDD12)
			03846	Volt Range Error [mask 36]: WLC Board (VPP)
			03847	Volt Range Error [mask 37]: WLC Board (VSS12)
			03848	Temp Range Error [mask 38]: WLC Board (BoardTemp)
			03849	Volt Range Error [mask 39]: WLC Board (VBUS)
			03850	Curr Range Error [mask 40]: WLC Board (IDOCTRIP)
			03851	Volt Range Error [mask 41]: WLC Board (GND)

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
HLT Cont'd			03852	Volt Range Error [mask 42]: WLC Board (GND)
			03853	Volt Range Error [mask 43]: WLC Board (VPPCTRL)
			03854	Temp Range Error [mask 44]: WLC Board (Laser 1)
			03855	Temp Range Error [mask 45]: WLC Board (Laser 2)
			03856	Temp Range Error [mask 46]: LVDL Board (PulseAmp0)
			03857	Temp Range Error [mask 47]: LVDL Board (StrokeAmp)
			03858	Temp Range Error [mask 48]: LVDL Board (PulseAmp1)
			03859	Volt Range Error [mask 49]: LVDL Board (VPP1-80)
			03860	Volt Range Error [mask 50]: LVDL Board (VPP2-40)
			03861	Volt Range Error [mask 51]: LVDL Board (A+5V)
			03862	Volt Range Error [mask 52]: LVDL Board (A–5V)
			03863	Volt Range Error [mask 53]: LVDL Board (+2.5V)
			03864	Volt Range Error [mask 54]: LVDL Board (+1.8V)
			03865	Volt Range Error [mask 55]: LVDL Board (VPP3-25)
			03866	Volt Range Error [mask 56]: LVDL Board (GND)
			03867	Temp Range Error [mask 57]: LVDU Board (PulseAmp0)
			03868	Temp Range Error [mask 58]: LVDU Board (StrokeAmp)
			03869	Temp Range Error [mask 59]: LVDU Board (PulseAmp1)
			03870	Volt Range Error [mask 60]: LVDU Board (VPP1-80)
			03871	Volt Range Error [mask 61]: LVDU Board (VPP2-40)
			03872	Volt Range Error [mask 62]: LVDU Board (A+5V)
			03873	Volt Range Error [mask 63]: LVDU Board (A–5V)
			03874	Volt Range Error [mask 64]: LVDU Board (+2.5V)
			03875	Volt Range Error [mask 65]: LVDU Board (+1.8V)
			03876	Volt Range Error [mask 66]: LVDU Board (VPP3-25)
			03877	Volt Range Error [mask 67]: LVDU Board (GND)
			03900	NPE board interface timeout
			03901	ACT board interface timeout
			03902	PBP board interface timeout
			03903	IBS board interface timeout
			03904	DBP board interface timeout
			03905	WLC board interface timeout
			03906	RFE board interface timeout
			03907	LVDU board interface timeout

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
HLT Cont'd			03908	LVDL board interface timeout
			03909	NPE board interface framing error
			03910	ACT board interface framing error
			03911	PBP board interface framing error
			03912	IBS board interface framing error
			03913	DBP board interface framing error
			03914	WLC board interface framing error
			03915	RFE board interface framing error
			03916	LVDU board interface framing error
			03917	LVDL board interface framing error
			03918	NPE board interface parity error
			03919	ACT board interface parity error
			03920	PBP board interface parity error
			03921	IBS board interface parity error
			03922	DBP board interface parity error
			03923	WLC board interface parity error
			03924	RFE board interface parity error
			03925	LVDU board interface parity error
			03926	LVDL board interface parity error
			03927	NPE board interface fifo overflow
			03928	ACT board interface fifo overflow
			03929	PBP board interface fifo overflow
			03930	IBS board interface fifo overflow
			03931	DBP board interface fifo overflow
			03932	WLC board interface fifo overflow
			03933	RFE board interface fifo overflow
			03934	LVDU board interface fifo overflow
			03935	LVDL board interface fifo overflow
			03936	Satellite missed interrupt
HSD	01900	Invalid function parameter		
	01901	Xilinx upload failed		
HSP	02000	Invalid device ID		
	02001	Data length is 0		

