FMT Errors and Warnings

The FMT CPU's generate alarms when they detect that something is wrong. These can be viewed from the Alarm screen .

Alarms are categorized as Errors, Warnings or Information.

- Errors are serious and cause the program to stop; all outputs are turned off and the error LED illuminates.
- Warnings cause no effect on the operation of the user program but indicate something is wrong; The warning LED illuminates.
- Information level alarms are provided to help you find possible errors in your application and do not cause the error or warning LEDs to illuminate.

Below is a list of these errors and warnings with suggestions as to the reasons and solutions. Warnings and errors are cleared when the program is started running i.e. when power is applied or when the program is started from within the Debug or mimic screens in FLEX.

Description	Int Ref	Error/Warning /Info (E/W/I)	Cause(s)	Solution
Not implemented indirect command	0	W	FLEX requested the FMT to use a resource that is not understood by the FMT.	Firmware in FMT system is not up to date, contact your supplier for a PROM update.
Excessive loop time.	1	E	The time taken to execute the program loop was in excess of 0.25 Sec. User program probably got into a continuous loop. Excessively complicated program with many large 32-bit maths computations.	Check that jumps that jump back in the program always have an exit. Try to simplify excessive 32-bit maths calculations particularly division and square root.
Battery low	2	W	Battery voltage is low	Fit new battery supporting memory.
Program checksum error	3	E	When the FMT went to execute the user program it found that the CRC checksum was invalid.	Check battery is not flat. Re-load user program.
Read/Write ram error	4	E	The internal system testing found an error with the memory.	Major hardware fault with FMT. Return for repair.
10mS interrupt warning	5	W	The processor is nearly overloaded, there are no errors at this stage but performance is fully stretched. May be caused by excessive communication activity.	Lower the baud rates on the communication ports.

10mS interrupt error	6	E	The processor is overloaded. The processor is unable to maintain the system.	Lower the baud rates on the communication ports.
Stack warning	7	W	Running out of internal resources.	Contact Colter Systems or your supplier with a copy of your program, and the versions of both your FLEX package and your FMT prom.
Stack error	8	E	The processor has run out of internal resources.	Contact Colter Systems or your supplier with a copy of your program, and the versions of both your FLEX package and your FMT prom.
No user program to run	9	E	When the FMT went to execute the user program it did not find one.	Flat battery or no user program in the FMT.
Unhandled High Speed Input	A	W	The High Speed option selected in the Internal Register editor is not supported by the FMT.	Contact COLTER of an upgrade to your FMT firmware
Unable to set Real Time Clock	B	E	Hardware Fault	Contact your supplier for advice
Embedded Text in Comp-Text function.	C	W	The compare-text function cannot search within text strings which include additional text strings	Only use the compare text function with simple text strings.
Real Time Clock corrupted	D	W	Date and time in hardware clock is invalid.	Caused by hardware fault or flat battery.
Unhandled transmit checksum	E	W	A text string tried to use a check sum that is not handled by the FMT firmware.	Check the text strings for invalid check sums, or contact your supplier for a firmware upgrade.
Internal Bus Error Call COLTER	F	E	Hardware Fault	Contact your supplier for advice
Address Error Call COLTER	10	E	Hardware Fault	Contact your supplier for advice
Illegal Code Call COLTER	11	E	Hardware Fault	Contact your supplier for advice
Zero Divide Error Call COLTER	12	E	Hardware Fault	Contact your supplier for advice
Unhandled receive checksum	13	W	A serial-in function tried to use a check sum that is not handled by the FMT firmware.	Check the serial-in functions for invalid check sums, or contact your supplier for a firmware upgrade.
Invalid Program in Flash	14	E	The internal FLASH memory does not contain a valid program.	Download the program again.

