



TECHNICAL NOTE TN-1008

TM8100 Error Codes

21 May 2005

Applicability The following information covers generic error codes and descriptions for all current TM8100 product.

1. Introduction

This is a guideline to provide extra assistance in the servicing and/or repair of the TM8100 product range.

Tait radios have an inbuilt software diagnostic tool that will indicate error codes, if there is a failure in the software or hardware platforms.

When a system error occurs, normal operation of the radio ceases, and the software then enters an error mode to display the error number on the front panel.

Error codes can also be viewed in Terminal application format (via serial interface) if appropriate. (See TN -1011 Terminal Application Operation for more information)

Error codes displayed do not include the acronyms as listed below only the number.

Please note that error codes can occur for any number of reasons, therefore this error code listing is only indicative as to what the possible cause of any given error may be.

Due to the recent release of this product there may be extra system errors added for diagnosis in future revisions.

Respective codes were generated using V02.05.00.02 Firmware.

The error code listing is valid from Firmware Version 02.02.00.02 onwards.

2. Code Definitions: Acronyms

SYOS	Operating System
SYFE	SFE
ULCH	User Interface Control Head
ULIO	User Interface I/O Control
UUPS	User Interface GPS
PCCU	Personality Common User Interface
PLL	Personality Logon
PCSC	Personality Common Serial Communications
PUAM	Personality User Alarm Mode
PUC	Personality User CCDI
PUCP	Personality User Call Processing
PUCW	Personality User CWID
PUDA	Personality User Data
PUDT	Personality User DTMF
PUEM	Personality User Emergency Mode
PUKM	Personality User Keypad Microphone
PUMO	Personality User Monitor
PUNO	Personality User Normal Operation
PUNW	Personality User Network

PUPA	Personality User Programmable Action
PUPN	Personality User Pin Entry
PUPS	Personality User Position Services
PUSC	Personality User Scrambler
PUSI	Personality User Single In Band Tone
PUTK	Personality User Task Manager
PUTR	Personality User Power
PUVL	Personality User Volume
PUVN	Personality User Version Number
CLAU	Core Layer Audible
CLDA	Core Layer Data
CLDT	Core Layer DTMF
CLRS	Core Layer RSSI
CLSA	Core Layer Subaudible
CLSI	Core Layer Single In Band Tone
CLSL	Core Layer Selcall
CLSQ	Core Layer Squelch
CLTN	Core Layer Type 99
CLTR	Core Layer Transmitter
CUAC	Core Layer Audio
CUAP	Core Layer Audio Path
CUAU	Core Layer Audible
CUBD	Core Layer Busy Detect
CUCH	Core Layer Channels
CUCT	Core Layer Task Manager
CUCW	Core Layer CWID
CUDA	Core Layer DATA
CUDT	Core Layer DTMF
CUGR	Core Layer Groups
CUGV	Core Layer Groups Voting
CUMC	Core Layer Mute
CUMO	Core Layer Monitor
CUNW	Core Layer Network
CURS	Core Layer RSSI
CUSA	Core Layer Subaudible
CUSI	Core Layer Single In Band Tone
CUSL	Core Layer Selcall
CUSQ	Core Layer Squelch
CUTN	Core Layer Type 99
CUTR	Core Layer Transmitter
HWIO	Hardware Interface I/O
HWSP	Hardware Interface SPI Services
HWAP	Hardware Interface UART
HWAN	Hardware Interface Analogue
HWTM	Hardware Interface Timers
HWFL	Hardware Interface Flash Manager
HWNP	Hardware Interface Device Drivers
IOTM	Hardware Interface Task Manager

3. Code Definitions: Description

Message Service Errors:

0	SYOS	NO_ERROR=0
1	SYOS	HEAP_EXHAUSTED
2	SYOS	MESSAGE_POOL_EXHAUSTED
3	SYOS	MESSAGE_POOL_BLOCK_SIZE_EXCEEDED
4	SYOS	MBX_UNAVAILABLE
5	SYOS	INVALID_POOL_SPECIFIED
6	SYOS	INVALID_FREE_ROUTINE_SPECIFIED

Timer Module Errors:

7	SYOS	TIMERS_EXHAUSTED_ERROR
8	SYOS	INVALID_TIMER_NUMBER_ERROR
9	SYOS	TIMER_DOES_NOT_EXIST_ERROR
10	SYOS	INVALID_TIMER_VECTOR_ERROR
11	SYOS	TIMER_ALREADY_EXISTS_ERROR

Flash Utility Errors:

12	SYOS	FLASH_PROGRAM_ERROR
13	SYOS	FLASH_ERASE_ERROR
14	SYOS	FLASH_BLOCK_ERASE_ERROR

Stack Overrun Errors:

16	ULCH	FAILED_TO_ASSIGN_INPUT
17	ULCH	FAILED_TO_ASSIGN_OUTPUT
18	ULCH	FAILED_TO_INITIATE_INFORM
19	ULCH	FAILED_TO_STOP_INFORM

SFE Errors:

30	SYFE	SYFE_UNDEFINED_FC_ERROR
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UI Errors:

40	ULCH	FAILED_TO_ASSIGN_INPUT
41	ULCH	FAILED_TO_ASSIGN_OUTPUT
42	ULCH	FAILED_TO_INITIATE_INFORM
43	ULCH	FAILED_TO_STOP_INFORM
44	ULCH	FAILED_TO_READ_DBASE
45	ULCH	INCONSISTENT_GPIO_CONFIGURATION

Common UI Errors:

50	PCCU	DISPLAY_CHANNEL_FAILED_ERROR
51	PCCU	AUDIBLE_INFO_FROM_DBASE_ERROR
52	PLLP	READ_LOW_POWER_STATE_INFO_FROM_DBASE_ERROR
53	PCCU	EMERG_STEALTH_OPTION_FROM_DBASE_ERROR
54	PCCU	EMERG_TX_INDICATOR_OPTION_FROM_DBASE_ERROR
55	PCCU	EMERG_INVALID_STATE_CHANGED_ERROR
56	UUPS	READ_PORT_SETUP_FROM_DBASE_ERROR
57	UUPS	READ_NMEA_SETUP_FROM_DBASE_ERROR

Power-Up Calibration Errors:

60	PCCU	POWER_UP_CAL_FAILED_VCXO_DATABASE_ERROR
61	PCCU	POWER_UP_CAL_FAILED_VCO_DATABASE_ERROR
62	PCCU	POWER_UP_CAL_FAILED_UNKNOWN

Port Assignment Errors:

70	PCSC	UNABLE_TO_OPEN_PORT_1
71	PCSC	UNABLE_TO_OPEN_PORT_2
72	PCSC	UNABLE_TO_OPEN_PORT_3
73	PCSC	MULTIPLE_PROTOCOLS_ASSIGNED_ERROR

Channel Selection Errors:

80	PUCS	READ_WRAP_FLAG_ERROR
81	PUCS	READ_CHAN_BLOCK_REC_ERROR
82	PUCS	FIND_FIRST_CHAN_FAILED_ERROR
83	PUCS	FIND_LAST_CHAN_FAILED_ERROR
84	PUCS	IS_HIDDEN_ERROR_1
85	PUCS	IS_HIDDEN_ERROR_2
86	PUCS	ALL_CHANNELS_HIDDEN_ERROR
87	PUPA	CHANNEL_SELECT_FROM_DBASE_ERROR
88	PUCS	CHAN_SELECT_ENTER_SHOULDNT_HAPPEN_STATE_ERROR
89	PUCS	EXCEEDED_MAX_CHANNEL_QUEUED_ERROR
90	PUCS	CANT_FIND_PREV_CHAN_REQUEST_ERROR
91	PUCS	INCORRECT_CHANNEL_SELECT_REQUEST_TYPE_ERROR
92	PUCS	CANT_PLACE_SELECTION_REQUEST_INTO_QUEUE_ERROR
93	PUCS	SINGLE_DIGIT_CHANNEL_FROM_DBASE_ERROR
94	PUCS	INVALID_REPEATER_TALK_AROUND_ACTION
95	PUCS	CHANNEL_SCROLL_DB_ERROR
96	PUCS	ERROR_EXTRACTING_RADIO_GLOBALS

Personality Transmission Errors:

100	PUCS	INVALID_TRANSMISSION_LOCKOUT_STATUS_ERROR
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Group Activity Errors:

110	PUCS	READ_CIB_REC_FROM_DBASE_ERROR
111	PUCS	READ_GROUP_TYPE_OPTION_FROM_DBASE_ERROR
112	PUCS	READ_SCAN_TYPE_FROM_DBASE_ERROR
113	PUCS	READ_OFF_HOOK_SCANNING_OPTION_FROM_DBASE_ERROR
114	PUCS	READ_STOP_SCAN_ON_PTT_RELEASED_FROM_DBASE_ERROR
115	PUCS	READ_CHANNEL_IN_BLOCK_FROM_DBASE_ERROR

Call Processing Errors:

130	PUCP	INCORRECT_CALL_REQUEST_INITIATOR_ERROR
131	PUCP	INCORRECT_CALL_REQUEST_SM_TYPE_ERROR
132	PUCP	INCORRECT_SIG_CR_TYPE_ERROR
133	PUCP	INCORRECT_SIG_CR_SUB_TYPE_ERROR
134	PUCP	INCORRECT_SIG_CR_DECODE_TYPE_CLARIFIER_ERROR
135	PUCP	INCORRECT_VOICE_CALL_STATE_ERROR
136	PUCP	READ_NETWORK_INFO_FROM_DBASE_ERROR
137	PUCP	ENTERED_SHOULDNT_HAPPEN_SI_TRANSACTION_STATE_ERROR

Call Processing Errors: (continued)