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
I2C	02100	Invalid parameter		
	02101	Slave did not send acknowledge		
	02102	Address is locked		
	02103	I2C subsystem busy		
	02104	I2C address is invalid		
IBS			07600	The IBS is in use by another task
			07601	Internal balance initialization failed
			07602	The internal beam-balance sensor calibration is invalid
			07603	Failure opening the media
			07604	Failure closing the media
			07605	The mode / state of the laser diode is invalid
			07606	The mode / state of the beam-pointing is invalid
			07607	The mode of the light valve is invalid
			07608	The control mode is invalid
			07609	The spot increment is invalid
			07610	The specified spots could not be configured
			07611	The polarity could not be configured
			07612	Failure configuring the internal beam-balance sensor
			07613	Failure calibrating the internal beam-balance sensor
			07614	An internal balance is in progress
			07615	The internal balance has been aborted
			07616	Internal balance prevented by the range of pulse heights
			07617	Internal balance prevented by drift errors
			07618	Internal balance error exceeds the maximum error
			07619	Insufficient signal at maximum gain
			07620	The internal beam-balance sensor samples are saturated
			07621	Timeout waiting for the sample acquisition
			07622	The board version does not support the functionality
			07623	Unexpected software failure
INT	02200	The interrupt vector is invalid		
	02201	The registration/mask operation is invalid		
	02202	The callback could not be found		

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
JTG			01400	The JTAG device is invalid
			01401	The file version is invalid
			01402	The BSDL configuration is invalid
			01403	Failure verifying the BSDL data
			01404	Failure reading the program file
			01405	Unexpected software failure
LDD	02300	The LDD is in use by another task	05200	The LDD is in use by another task
	02301	Laser diode initialization failed	05201	Laser diode initialization failed
	02302	The control mode is invalid	05202	The control mode is invalid
	02303	The setpoint is invalid	05204	The command setpoint is invalid
	02304	The control mode transition is invalid	05207	The control mode transition is invalid
			05203	The laser mode is invalid
	02305	The command syntax is invalid		
			05205	The drive mode is invalid
			05206	The laser diode is invalid
			05208	Failure controlling the WLC
	02306	The mode/state of the beam-pointing is invalid		
	02307	The mode of the light valve is invalid		
	02308	The plot configuration is invalid		
	02309	Timeout waiting for the sample acquisition	05209	Timeout waiting for the sample acquisition
	02310	Timeout waiting for the sample accumulation		
	02311	The diode is over-temperature		
	02312	The WLP error is semi-fatal		
	02313	The WLP was not detected		
	02314	Timeout waiting for the calibration		
	02315	Insufficient current range for calibration		
	02316	The laser beam was not detected during calibration		
	02317	The laser beam was not detected during initialization		
	02318	The laser power could not be calculated during calibration		
	02319	The laser diode is over-temperature		
	02320	The laser diode temperature could not be read		
	02321	The laser diode is over-temperature (WLP fault)		

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
LDD Cont'd	02322	The laser diode is over-current (WLP fault)		
	02323	The temperature sensor is open-circuit (WLP fault)		
	02324	Unexpected software failure (WLP fault)		
	02325	Possible coolant failure (WLP fault)		
			05210	The calibrated values are out of range
			05211	Timeout waiting for the write laser to be detected
			05212	Timeout waiting for the laser current to be ramped
			05213	The beam-pointing mode is invalid
			05214	The light valve mode is invalid
			05215	The laser power signal level is invalid
			05216	The laser current exceeds the current limits
			05219	The write laser is over-temperature
	02326	The laser diode is under-current (WLP fault)		
	02327	Possible safety fault (WLP fault)		
	02328	The WLP status is unstable		
	02329	Unexpected WLP status		
	02330	The WLP burst data is not available		
	02331	The diode temperature is not available		
	02332	The laser power cannot be obtained due to the current limit		
	02333	The laser power cannot be maintained due to the current limit		
	02334	The laser power is unstable	05217	The laser power is unstable
	02335	The WLP burst data is invalid		
	02336	The transmission of WLP burst data is not supported		
	02337	Unexpected software failure	05220	Unexpected software failure
	02338	The product/head model configuration is invalid		
	02339	The write laser has been disabled	05218	The write laser has been disabled