Unable to program int. Flash	15	W	Hardware Fault	Contact your supplier for advice
Unable to program ext. Flash	16	W	The FMT could not write data to the external FLASH card.	Check for faulty or incorrectly fitted FLASH card
Non-Volatile RAM error	17	E	The internally check-summed area of RAM did not have a valid checksum.	Check for flat battery. System will automatically recalculate the checksum, but the programming station number will be set to zero.
Card program uses old firmware	18	E	The program read from an external FLASH card was generated for an incompatible firmware version.	Re-program the FLASH card.
12v prog. fault, Call COLTER	19	E	Hardware Fault.	Contact your supplier for advice.
Instruction Step Overrun	1A	I	An instruction module overran the number of steps in the module.	Ensure all instruction modules use a goto, while or do loop to return execution to the start of the module.
nstruction Module Stack Error	1B	E	The subroutines within an instruction module are nested too deeply and the modules stack overflowed.	Ensure that subroutines cannot be nested more than 8 deep.
Repeat Instruction of Zero	1C	W	A REPEAT keyword was found with zero as the number of loops to perform.	Repeat should specify a number of loops of 1 to 65535
No Steps in Instruction Module	1D	E	An instruction modules had no code associated with it.	Ensure that each module has code that has been saved and compiled without errors.
Register Indirection Invalid	1E	W	An instruction condition using register indirection (e.g. IF R@R100 > 0) referred to a facility number that doesn't exist.	Ensure that registers used as pointers in indirect conditions cannot contain invalid values.
Input Interrupt Module Overrun	1F	E	An input interrupt driven instruction module executed more than 20 steps.	Ensure that code written for input interrupt modules cannot execute more than 20 steps.
Bad character received on port 0	20	I	A corruption in the character that was received on port 0.	External noise or wiring errors on communication cables connected to port 0.
Bad character received on port 1	21	I	A corruption in the character that was received on port 1.	External noise or wiring errors on communication cables connected to port 1.

Bad character received on port 2	22	I	A corruption in the character that was received on port 2.	External noise or wiring errors on communication cables connected to port 2.
Bad character received on port 3	23	I	A corruption in the character that was received on port 3.	External noise or wiring errors on communication cables connected to port 3.
Bad character received on port 4	24	I	A corruption in the character that was received on port 4.	External noise or wiring errors on communication cables connected to port 4.
Bad character received on port 5	25	I	A corruption in the character that was received on port 5.	External noise or wiring errors on communication cables connected to port 5.
Bad character received on port 6	26	I	A corruption in the character that was received on port 6.	External noise or wiring errors on communication cables connected to port 6.
Bad character received on port 7	27	I	A corruption in the character that was received on port 7.	External noise or wiring errors on communication cables connected to port 7.
Invalid user comms parameter on port 0	28	W	The baud rate, data bits, parity or stop bits contain an invalid parameter for port 0.	Check and correct using the comms page in the project configuration screen in FLEX32.
Invalid user comms parameter on port 1	29	W	The baud rate, data bits, parity or stop bits contain an invalid parameter for port 1.	Check and correct using the comms page in the project configuration screen in FLEX32.
Invalid user comms parameter on port 2	2A	W	The baud rate, data bits, parity or stop bits contain an invalid parameter for port 2	Check and correct using the comms page in the project configuration screen in FLEX32.
Invalid user comms parameter on port 3	2B	W	The baud rate, data bits, parity or stop bits contain an invalid parameter for port 3.	Check and correct using the comms page in the project configuration screen in FLEX32.
Invalid user comms parameter on port 4	2C	W	The baud rate, data bits, parity or stop bits contain an invalid parameter for port 4	Check and correct using the comms page in the project configuration screen in FLEX32.
Invalid user comms parameter on port 5	2D	W	The baud rate, data bits, parity or stop bits contain an invalid parameter for port 5.	Check and correct using the comms page in the project configuration screen in FLEX32.

Invalid user comms parameter on port 6	2E	W	The baud rate, data bits, parity or stop bits contain an invalid parameter for port 6.	Check and correct using the comms page in the project configuration screen in FLEX32.
Invalid user comms parameter on port 7	2F	W	The baud rate, data bits, parity or stop bits contain an invalid parameter for port 7.	Check and correct using the comms page in the project configuration screen in FLEX32.
Invalid user port 0 protocol	30	I	A character was received in on port 0 when no protocol has been defined to handle it.	Check that the protocol type has been set up using the comms page in the project configuration screen in FLEX32. If set to user text (0) then the command serial input or get num may not be present or executed within the user program.
Invalid user port 1 protocol	31	I	A character was received in on port 1 when no protocol has been defined to handle it.	Check that the protocol type has been set up using the comms page in the project configuration screen in FLEX32. If set to user text (0) then the command serial input or get num may not be present or executed within the user program.
Invalid user port 2 protocol	32	I	A character was received in on port 2 when no protocol has been defined to handle it.	Check that the protocol type has been set up using the comms page in the project configuration screen in FLEX32. If set to user text (0) then the command serial input or get num may not be present or executed within the user program.
Invalid user port 3 protocol	33	I	A character was received in on port 3 when no protocol has been defined to handle it.	Check that the protocol type has been set up using the comms page in the project configuration screen in FLEX32. If set to user text (0) then the command serial input or get num may not be present or executed within the user program.