138	PUCP	ENTERED_SHOULDNT_HAPPEN_EI_TRANSACTION_STATE_ERROR
139	PUCP	ENTERED_SHOULDNT_HAPPEN_SI_CALL_REQUEST_STATE_ERROR
140	PUCP	ENTERED_SHOULDNT_HAPPEN_EIV_CALL_REQUEST_STATE_ERROR
141	PUCP	ENTERED_SHOULDNT_HAPPEN_EIC_CALL_REQUEST_STATE_ERROR
142	PUCP	ENTERED_SHOULDNT_HAPPEN_EICC_CALL_REQUEST_STATE_ERROR
143	PUCP	ENTERED_SHOULDNT_HAPPEN_EID_CALL_REQUEST_STATE_ERROR
144	PUCP	ENTERED_CANT_HAPPEN_CALL_TRANSFER_STATE_ERROR
145	PUCP	SDM_SI_STATE_CANT_HAPPEN_STATE_ERROR
146	PUCP	SIT_INCORRECT_CHANNEL_REQUEST_ERROR
147	PUCP	EIT_INCORRECT_CHANNEL_REQUEST_ERROR
148	PUCP	PTT_TX_ENTERED_SHOULDNT_HAPPEN_STATE_ERROR
149	PUCP	LEADING_PTT_TX_ENTERED_SHOULDNT_HAPPEN_STATE_ERROR
150	PUCP	TRAILING_PTT_TX_ENTERED_SHOULDNT_HAPPEN_STATE_ERROR
151	PUCP	READ_ANI_DATA_FROM_DBASE_ERROR
152	PUCP	READ_AOB_DATA_FROM_DBASE_ERROR
153	PUCP	READ_RAT_DATA_FROM_DBASE_ERROR
154	PUCP	PTT_ANI_REQUEST_SOURCE_UNKNOWN_ERROR
155	PUCP	PTT_RAT_REQUEST_SOURCE_UNKNOWN_ERROR
156	PUCP	START_SELF_INIT_TRANSACTION_FAILED
157	PUCP	START_EIT_FAILED
158	PUCP	TRANS_REQ_MAN_SHOULD_NOT_HAPPEN
159	PUCP	READ_EMERGENCY_STATUS_FROM_DBASE_ERROR
160	PUCP	COULD_NOT_READ_STATUS_FROM_DBASE_ERROR
161	PUCP	COULD_NOT_READ_GPS_PTT_OPTIONS_FROM_DBASE
162	PUCP	DIAL_STRING_UNAVAILABLE
163	PUCP	SDM_MEMORY_COPY_ERROR

Emergency Mode Errors:

170	PUEM	CALLOUT_ENTER_CANT_HAPPEN_STATE_ERROR
171	PUEM	CALLOUT_ENTER_SHOULDNT_HAPPEN_STATE_ERROR
172	PUEM	EMERGENCY_ENTER_CANT_HAPPEN_STATE_ERROR
173	PUEM	RESET_SUB_SM_ENTER_CANT_HAPPEN_STATE_ERROR
174	PUEM	RESET_SUB_SM_ENTER_SHOULDNT_HAPPEN_STATE_ERROR
175	PUEM	CYCLING_ENTER_CANT_HAPPEN_STATE_ERROR
176	PUEM	CYCLING_ENTER_SHOULDNT_HAPPEN_STATE_ERROR
177	PUEM	SETUP_ENTER_CANT_HAPPEN_STATE_ERROR
178	PUEM	SETUP_ENTER_SHOULDNT_HAPPEN_STATE_ERROR

Single In Band Tone:

190	PUSI	FAILED_EXTRACTING_SIBT_DATA_FROM_DATABASE_ERROR
191	PUSI	FAILED_EXTRACTING_SIBT_DATA_FOR_CHANNEL_FROM_DATABASE_ERROR

Data Errors:

200	PUDA	FAILED_TO_READ_DATA_IDENTITY
201	PUPS	CURRENT_NETWORK_INVALID_ERROR
202	PUPN	FAILED_TO_READ_PIN_ENTRY_SIZE
203	PUPN	FAILED_TO_INITIALISE_PIN_ENTRY_STORAGE

PTT Errors:

210	PUTR	INVALID_PTT_SPECIFIED_FOR_ACTIVATION
211	PUTR	INVALID_PTT_SPECIFIED_FOR_DEACTIVATION
212	PUTR	FAILED_TO_READ_PTT_INHIBITED_BY_MIC_ON_HOOK
213	PUTR	FAILED_TO_READ_PTT_INHIBITED_BY_VOICE_CALL_INACTIVE
214	PUTR	FAILED_TO_READ_PTT_INHIBITED_BY_EMERGENCY_MODE
215	PUTR	FAILED_TO_READ_PTT_INHIBITED_BY_EXTERNAL_CONTROL
216	PUTR	FAILED_TO_READ_MONITOR_ACTIVATION_MODE
217	PUTR	FAILED_TO_READ_PTT_DE_KEY_AFTER_ACTIVATING_MONITOR
218	PUTR	FAILED_TO_READ_PTT_PRESS_CALL_SETUP
219	PUTR	FAILED_TO_READ_PTT_DE_KEY_AFTER_PTT_CALL_SETUP
220	PUTR	FAILED_TO_READ_PTT_STATE_IS_REFLECTED
221	PUTR	FAILED_TO_READ_PTT_INHIBIT_IS_INDICATED
222	PUTR	FAILED_TO_READ_PTT_TRANSMISSION_TYPE
223	PUTR	FAILED_TO_READ_PTT_PRIORITY
224	PUTR	FAILED_TO_READ_PTT_AUDIO_SRC_TAP_CONFIG
225	PUTR	PTT_ENTERED_SHOULDNT_HAPPEN_STATE_ERROR
226	PUTR	FAILED_TO_READ_MIC_SRC_FROM_DB
227	PUTR	FAILED_TO_READ_PA_MODE_TIMER_ERROR
228	PUTR	FAILED_TO_READ_GPS_PTT_SUPPRESSION_TIME_ERROR