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
LGA			06800	The logic analyzer is in use by another task
			06801	The logic analyzer is invalid
			06802	The control mode is invalid
			06803	The trigger configuration is invalid
			06804	The hardware configuration is not supported
			06805	Unexpected software failure
LOG	02400	The LOG is in use by another task	04600	The datalogger is in use by another task
	02401	Datalogger initialization failed	04601	Datalogger initialization failed
	02402	The control mode is invalid	04602	The control mode is invalid
	02403	The sample configuration is invalid	04603	The sample configuration is invalid
	02404	The command sequence is invalid		
	02405	Plot/sample data has not been acquired		
	02406	Failure allocating a bank buffer		
	02407	Failure freeing a bank buffer		
	02408	Failure accessing the bank buffer		
	02409	The transfer buffer is empty		
	02410	The bank buffer is empty		
	02411	The bank buffer is full		
	02412	The plot/sample range are invalid		
	02413	The plot/sample format is invalid		
			04604	Invalid function parameter
	02414	The sample point is invalid	04605	The sample point is invalid
			04606	Point registration error
			04607	Invalid field table
	02415	The sample state is invalid	04608	The sample state is invalid
	02416	The sample divisor is invalid		
	02417	The trigger event is invalid	04609	The trigger event is invalid
	02418	The trigger delay is invalid	04610	The trigger delay is invalid
	02419	Unexpected software failure	04611	Unexpected software failure

Thermal 3 vs Thermal 2 Errors – Error List by Subsystem – Field Access

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
LVD	02500	The LVD is in use by another task	05800	The LVD is in use by another task
	02501	Light valve initialization failed	05801	Light valve initialization failed
			05802	The hardware version(s) are invalid
			05803	Insufficient configuration access level
	02502	The control mode is invalid	05805	The control mode is invalid
			05806	The polarity type is invalid
	02503	The spot index is invalid	05807	The spot index is invalid
			05809	The polarity state is invalid
	02504	The spot level is invalid	05810	The spot level is invalid
	02505	The plot configuration is invalid		
	02506	The standalone configuration is invalid		
	02507	The CRC configuration is invalid		
	02508	The stroke offset and/or width is invalid	05804	The stroke offset and/or width is invalid
	02509	The spot state is invalid	05808	The spot state is invalid
	02510	The pattern string has invalid characters	05811	The pattern string has invalid characters
	02511	The length of the pattern string is invalid	05812	The length of the pattern string is invalid
			05813	The diagnostic command is invalid
			05814	The diagnostic function is not supported
			05815	The diagnostic function has failed
	02512	The stroke clock is detected		
	02513	The stroke clock is not detected		
	02514	The data cable is detected		
	02515	A data fault has been detected		
	02516	The data cable is not detected		
	02517	A data overflow has been detected		
	02518	A data collision has been detected		
	02519	Unexpected software failure	05816	Unexpected software failure
MAT	02600	Invalid number of samples		
			05400	Insufficient cycles for Bode analysis
			05401	The step response is invalid
			05402	The step response has failed
			05403	Unexpected software failure

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
MED	02700	Media initialization failed		
	02701	The media key is invalid	06004	The media key is invalid
	02702	The media index is invalid	06001	The media index is invalid
	02703	Failure writing the media key	06002	Failure writing the media key
	02704	Failure reading the media key	06003	Failure reading the media key
	02705	The media is in use by another task	06000	The media is in use by another task
	02706	The media is reserved by another task		
	02707	The media is not supported	06005	The media is not supported
	02708	Unexpected software failure	06006	Unexpected software failure
MON	02800	Invalid function parameter	01600	Invalid function parameter
	02801	Invalid subsystem ID	01601	Invalid subsystem ID
	02802	Subsystem registration error	01602	Subsystem registration error
	02803	Invalid subsystem table	01603	Invalid subsystem table
	02804	Invalid format string	01604	Invalid format string
	02805	Timeout entering the command line	01605	Timeout entering the command line
	02806	Maximum command line length exceeded	01606	Maximum command line length exceeded
	02807	Command not found	01607	Command not found
	02808	Monitor command access level insufficient	01608	Monitor command access level insufficient
	02809	Command has too many tokens	01609	Command has too many tokens
	02810	Command characters are not available	01610	Command characters are not available
	02811	Command has no tokens	01611	Command has no tokens
	02812	Timeout receiving characters	01612	Timeout receiving characters
	02813	Confirmation has been denied	01613	Confirmation has been denied
	02814	The confirmation character is invalid	01614	The confirmation character is invalid
	02815	Timeout entering the confirmation	01615	Timeout entering the confirmation
			01616	The password is invalid
			01617	Timeout entering the password
	02816	The subsystem has not registered commands	01618	The subsystem has not registered commands
	02817	The subsystem has not registered information	01619	The subsystem has not registered information
	02818	Command line parameter range error	01620	Command line parameter range error
	02819	The data encoding is invalid		
	02820	Unexpected software failure	01621	Unexpected software failure
	02821	The command line has been aborted		