Invalid user port 4 protocol	34	I	A character was received in on port 4 when no protocol has been defined to handle it.	Check that the protocol type has been set up using the comms page in the project configuration screen in FLEX32. If set to user text (0) then the command serial input or get num may not be present or executed within the user program.
Invalid user port 5 protocol	35	I	A character was received in on port 5 when no protocol has been defined to handle it.	Check that the protocol type has been set up using the comms page in the project configuration screen in FLEX32. If set to user text (0) then the command serial input or get num may not be present or executed within the user program.
Invalid user port 6 protocol	36	I	A character was received in on port 6 when no protocol has been defined to handle it.	Check that the protocol type has been set up using the comms page in the project configuration screen in FLEX32. If set to user text (0) then the command serial input or get num may not be present or executed within the user program.
Invalid user port 7 protocol	37	I	A character was received in on port 7 when no protocol has been defined to handle it.	Check that the protocol type has been set up using the comms page in the project configuration screen in FLEX32. If set to user text (0) then the command serial input or get num may not be present or executed within the user program.
LINKLINE received own/duplicate frame on port 0.	38	W	LINKLINE received a packet of information from a station number the same as it's own.	Check that another station of the same number is not on the link. Also be sure that an FMT cannot receive it's own transmissions.
LINKLINE received own/duplicate frame on port 1.	39	W	LINKLINE received a packet of information from a station number the same as it's own.	Check that another station of the same number is not on the link. Also be sure that an FMT cannot receive it's own transmissions.

LINKLINE received own/duplicate frame on port 2.	3A	W	LINKLINE received a packet of information from a station number the same as it's own.	Check that another station of the same number is not on the link. Also be sure that an FMT cannot receive it's own transmissions.
LINKLINE received own/duplicate frame on port 3.	3B	W	LINKLINE received a packet of information from a station number the same as it's own.	Check that another station of the same number is not on the link. Also be sure that an FMT cannot receive it's own transmissions.
LINKLINE received own/duplicate frame on port 4.	3C	W	LINKLINE received a packet of information from a station number the same as it's own.	Check that another station of the same number is not on the link. Also be sure that an FMT cannot receive it's own transmissions.
LINKLINE received own/duplicate frame on port 5.	3D	W	LINKLINE received a packet of information from a station number the same as it's own.	Check that another station of the same number is not on the link. Also be sure that an FMT cannot receive it's own transmissions.
LINKLINE received own/duplicate frame on port 6.	3E	W	LINKLINE received a packet of information from a station number the same as it's own.	Check that another station of the same number is not on the link. Also be sure that an FMT cannot receive it's own transmissions.
LINKLINE received own/duplicate frame on port 7.	3F	W	LINKLINE received a packet of information from a station number the same as it's own.	Check that another station of the same number is not on the link. Also be sure that an FMT cannot receive it's own transmissions.
LINKLINE received a bad frame on port 0	40	I	LINKLINE received a packet of information which contained invalid information.	Check for data corruption caused by noise or data crashes on the link.
LINKLINE received a bad frame on port 1	41	I	LINKLINE received a packet of information which contained invalid information.	Check for data corruption caused by noise or data crashes on the link.
LINKLINE received a bad frame on port 2	42	I	LINKLINE received a packet of information which contained invalid information.	Check for data corruption caused by noise or data crashes on the link.
LINKLINE received a bad frame on port 3	43	I	LINKLINE received a packet of information which contained invalid information.	Check for data corruption caused by noise or data crashes on the link.
LINKLINE received a bad frame on port 4	44	I	LINKLINE received a packet of information which contained invalid information.	Check for data corruption caused by noise or data crashes on the link.