Transmission Errors:

240	PUTR	TX_POOL_EXHAUSTED
241	PUTR	DATA_TRANSMISSION_NOT_IMPLEMENTED
242	PUTR	TX_REQUEST_POOL_EXHAUSTED_ERROR

CCR/CCDI Errors:

245	PUCC	FAILED_TO_READ_FREQUENCY_BAND_INFO_FROM_DBASE
246	PUCC	READ_CCDI_DATA_FROM_DBASE_ERROR
247	PUCC	FAILED_TO_SELECT_CCR_CHANNEL
248	PUCC	FAILED_TO_WRITE_BYTES_TO_PORT

Scan Group Display Errors:

260	PUNO	READ_SCAN_DISPLAY_OPTION_FROM_DBASE_ERROR
261	PUNO	NUISANCE_DELETE_FROM_DBASE_ERROR
262	PUNO	DEFAULT_TX_CHANNEL_FROM_DBASE_ERROR
263	PUNO	READ_GROUP_ALIAS_FROM_DBASE_ERROR
264	PUNO	READ_VOTE_DISPLAY_OPTION_FROM_DBASE_ERROR
265	PUNO	READ_GROUP_TYPE_OPTION_FROM_DBASE_ERROR
266	PUNO	DISPLAY_LAST_FREE_CHANNEL_ERROR
267	PUNO	DISPLAY_CHANNEL_FAILED_ERROR
268	PUNO	READ_SCAN_TYPE_FROM_DBASE_ERROR
269	PUNO	GET_GROUP_ACTIVATE_POWER_UP_ERROR
270	PUNO	READ_GROUP_ID_FROM_DBASE_ERROR

UI In Band Signal Errors:

290	PUNO	UNDEFINED_CALL_RECEIVED_TYPE_ERROR
291	PUNO	READING_NETWORK_CALL_ALERT_POINTER_ERROR
292	PUNO	UNDEFINED_INT_ALERT_TYPE_ERROR

CWID Errors:

300	PUCW	ERROR_READING_CWID_DATA_FROM_DATABASE
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Core Processor RF PLL Errors:

400	CLTR	RF_PLL_FAILED_TO_PROGRAM_SYNTH_REF
401	CLTR	RF_PLL_FAILED_TO_CREATE_HW_TIMER
402	CLTR	RF_PLL_ATTEMPT_TO_PROGRAM_WHILST_BUSY
403	CLTR	RF_PLL_EVENT_CANT_HAPPEN_ERROR
404	CLTR	INVALID_RF_PLL_PRESCALER

Core Transmitter PA Errors:

410	CLTR	TX_PA_FAILED_TO_CREATE_HW_TIMER
411	CLTR	TX_PA_EVENT_CANT_HAPPEN_ERROR
412	CLTR	FLL_MOD_FAILED_TO_CREATE_HW_TIMER

Core Processor Half Duplex Errors:

415	CLTR	HALF_DUPLEX_EVENT_CANT_HAPPEN_ERROR
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Core Processor Audio Path Configuration Errors:

420	CUAC	FAILED_TO_READ_MIC_CONFIG
421	CUAC	FAILED_TO_READ_CH_MIC_GAIN_FROM_DB
422	CUAC	FAILED_TO_READ_AUX_MIC_GAIN_FROM_DB

Core Processor Channel Selection Errors:

430	CUCH	READ_CHANNEL_INFO_FROM_DBASE_ERROR
431	CUCH	READ_TX_DURATION_TIMER_FROM_DBASE_ERROR
432	CUCH	READ_TX_LOCKOUT_TIMER_FROM_DBASE_ERROR
433	CUCH	READ_LOW_POWER_LEVEL_INFO_FROM_DBASE_ERROR
434	CUCH	READ_TX_DURATION_TIMING_ENABLED_FROM_DBASE_ERROR
435	CUCH	READ_NETWORK_TYPE_FROM_DBASE_ERROR
436	CUCH	FAILURE_TO_READ_TX_INHIBIT_OPTIONS_FROM_DBASE_ERROR
437	CUCH	READ_PREEMPHASIS_FROM_DBASE_ERROR
438	CUCH	INVALID_REPEATER_TALK_AROUND_ACTION

Core Processor Network Errors:

440	CUNW	DEACTIVATE_RX_IN_BAND_SIGNALLING_ERROR
441	CUNW	ACTIVATE_RX_IN_BAND_SIGNALLING_ERROR
442	CUNW	DEACTIVATE_TX_IN_BAND_SIGNALLING_ERROR
443	CUNW	ACTIVATE_TX_IN_BAND_SIGNALLING_ERROR
444	CUNW	STOP_RX_IN_BAND_SIGNALLING_ERROR
445	CUNW	START_RX_IN_BAND_SIGNALLING_ERROR
446	CUNW	INCORRECT_NETWORK_SPECIFICATION_DURING_CONFIGURE_ERROR
447	CUNW	UNSUPPORTED_NETWORK_TYPE_SPECIFIED_ERROR
448	CUNW	INVALID_NETWORK_SPECIFIED_FOR_NETWORK_CLEANUP_ERROR
449	CUNW	INVALID_NETWORK_SPECIFIED