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
MSG	02900	The string queue is empty	01800	The string queue is empty
	02901	The string queue is full	01801	The string queue is full
	02902	The packet queue is empty	01802	The packet queue is empty
	02903	The packet queue is full	01803	The packet queue is full
	02904	The packet length is invalid	01804	The packet length is invalid
	02905	The packet offset is invalid	01805	The packet offset is invalid
NET			04200	Network initialization failed
			04201	Failure initializing the Turbo Treck TCP/IP stack
			04202	The network address is invalid
			04203	The network interface is invalid
			04204	Failure initializing the network interface
			04205	The network interface loopback test is invalid
			04206	Failure retrieving diagnostics from the network interface
			04207	The telnet session handle is invalid
			04208	The telnet session state is invalid
			04209	The telnet session notification is invalid
			04210	The telnet session buffer is empty
			04211	The telnet session buffer is full
			04212	Failure opening a socket
			04213	Failure sending the BOOTP request
			04214	The file does not support reads
			04215	The file does not support writes
			04216	The file is unknown
			04217	The autoboot algorithm prevents erasing the file
			04218	The flags are invalid
			04219	The buffer is invalid
			04220	Unexpected software failure
PLT			06200	The plot is in use by another task
			06201	Plot initialization failed
			06202	The control mode is invalid
			06203	The image configuration is invalid
			06204	The synthesizer configuration is invalid
			06205	The TPG configuration is invalid

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
PLT Cont'd			06206	The TGP label is invalid
			06207	The pattern data is invalid
			06208	The combination data is invalid
			06209	Invalid function parameter
			06210	The command packet is invalid
			06211	The protocol version is unsupported
			06212	The sequence number is invalid
			06213	Failure opening a socket
			06214	Failure binding the socket
			06215	Failure receiving from the socket
			06216	Failure sending to the socket
			06217	Failure getting the ARP entry
			06218	A partial swath is still buffered, the image may be corrupt
			06219	The plot has been aborted due to multiple hosts
			06220	The plot has been aborted prematurely
			06221	The mainscan image size is mismatched, the image may be corrupt
			06222	FIFO underrun error, the image may be corrupt
			06223	FIFO overflow error, the image may be corrupt
			06224	SCLK overrun error, the image may be corrupt
			06225	Swath buffer overflow error, the image may be corrupt
			06226	The TPG pattern has not been found
			06227	Unexpected software failure
POT	04700	Potentiometer not supported by hardware		
	04701	Potentiometer initialization failed		
	04702	The potentiometer index is invalid		
	04703	The potentiometer wiper is invalid		
	04704	The potentiometer increment is invalid		
	04705	The potentiometer decrement is invalid		
	04706	Failure writing the potentiometer		
	04707	Unexpected software failure		

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
PRM	03100	Invalid function parameter	02000	Invalid function parameter
	03101	Invalid subsystem ID	02001	Invalid subsystem ID
	03102	Subsystem registration error	02002	Subsystem registration error
	03103	Invalid subsystem table	02003	Invalid subsystem table
	03104	Duplicate parameter key found	02004	Duplicate parameter key found
	03105	Invalid parameter key	02005	Invalid parameter key
	03106	The search is complete		
	03107	The buffer size is invalid	02006	The buffer size is invalid
	03108	The parameter has not been found	02007	The parameter has not been found
	03109	Parameter access level insufficient	02008	Parameter access level insufficient
	03110	The parameter copy is invalid	02009	The parameter copy is invalid
	03111	The parameter element is invalid	02010	The parameter element is invalid
	03112	The source/destination copy is invalid	02011	The source/destination copy is invalid
	03113	The parameter syntax is invalid	02012	The parameter syntax is invalid
	03114	The parameter range is invalid	02013	The parameter range is invalid
	03115	The string parameter syntax is not supported	02014	The string parameter syntax is not supported
	03116	The string parameter length is invalid	02015	The string parameter length is invalid
	03117	The subsystem has not registered parameters	02016	The subsystem has not registered parameters
	03118	The subsystem has not registered information	02017	The subsystem has not registered information
	03119	The parameter division is invalid	02018	The parameter division is invalid
	03120	Unexpected software failure	02019	Unexpected software failure
RDR	05000	The redirection mode is invalid		
	05001	The redirection buffer is empty		
	05002	The redirection buffer is full		
REG	03200	The registry is in use by another task	02200	The registry is in use by another task
	03201	The registry is full, execute “Reg Optimize”	02201	The registry is full, execute “Reg Optimize”
	03202	The search of the registry is complete	02202	The search of the registry is complete
	03203	RCB checksum is invalid	02203	RCB checksum is invalid
	03204	Entry checksum is invalid	02204	Entry checksum is invalid
	03205	Entry size is invalid	02205	Entry size is invalid
	03206	A registry key was not found	02206	A registry key was not found
	03207	A registry key already exists	02207	A registry key already exists
	03208	The directory section is not erased	02208	The directory section is not erased
	03209	The directory sections are different	02209	The directory sections are different