LINKLINE received a bad frame on port 5	45	I	LINKLINE received a packet of information which contained invalid information.	Check for data corruption caused by noise or data crashes on the link.
LINKLINE received a bad frame on port 6	46	I	LINKLINE received a packet of information which contained invalid information	Check for data corruption caused by noise or data crashes on the link.
LINKLINEreceived a bad frame on port 7	47	I	LINKLINE received a packet of information which contained invalid information.	Check for data corruption caused by noise or data crashes on the link.
Invalid communication port accessed	48	W	The program accessed a serial port which doesn't exist on the FMT running the code.	Ensure that the program is correct for the target FMT.
Some Input Interrupts Missed	49	W	The FMT was not able to handle all the high-speed interrupts.	Reduce the loading on the FMT by: Decreasing the frequency of high-speed counters and encoders. Lowering the baud rate of communications. Reducing the I/O update times.
Can't Process Input Interrupts	4A	E	The FMT was not able to handle all the high-speed interrupts and was missing too many to be able to continue running.	Reduce the loading on the FMT by: Decreasing the frequency of high-speed counters and encoders. Lowering the baud rate of communications. Reducing the I/O update times.
Invalid program in external flash	4B	E	The FMT attempted to load a program from the plug-in flash card but the check sum was invalid.	Re-programme the flash card.
Programming lead required	4C	E	An attempt was made to download firmware without having a programming lead plugged in.	Repeat the firmware download procedure with a programming lead plugged in.
FMT in Update System Flash mode	4D	W	This warning shows that the FMT/BIS is in the correct mode for Firmware download.	This warning will be cleared when firmware download completes.
Fieldbus module failure	4E	E	No response from the Fieldbus module plugged into a BIS-100 or FMT-400.	Hardware failure, contact your supplier.
Invalid response from fieldbus module	4F	E	The fieldbus module replied with invalid information.	Check the fieldbus module type is correct and that the number of registers 'In' and 'Out' are within range.
Timeout during fieldbus initialisation	50	E	The fieldbus module did not respond within a specified time during initialisation.	Try a power on reset, if persistent then contact your supplier.

No response from fieldbus module	51	E	The fieldbus module did not respond within a specified time during normal operation.	Try a power on reset, if persistent then contact your supplier.
Invalid fieldbus size/range setup	52	E	The ranges of registers used for Input and Output of fieldbus data are invalid.	Check the settings on the fieldbus screen of the project configuration form.
No fieldbus In or Out register defined	53	W	The number of registers used for Input and Output of fieldbus data are invalid.	Check the settings on the fieldbus screen of the project configuration form.
Digital I/O update time overrun	54	W	The FMT was not able to update the digital I/O within the update interval	Increase the update time or reduce the loading on the FMT by: Decreasing the frequency of high-speed counters and encoders. Lowering the baud rate of communications. Reducing the I/O update times.
Analogue I/O update time overrun	55	W	The FMT was not able to update the analogue I/O within the update interval	Increase the update time or reduce the loading on the FMT by: Decreasing the frequency of high-speed counters and encoders. Lowering the baud rate of communications. Reducing the I/O update times.
Fieldbus I/O update time overrun	56	W	The FMT was not able to update the fieldbus I/O within the update interval.	Increase the update time or reduce the loading on the FMT by: Decreasing the frequency of high-speed counters and encoders. Lowering the baud rate of communications. Reducing the I/O update times.
Fieldbus I/O update access denied	57	W	The FMT was unable to access the fieldbus for a routine I/O update.	Try a power on reset, if persistent then contact your supplier.
Monitor mode access warning	58	W	An attempt was made to change the FMT program when in monitor mode.	Take the FMT out of monitor mode before attempting to download a new program or force I/O etc.
Fieldbus module unrecognized	59	W	The FMT does not recognize the type of fieldbus module.	Contact your supplier. You may need a firmware update, or you may have the wrong fieldbus module.