Core Processor Selcall Related Errors:

460	CUSL	NO_FREE_FORM_CALL_FOUND_ERROR
461	CUSL	ILLEGAL_FREE_FORM_BURST_ID_ERROR
462	CUSL	COULD_NOT_READ_FREE_FORM_BURST_ERROR
463	CUSL	COULD_NOT_READ_FREE_FORM_GAP_ERROR
464	CUSL	BAD_GAP_BURST_ID_ERROR
465	CUSL	SELCALL_CONCATENATION_ERROR
466	CUSL	FAILED_EXTRACTING_SELCALL_NETWORK_DATA_FROM_DBASE_ERROR
467	CUSL	DECODE_COMPARISON_LEVEL_INVALID_ERROR
468	CUSL	FAILED_TO_EXTRACT_RX_FORMAT_FROM_DATABASE_ERROR
469	CUSL	FAILED_TO_EXTRACT_RX_DECODE1_FROM_DATABASE_ERROR
470	CUSL	FAILED_TO_EXTRACT_RX_DECODE2_FROM_DATABASE_ERROR
471	CUSL	FAILED_TO_EXTRACT_RMR_FROM_DATABASE_ERROR
472	CUSL	SELCALL_BURST_INVALID_ERROR
473	CUSL	FAILED_TO_EXTRACT_TX_FORMAT_FROM_DATABASE_ERROR
474	CLSL	FAILURE_READING_SELCALL_TX_DEVIATION_LEVEL_FROM_DBASE_ERROR
475	CUSL	FAILED_READING_SELCALL_TONE_FREQUENCIES_ERROR
476	CUSL	FAILED_READING_SELCALL_UPPER_FREQUENY_BOUNDS_ERROR
477	CUSL	FAILED_READING_SELCALL_LOWER_FREQUENY_BOUNDS_ERROR
478	CUSL	FAILED_READING_SELCALL_REMAP_TABLE_ERROR
479	CLSL	FAILURE_READING_SELCALL_CONFIG_PARAMS_ERROR
480	CUSL	PREPARING_TX_SIGNALLING_WITH_NO_NETWORK_SPECIFIED_ERROR
481	CUSL	ILLEGAL_FIXED_FORM_BURST_ID_ERROR
482	CUSL	NO_FIXED_BURST_FOUND_ERROR
483	CUSL	COULD_NOT_READ_FIXED_FORM_BURST_ERROR
484	CUSL	FAILED_TO_READ_FREE_FORM_BURSTS_ERROR
485	CUSL	FAILED_TO_READ_AUTO_ACK_TYPE_ERROR
486	CUSL	DIAL_STRING_MAX_LENGTH_EXCEEDED
487	CUSL	FAILED_TO_GET_RECORD_NUMBER_FOR_DECODE_BURSTS
488	CUSL	FAILED_TO_GET_DBASE_RECNUM_FOR_NETWORK
489	CLSL	FAILURE_READING_SIBT_TX_DEVIATION_LEVEL_FROM_DBASE_ERROR

Core Processor DTMF Related Errors:

500	CUDT	FAILED_EXTRACTING_DTMF_NETWORK_DATA_FROM_DATABASE_ERROR
501	CUDT	FAILED_EXTRACTING_DTMF_PATCH_DATA_FROM_DATABASE_ERROR
502	CUDT	CANNOT_CONFIGURE_DTMF_NETWORK_SIGNALLING_MODEM_ERROR
503	CUDT	CANNOT_CONFIGURE_DTMF_PATCH_MODEM_ERROR
504	CUDT	CANNOT_PREPARE_DTMF_NETWORK_SIGNALLING_TX_BUFFER_ERROR
505	CUDT	CANNOT_PREPARE_DTMF_PATCH_SIGNALLING_TX_BUFFER_ERROR
506	CUDT	CANNOT_LOAD_DTMF_NETWORK_SIGNALLING_TX_BUFFER_ERROR
507	CUDT	CANNOT_LOAD_DTMF_PATCH_SIGNALLING_TX_BUFFER_ERROR
508	CUDT	CANNOT_SEND_DTMF_NETWORK_SIGNALLING_TX_BUFFER_ERROR
509	CUDT	CANNOT_SEND_DTMF_PATCH_SIGNALLING_TX_BUFFER_ERROR
510	CUDT	CANNOT_READ_DTMF_NETWORK_DATABASE_SEQUENCE_ERROR
511	CUDT	INVALID_POINTER_TO_TX_BUFFER_ERROR
512	CUDT	INVALID_TX_DIGIT_TYPE_ERROR
513	CUDT	INVALID_TX_DIGIT_TYPE_ERROR
514	CUDT	INVALID_PATCH_SEQUENCE_TYPE_ERROR
515	CUDT	UNRECOGNISED_TX_ACCEPTED_ERROR
516	CUDT	PATCH_STATE_MACHINE_SHOULDNT_HAPPEN_ERROR