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
REG Cont'd	03210	Both directory sections are corrupt	02210	Both directory sections are corrupt
	03211	The primary directory section was recovered	02211	The primary directory section was recovered
	03212	The primary directory section is corrupt	02212	The primary directory section is corrupt
	03213	The secondary directory section was recovered	02213	The secondary directory section was recovered
	03214	The secondary directory section is corrupt	02214	The secondary directory section is corrupt
	03115	The baseline directory section is corrupt	02215	The baseline directory section is corrupt
	03216	The registry is invalid	02216	The registry is invalid
RTOS			02400	A function parameter is invalid
			02401	The event flag(s) are not present
			02402	The partition pool is empty
			02403	The partition pool is full
			02404	The queue is empty
			02405	The queue is full
			02406	Timeout obtaining the semaphore
			02407	Unexpected software failure
SAT			04000	Unexpected firmware failure
			04001	Invalid command line argument
			04002	No existing servo handler
			04003	Hardware/firmware interrupt counts differ
			04004	Satellite timer stopped
			04005	Satellite not installed
			04006	Satellite board is wrong type
			04007	Satellite version not supported
			04008	Satellite configuration incorrect
			04009	Satellite version reads inconsistent
			04010	All satellite status faults now cleared
			04011	RFE power relay frozen 'on'
			04012	RFE power relay frozen 'off'
			04020	NPE: IO disabled
			04021	NPE: parity error
			04022	NPE: framing error
			04023	NPE: VDD undervoltage
			04024	NPE: VSS undervoltage
			04025	NPE: pcb temp no ack

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
SAT Cont'd			04026	NPE: power monitor fault
			04027	ACT: IO disabled
			04028	ACT: parity error
			04029	ACT: framing error
			04030	ACT: dac fifo overflow
			04031	ACT: piezo1 overtemp
			04032	ACT: piezo2 overtemp
			04033	ACT: power supply fault
			04034	ACT: shutter2 fault
			04035	PBP: IO disabled
			04036	PBP: parity error
			04037	PBP: framing error
			04038	PBP: VDD undervoltage
			04039	PBP: VSS undervoltage
			04040	PBP: power monitor
			04041	IBS: IO disabled
			04042	IBS: parity error
			04043	IBS: framing error
			04044	IBS: VDD undervoltage
			04045	IBS: VSS undervoltage
			04046	DBP: IO disabled
			04047	DBP: parity error
			04048	DBP: framing error
			04049	DBP: VDD undervoltage
			04050	DBP: VSS undervoltage
			04051	DBP: power monitor fault
			04052	WLC: IO disabled
			04053	WLC: parity error
			04054	WLC: framing error
			04055	WLC: laser1 overcurrent
			04056	WLC: laser2 overcurrent
			04057	RFE: IO disabled
			04058	RFE: power monitor fault
			04059	RFE: parity error