Fieldbus no response warning	5A	W	The fieldbus module did not respond within a specified time during normal operation.	Try a power on reset, if persistent then contact your supplier.
Extra module fitted in FMT400 rack	5B	W	The FMT detected a module in the FMT400 rack that does not have a corresponding entry in the project set up	Check that the rack set-up in the project configuration screen matches the actual hardware you are using
Module missing from FMT400 rack	5C	W	The FMT has detected that a module specified in the rack set-up of the project configuration is missing	Check that the rack set-up in the project configuration screen matches the actual hardware you are using
Wrong module fitted in FMT400 rack	5D	W	The FMT has detected that a module specified in the rack set-up of the project configuration is different to the actual module fitted in the rack.	Check that the rack set-up in the project configuration screen matches the actual hardware you are using
Bad configuration in FMT program	5E	W	The rack configuration downloaded by Flex32 is invalid.	Contact your supplier.
Unhandled Ethernet Protocol	5F	W	The communications protocol specified for use with an Ethernet module is not recognized.	Check the setup on the fieldbus page of the project configuration screen.
Program too big for Flash card	60	W	The program in the FMT memory is too large to fit on the plug-in flash card.	The program size will have to be reduced (by removing code or text strings) to fit on a flash card.
Communication failure with remote I/O	61	E (FMT-400 only)	A fault has occured in the fibre optic communications to one or more of the slave racks.	Re-start the FMT to get a more detailed error message (see below). Check all master ans slave modules for bad or dirty connections.
Communication error with slave rack 1	62	E (FMT-400 only)	A fault has occured in the fibre optic communications to slave rack 1.	Check the fibre optic connection to this slave is clean and correctly fitted.
Communication error with slave rack 2	63	E (FMT-400 only)	A fault has occured in the fibre optic communications to slave rack 2.	Check the fibre optic connection to this slave is clean and correctly fitted.
Communication error with slave rack 3	64	E (FMT-400 only)	A fault has occured in the fibre optic communications to slave rack 3.	Check the fibre optic connection to this slave is clean and correctly fitted.
Communication error with slave rack 4	65	E (FMT-400 only)	A fault has occured in the fibre optic communications to slave rack 4.	Check the fibre optic connection to this slave is clean and correctly fitted.
Communication error with slave rack 5	66	E (FMT-400 only)	A fault has occured in the fibre optic communications to slave rack 5.	Check the fibre optic connection to this slave is clean and correctly fitted.

Communication error with slave rack 6	67	E (FMT-400 only)	A fault has occured in the fibre optic communications to slave rack 6.	Check the fibre optic connection to this slave is clean and correctly fitted.
Communication error with slave rack 7	68	E (FMT-400 only)	A fault has occured in the fibre optic communications to slave rack 7.	Check the fibre optic connection to this slave is clean and correctly fitted.
Communication error with slave rack 8	69	E (FMT-400 only)	A fault has occured in the fibre optic communications to slave rack 8.	Check the fibre optic connection to this slave is clean and correctly fitted.
Communication error with slave rack 9	6A	E (FMT-400 only)	A fault has occured in the fibre optic communications to slave rack 9.	Check the fibre optic connection to this slave is clean and correctly fitted.
Communication error with slave rack 10	6B	E (FMT-400 only)	A fault has occured in the fibre optic communications to slave rack 10.	Check the fibre optic connection to this slave is clean and correctly fitted.
Communication error with slave rack 11	6C	E (FMT-400 only)	A fault has occured in the fibre optic communications to slave rack 11.	Check the fibre optic connection to this slave is clean and correctly fitted.
Communication error with slave rack 12	6D	E (FMT-400 only)	A fault has occured in the fibre optic communications to slave rack 12.	Check the fibre optic connection to this slave is clean and correctly fitted.
Communication error with slave rack 13	6E	E (FMT-400 only)	A fault has occured in the fibre optic communications to slave rack 13	Check the fibre optic connection to this slave is clean and correctly fitted.
Communication error with slave rack 14	6F	E (FMT-400 only)	A fault has occured in the fibre optic communications to slave rack 14.	Check the fibre optic connection to this slave is clean and correctly fitted.
Communication error with slave rack 15	70	E (FMT-400 only)	A fault has occured in the fibre optic communications to slave rack 15.	Check the fibre optic connection to this slave is clean and correctly fitted.
Extra slave rack(s) detected	71	W (FMT-400 only)	During initialisation the bus master detected one or more slave racks than the number expected.	Check the Rack configuration on the project form.
Access to invalid allocated RAM	72	W	The application code attempted to read from an allocated RAM location outside the defined range.	Check the number of words of allocated RAM on the PAM page of the project form and ensure your code honours this limit.
Remote I/O bus master module missing	73	E (FMT-400 only)	The CPU was unable to find the Bus master	Plug in the Bus master or remove the module from the rack configuration on the project form.