Core Processor Subaudible Signalling Errors:

520	CUTR	INVALID_INBAND_TX_COMPONENT_SUBTYPE_ERROR_1
521	CUTR	INVALID_INBAND_TX_COMPONENT_SUBTYPE_ERROR_2
522	CUTR	INVALID_INBAND_TX_COMPONENT_SUBTYPE_ERROR_3
523	CUTR	INVALID_INBAND_TX_COMPONENT_SUBTYPE_ERROR_4
524	CUTR	INVALID_AUDIBLE_TX_COMPONENT_SUBTYPE_ERROR
525	CUTR	INVALID_SUBAUD_TX_COMPONENT_SUBTYPE_ERROR
526	CUTR	INVALID_FULLBAND_TX_COMPONENT_SUBTYPE_ERROR
527	CUTR	TOO_MANY_BAND_FREE_NOTIFICATION_REQUESTS_ERROR
528	CUTR	GET_EMERGENCY_TX_HIGH_POWER_INFO_ERROR

Core Processor Transmission Errors:

530	CUCH	INVALID_NETWORK_SPECIFIED_FOR_CHANNEL_ERROR
531	CUTR	INVALID_RF_LIMIT_REQUEST_ERROR
532	CLTR	TRANSMITTER_INVALID_OVERTEMP_SPECIFIED_ERROR
533	CLTR	BAD_REVERSE_POWER_LEVEL_SPECIFIED_ERROR
534	CLTR	NON_HALF_DUPLEX_CHANNEL_SPECIFIED_IN_TXON_TRANSITION_ERROR
535	CLTR	NON_HALF_DUPLEX_CHANNEL_SPECIFIED_IN_RXIDLE_TRANSITION_ERROR
536	CLTR	NON_HALF_DUPLEX_CHANNEL_SPECIFIED_IN_TXIDLE_TRANSITION_ERROR
537	CLTR	NON_HALF_DUPLEX_CHANNEL_SPECIFIED_IN_RXON_TRANSITION_ERROR
538	CLTR	NON_HALF_DUPLEX_CHANNEL_SPECIFIED_IN_TXSTDBY_TRANSITION_ERROR

Core Processor Initialisation Errors:

540	CLTR	ERROR_EXTRACTING_TRANSMITTER_CAL_DATA_FROM_DATABASE
541	CLTR	FAILURE_READING_FREQUENCY_BAND_INFO_FROM_DBASE
542	CLTR	ERROR_EXTRACTING_RECEIVER_CAL_DATA_FROM_DATABASE
543	CLTR	ERROR_EXTRACTING_BANDWIDTH_DATA_FROM_DATABASE
544	CLTR	ERROR_UNKNOWN_BAND_EXTRACTED_FROM_HARDWARE_ID
545	CLTR	ERROR_EXTRACTING_DEFAULT_CAL_DATA
546	CLTR	ERROR_SETTING_KVCXO_VALUES
547	CLTR	ERROR_SETTING_KVCO_VALUES

Core Processor Task Errors:

550	CUCT	INVALID_CP_TO_CP_MESSAGE_CODE_ERROR
551	CUCT	ATTEMPT_TO_USE_RADIO_SERVICE_BEFORE_INITIALISATION

Core Processor Subaudible Errors:

560	CUSA	SUBAUDIBLE_READ_INFO_FROM_DBASE_ERROR
561	CUSA	SUBAUDIBLE_RX_STATE_ERROR
562	CUSA	SUBAUDIBLE_RX_CONFIGURATION_ERROR
563	CUSA	SUBAUDIBLE_RX_LOAD_ERROR
564	CUSA	SUBAUDIBLE_RX_UNLOAD_ERROR
565	CUSA	SUBAUDIBLE_RX_START_ERROR
566	CUSA	SUBAUDIBLE_RX_STOP_ERROR
567	CUSA	SUBAUDIBLE_TX_CONFIGURATION_ERROR
568	CUSA	SUBAUDIBLE_TX_LOAD_ERROR
569	CUSA	SUBAUDIBLE_TX_UNLOAD_ERROR
570	CUSA	SUBAUDIBLE_TX_START_ERROR
571	CUSA	SUBAUDIBLE_TX_STOP_ERROR

Core Processor Data Errors:

580	CUDA	INVALID_DATA_MODEM_TYPE_SPECIFIED_ERROR
581	CUDA	FAILURE_TO_EXTRACT_DATA_MODEM_TYPE_FROM_DBASE_ERROR

UART Errors:

585	UART	TRANSMIT_DATA_STREAM_EXCEEDS_BUFFER_SIZE_ERROR
586	UART	RECEIVE_DATA_NOTIFICATION_EXCEEDS_BUFFER_SIZE_ERROR

Core Monitor and Mute Errors:

590	CUMC	RX_AUDIO_MUTE_EVENT_ERROR
591	CUMC	AUDIO_MUTE_DBASE_READ_ERROR

Audio Path Errors:

595	CUAC	SCHEDULE_PROCESS_FAILED
596	CUAC	INVALID_CONFIGURATION
597	CUAP	FAILED_TO_READ_PUBLIC_ADDR_VOL_LEVEL
598	CUAP	FAILED_TO_READ_MIN_TONE_VOL_LEVEL