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
SAT Cont'd			04060	RFE: framing error
			04061	RFE: VDD undervoltage
			04062	RFE: VSS undervoltage
			04063	RFE: PCB temp no ack fault
			04064	RFE: LD flex not detected
			04065	RFE: PSD flex not detected
			04066	LVDU: IO disabled
			04067	LVDU: parity error
			04068	LVDU: framing error
			04069	LVDU: VPP1 fault (1v8 fault Alpha)
			04070	LVDU: 3v3/2v5/1v8 fault (5v Alpha)
			04071	LVDU: datapath CRC error
			04072	LVDL: IO disabled
			04073	LVDL: parity error
			04074	LVDL: framing error
			04075	LVDL: VPP1 fault (1v8 fault Alpha)
			04076	LVDL: 3v3/2v5/1v8 fault (5v Alpha)
			04077	LVDL: datapath CRC error
SBT	03300	Checksum invalid loading the firmware bundle	02600	Checksum invalid loading the firmware bundle
	03301	Firmware downloads using monitor redirection are not supported		
			02601	Section type is invalid
STG			07800	The registry is in use by another task
			07801	A registry key was not found
			07802	A registry key already exists
			07803	Entry size is invalid
			07804	Unexpected software failure
STS	04400	The STS is in use by another task		
	04401	That statistics point is invalid		
	04402	Timing has not been started		
	04403	Unexpected software failure		
SYM	03400	The SYM is in use by another task		
	03401	System monitor initialization failed		
	03402	The temperature input is invalid		

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
SYM Cont'd	03403	The voltage input is invalid		
	03404	The Boolean input is invalid		
	03405	The temperature input is not supported		
	03406	The voltage input is not supported		
	03407	The temperature input is not monitored		
	03408	The voltage input is not monitored		
	03409	The LM75/LM80 sensor is not responding		
	03410	The LM80 voltage input is invalid		
	03411	The LM80 voltage limits are invalid		
	03412	The LM75/LM80 temperature thresholds are invalid		
	03413	Unexpected software failure		
SYS	03500	The system is in use by another task	05600	The system is in use by another task
	03501	The firmware upgrade is complete	05601	The firmware upgrade is complete
	03502	The firmware upgrade has failed	05602	The firmware upgrade has failed
	03503	The functionality is not supported	05603	The functionality is not supported
	03504	The command sequence is invalid	05604	The command sequence is invalid
	03505	The head/plot command is invalid	05605	The head/plot command is invalid
	03506	The head/plot command is not supported	05606	The head/plot command is not supported
	03507	The environment is unavailable		
	03508	The control mode is invalid	05607	The control mode is invalid
	03509	The shutter type/control is invalid	05608	The shutter type/control is invalid
	03510	Failure opening/closing the internal shutter	05609	Failure opening/closing the internal shutter
	03511	Failure determining the edge detect information	05610	Failure determining the edge detect information
	03512	The edge detect state is invalid (on/off plate)	05611	The edge detect state is invalid (on/off plate)
	03513	Failure resetting the edge detect	05612	Failure resetting the edge detect
	03514	The media is not supported	05613	The media is not supported
	03515	Failure accessing the media	05614	Failure accessing the media
	03516	The series/system parameter is invalid	05615	The series/system/NVS parameter is invalid
	03517	The series/system parameter length is invalid	05616	The series/system/NVS parameter length is invalid
	03518	Failure updating the series parameter		
	03519	Failure creating the system parameter	05617	Failure creating the system parameter
	03520	Failure reading the system parameter	05618	Failure reading the system parameter
	03521	The system parameter syntax is invalid	05619	The system parameter syntax is invalid
	03522	Failure verifying the system parameters	05620	Failure verifying the system parameters

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
SYS Cont'd	03523	System parameter(s) have been disabled	05621	System parameter(s) have been disabled
	03524	Failure configuring the focus driver	05622	Failure configuring the focus driver
	03525	Failure configuring the laser diode driver		
			05623	Failure configuring the plot subsystem
	03526	Failure configuring the light valve driver		
	03527	Failure accessing the test data		
	03528	Failure determining the head position	05624	Failure determining the head position
	03529	Failure of the focus learn	05625	Failure of the focus learn
	03530	Failure accessing the beam-balance sensor	05626	Failure accessing the beam-balance sensor
	03531	Failure accessing the beam-pointing driver		
	03532	Failure accessing the focus driver	05627	Failure accessing the focus driver
	03533	Failure accessing the laser diode driver	05628	Failure accessing the laser diode driver
	03534	Failure accessing the light valve driver	05629	Failure accessing the light valve driver
	03535	Failure accessing the media subsystem	05630	Failure accessing the media subsystem
	03536	Failure accessing the statistics subsystem		
			05631	Failure accessing the plot subsystem
	03537	The write laser control mode is in progress	05632	The write laser control mode is in progress
	03538	The stroke calibration is in progress	05633	The stroke calibration is in progress
	03539	The focus control mode is in progress	05634	The focus control mode is in progress
	03540	Timeout waiting for write laser stabilization		
	03541	Timeout waiting for the write laser	05635	Timeout waiting for the write laser
	03542	Timeout waiting for the stroke calibration	05636	Timeout waiting for the stroke calibration
	03543	Timeout waiting for the focus learn	05637	Timeout waiting for the focus learn
	03544	The write laser control mode has been aborted	05638	The write laser control mode has been aborted
	03545	The stroke calibration has been aborted	05639	The stroke calibration has been aborted
	03546	The focus control mode has been aborted	05640	The focus control mode has been aborted
	03547	Failure determining the head information	05641	Failure determining the head information
	03548	Warning fault(s) have been discarded	05642	Warning fault(s) have been discarded
	03549	Fatal fault(s) have been discarded	05643	Fatal fault(s) have been discarded
	03550	A warning fault has been generated for testing	05644	A warning fault has been generated for testing
	03551	A shutdown fault has been generated for testing	05645	A shutdown fault has been generated for testing
	03552	A fatal fault has been generated for testing	05646	A fatal fault has been generated for testing
	03553	A safety loop fault has been detected		
	03554	The control board temperature is out of range		

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
SYS Cont'd	03555	The focus driver temperature is out of range		
	03556	The +5V is out of range		
	03557	The +3.3V is out of range		
	03558	The -5V is out of range		
	03559	The +40V is out of range		
	03560	The +15V is out of range		
	03561	The data cable is not detected		
	03562	The stroke clock is not detected		
	03563	All faults have been cleared		
	03565	The command syntax is invalid	05647	The command syntax is invalid
	03566	The stroke clock frequency is too high (>950kHz)	05648	The stroke clock frequency is too high (>1520kHz)
	03567	The beam-balance has failed	05649	The beam-balance has failed
			05650	Health metric(s) have faulted
			05651	Health metric(s) have been masked
			05652	Satellite fault(s) have been detected
			05653	Satellite fault(s) have been masked
			05654	The exposure head has been disabled
			05655	The host has specified an invalid plot setup
			05656	The light valve annealing is in progress
			05657	The light valve annealing is not required
	03572	The +48V power supply cannot be detected		
	03573	A safety loop fault is preventing normal operation		
			05658	The write laser standby is in progress
			05659	The write laser standby is not required
			05660	Failure accessing the beam-pointing driver
			05661	The laser diode control mode is invalid
			05662	The rated power has been exceeded
	03574	Unexpected software failure	05663	Unexpected software failure
	03575	Failure configuring the stroke offset and width		
	03576	Failure configuring light valve registration mode		

Thermal 3 vs Thermal 2 Errors – Error List by Subsystem – Field Access

Subsystem	TH2 Errorcode	What it means	TH3 Errorcode	What it means
URT	03600	Invalid function parameter		
	03601	The serial port handle is invalid	03000	The serial port handle is invalid
	03602	The serial port state is invalid	03001	The serial port state is invalid
			03002	The serial port notification is invalid
	03603	The serial port buffer is empty	03003	The serial port buffer is empty
	03604	The serial port buffer is full	03004	The serial port buffer is full
			03005	Unexpected software failure
	03605	The transmitter isn't ready		
	03606	The transmitter isn't empty		
UTL	03700	Received a non-hex character		
	03701	Unexpected software failure		
VBS	03800	Verbose initialization failed	03400	Verbose initialization failed
	03801	Invalid subsystem ID	03401	Invalid subsystem ID
	03802	Invalid verbose level	03402	Invalid verbose level
	03803	Unexpected software failure	03403	Unexpected software failure
VER	03900	Invalid function parameter	03600	Invalid function parameter
	03901	Invalid subsystem ID	03601	Invalid subsystem ID
	03902	Subsystem registration error	03602	Subsystem registration error
	03903	Invalid subsystem information	03603	Invalid subsystem information
	03904	Invalid subsystem acronym	03604	Invalid subsystem acronym
			03605	Invalid sorting option
YMD	04200	Invalid function parameter		
	04201	Transfer aborted		
	04202	Receiver attempted xmodem		
	04203	Transmitter attempted batch transfer		