Audio Tap Errors:

600	CUAC	FAILED_TO_READ_MIC_SRC_FROM_DB
601	CUAC	FAILED_TO_READ_TAP_IN_FROM_DB
602	CUAC	FAILED_TO_READ_TAP_IN_TYPE_FROM_DB
603	CUAC	FAILED_TO_READ_TAP_IN_UNMUTE_CND_FROM_DB
604	CUAC	FAILED_TO_READ_TAP_OUT_FROM_DB
605	CUAC	FAILED_TO_READ_TAP_OUT_TYPE_FROM_DB
606	CUAC	FAILED_TO_READ_TAP_OUT_UNMUTE_CND_FROM_DB
607	CUAC	INVALID_NODE_SELECTED

Core Processor Busy Detect Errors:

610	CUBD	BUSY_DETECT_DBASE_READ_ERROR
611	CUBD	BUSY_DETECT_STATE_ERROR
612	CUBD	FAILED_TO_READ_BUSY_TAIL_TIME

Core Processor RSSI Errors:

615	CURS	RSSI_INVALID_THRESHOLD_ERROR
616	CURS	RSSI_ERROR_READING_DATABASE
617	CURS	FAILED_TO_FE_AGC_SWITCHING_CONFIG

Core Processor Noise Mute (Squelch) Errors:

620	CUSQ	SQUELCH_CONFIGURATION_FAILED
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Core Processor Scan Group Member List Errors:

630	SYOS	SW_SCANNING_ERROR
631	CUGR	READ_GROUP_MEMBER_CIB_FROM_DBASE_ERROR
632	CUGR	COUNT_GROUP_MEMBERS_IN_DBASE_ERROR
633	CUGR	READ_DEL_PRIORITY_CHAN_FROM_DBASE_ERROR
634	CUGR	SCAN_LIST_NOT_INITIALISED_ERROR

Core Processor Scan Group State Machine Errors:

640	CUGR	SCAN_GROUP_READ_INFO_FROM_DBASE_ERROR
641	CUGR	NO_CHANNELS_DELETED_IN_LIST_ERROR
642	CUGR	SCANNING_A_NULL_RX_CHANNEL_ERROR
643	CUGR	SCANNING_A_NULL_TX_CHANNEL_ERROR
644	CUGR	DEF_TX_CHANNEL_OPTION_ERROR
645	CUGR	ENTERED_SHOULDNT_HAPPENED_STATE_ERROR
646	CUGR	NO_CHANNELS_IN_SCAN_LIST_ERROR
647	CUGR	READ_CHANNEL_REC_ERROR
648	CUGR	CANNOT_LOAD_GROUP_MEMBERS_ERROR
649	CUGR	READ_RESUME_SCANNING_OPTION_FROM_DBASE_ERROR
650	CUGR	SELECTING_GROUP_CHANNEL_ERROR

Vote Errors:

653	CUGV	EVENT_QUEUE_FULL_ERROR
654	CUGV	EVENT_HANDLER_BUSY_ERROR

Core Processor Scan Group Timer Errors:

655	CUGR	READ_GROUP_HOLD_TIME_FROM_DBASE_ERROR
656	CUGR	READ_PRIORITY_SAMPLING_TIME_VALUE_FROM_DBASE_ERROR
657	CUGR	READ_SCAN_SLEEP_TIME_FROM_DBASE_ERROR

Core Processor TCXO Calibration Errors:

660	CLTR	TCXO_CALIBRATION_FAILED_ERROR
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Core Processor Transmit VCO Deviation Calibration Errors:

661	CLTR	TX_VCO_DEV_CALIBRATION_ERROR
662	CLTR	TX_VCO_DEV_CALIBRATION_SQUARE_WAVE_GEN_ERROR

Test Mode Circular Buffer Errors:

670	CTCM	MODEM_TEST_BUFFER_OVERFLOW
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Test Mode Errors For Testing:

675	CTCM	TEST_ERROR_GENERATED
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Core Processor T99 Error:

680	CUTN	READ_T99_NETWORK_DATABASE
681	CUTN	FAILED_READING_T99_UPPER_FREQUENY_BOUNDS_ERROR
682	CUTN	FAILED_READING_T99_LOWER_FREQUENY_BOUNDS_ERROR
683	CUTN	FAILED_READING_T99_REMAP_TABLE_ERROR
684	CUTN	FAILED_READING_T99_MIXING_FREQUENY_ERROR

Single In Band Tone Error:

690	CLSI	SENT_TONE_TIMER_ALREADY_EXISTS
691	CUSI	FAILED_EXTRACTING_SIBT_DATA_FROM_DATABASE_ERROR
692	CUSI	FAILED_EXTRACTING_EMERGENCY_ALERT_FROM_DATABASE_ERROR
693	CUSI	FAILED_EXTRACTING_AUTO_OVER_BEEP_FROM_DATABASE_ERROR

CWID Errors:

700	CUCW	ERROR_READING_CWID_DATA_FROM_DATABASE
701	CUCW	INVALID_NETWORK_SELECTED

Signal Processing Domain Errors:

900	SPKN	UNINITIALISED_ALGORITHM_CALL
901	SPKN	INVALID_KERNEL_STATE_REQUEST

Signal Processing Dynamic Code Locator Errors:

905	SYCL	BAD_SIGPROG_RX_TX_BASE_ADDRESS
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Hardware Driver Errors:

1000	HWIO	INVALID_ATTRIBUTE
1001	HWIO	INVALID_ASSIGNED_STATUS
1002	HWIO	LINE_ALREADY_ASSIGNED
1003	HWIO	ASSIGNING_OUTPUT_ONLY_LINE_AS_INPUT
1004	HWIO	ASSIGNING_INPUT_ONLY_LINE_AS_OUTPUT
1005	HWIO	WRITING_TO_CONFIGURABLE_INPUT
1006	HWIO	READING_FROM_CONFIGURABLE_OUTPUT
1007	HWIO	HARDWARE_FLOW_CONTROL_LINES_NOT_SET_UP
1008	HWIO	RTS_STATE_CHANGE_CALLBACK_FUNC_SET_UP_FAILED
1009	HWIO	FAILED_TO_SET_DIGITAL_OUTPUT
1010	HWIO	FAILED_TO_CLEAR_DIGITAL_OUTPUT
1011	HWIO	FAILED_TO_ASSIGN_DIGITAL_LINE

Hardware Simulation Errors:

1012	HWIO	DIGITAL_IO_MAPPING_ERROR
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Hardware SPI Driver Errors:

1015	HWSP	SPI_MUTEX_SEM_COUNT_GREATER_THAN_ONE_ERROR
1016	HWSP	SPI_MUTEX_SEM_ACQUIRE_FAILED_ERROR

Hardware Transmitter Services Errors:

1020	HWNP	SP_REG_MUTEX_SEM_ACQUIRE_FAILED_ERROR
1025	HWAN	FPGA_DRIVER_DISABLED
1030	HWAP	FAILED_TO_CREATE_SERIAL_TX_DATA_TIMER
1035	HWTM	TIMER_CALLBACK_TRAP_ERROR
1040	HWFL	INVALID_PAGE_TO_ERASE_ERROR
1041	HWFL	INVALID_ADDRESS_ON_PAGE_WRITE_ERROR
1042	HWFL	INVALID_ADDRESS_ON_PAGE_READ_ERROR
1043	HWFL	INVALID_ADDRESS_ON_PAGE_COMPARE_ERROR
1044	HWFL	INVALID_ADDRESS_ON_PAGE_READ_U16_ERROR
1050	IOTM	INVALID_MESSAGE_CAT_ERROR
1051	IOTM	INVALID_MESSAGE_CODE_ERROR

Internal Database Errors:

1101	DBLM	ASSERT_FAILED_ERROR
1102	DBLM	INTERNAL_ERROR

Health Monitoring Task Errors:

1200	SYHM	IMR_REGISTER_CONTAINS_INCORRECT_VALUE
1201	SYHM	SIG_PROC_KERNEL_RUN_TIMES_OUTSIDE_LIMITS
1202	SYHM	UI_TASK_RUN_TIMES_OUTSIDE_LIMITS
1203	SYHM	CORE_PROCESSOR_TASK_LOCKED
1204	SYHM	PERSONALITY_TASK_LOCKED
1205	SYHM	IO_TASK_LOCKED

Miscellaneous Errors:

1800	SYOS	WATCHDOG_CRITICAL_WARNING
1801	SYOS	FPGA_COMMS_RESET
1802	SYOS	FPGA_6521_DATA_CORRUPTION
1803	SYOS	DBASE_PROGRAM_BFR_TOO_SMALL
1804	SYOS	HW_TRANSITION_TIMED_OUT
1805	SYOS	FAILED_READING_SCRAMBLER_INVERSION_POINT_FREQUENCY

Hardware Error Designation:

2000	SYOS	HARDWARE_ERROR_CODE
2001	PCCU	POWER_UP_CAL_FAILED_VCXO_SANITY_CHECK
2002	PCCU	POWER_UP_CAL_FAILED_VCXO_LOCK_ERROR
2003	PCCU	POWER_UP_CAL_FAILED_VCO_SANITY_CHECK
2004	PCCU	POWER_UP_CAL_FAILED_VCO_LOCK_ERROR

4. Terminal Error Code Applications

Error Code Reports

The last recorded system error code of a TM8100 mobile can be read via use of the serial interface and a terminal style application.

This is accessed by putting the radio into "test mode".

This is done using the "reset command" – Shift 6, Shift 5 (^,%) in quick succession.

Please note connection speed needs to be 19200 bps for effective handshaking between radio and computer.

(See TN- 1011 Terminal Application Operation for more information)

By now using the correct CCTM (Computer Controlled Test Mode) commands the last recorded error code can be displayed.

Related commands are listed as below:

204	READ LAST SYSTEM ERROR
203	CLEAR LAST SYSTEM ERROR

Please also note that if a radio is having a firmware upgrade any error code in the system log will be removed once upgrade takes place.

CSO Instruction

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Compliance Issues None

5. Issuing Authority

Name and Position

Chris Thomson
Technical support

of Issuing Officer

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Distribution Level

Tait Only

Document History

Original Release

21 May 2005

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