flipdot_fw301 NORDIC UART COMMAND LIST

SYSTEM OPCODES: WRITE @SLW6ON

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
'p'	'q'	','	OPCODE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

OPCODE
'0' - ping
'1' - DFU mode
'2' - Resets the device
'3' - Settings defaults
'4' - Starts deadline timer
'5' - Starts factory test mode
'6' - Stops factory test mode

Example: ***pq,3*** *Sets the default settings for the clock.*

TIME AND DATE: WRITE @V060L4

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
's'	'a'	','	SEC_D	SEC_U	','	MIN_D	MIN_U	','	HR_D	HR_U	','	DAY_D	DAY_U	','	MON_D	MON_U	','	YR_D	YR_U

SEC_D and SEC_U
'00' to '59' set time seconds.

MIN_**D and MIN_U**
'00' to '59' set time minutes.

HR_D and HR_U
'00' to '23' set time hours in 24-hour format.

DAY_D and DAY_U
'01' to '31' set the day of the month.

MON_D and MON_U
'01' to '12 set the month.

YR_D and YR_U
'00' to '99' set year (last two digits starting from year 2000).

Example: ***sa,00,45,14,03,08,17*** *Sets date and time: year: 2017, month: August, day: 3rd, hours: 14, minutes: 45, seconds: 0.*

DEADLINE TIME AND DATE: WRITE @NKX3DI

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
's'	'c'	','	DDL_SEC_D	DDL_SEC_U	','	DDL_MIN_D	DDL_MIN_U	','	DDL_HR_D	DDL_HR_U	','	DDL_-DAY_D	DDL_-DAY_U	','	DDL_MON_D	DDL_MON_U	','	DDL_YR_D	DDL_YR_U

DDL_SEC_D and DDL_SEC_U
'00' to '59' set deadline time seconds.

DDL_MIN_**D and DDL_MIN_U**
'00' to '59' set deadline time minutes.

DDL_HR_D and DDL_HR_U
'00' to '23' set deadline time hours in 24-hour format.

DDL_DAY_D and DDL_DAY_U
'01' to '31' set the day of the monthof the deadline.

DDL_MON_D and DDL_MON_U
'01' to '12 set the month of the deadline.

DDL_YR_D and DDL_YR_U
'00' to '99' set year (last two digits starting from year 2000) of the deadline .

Example: ***sc,00,45,14,03,08,17*** *Sets deadline date and time: year: 2017, month: August, day: 3rd, hours: 14, minutes: 45, seconds: 0.*

TIMED NIGHTMODE: WRITE @GTVOQS

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
's'	'd'	','	TNM_EN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TNM_EN
'0' - Disables timed night mode.(Display operation stops)
'1' - Enables timed night mode.(Display operation continues)

Example: ***sd,1*** *Enables timed night mode.*

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TIMED NIGHTMODE ON TIME: WRITE @GTU86U

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
's'	'e'	','	TNM_ON_MIN_D	TNM_ON_MIN_U	','	TNM_ON_HR_D	TNM_ON_HR_U	-	-	-	-	-	-	-	-	-	-	-	-

TNM_ON_MIN_D and TNM_ON_MIN_U
'00' to '59' set night mode begin minutes.

TNM_ON_HR_D and TNM_ON_HR_U
'00' to '23' set night mode begin hours.

Example: ***se,00,23*** *Timed night mode begins at 23:00.*

TIMED NIGHTMODE OFF TIME: WRITE @FLC0MG

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
's'	'f'	','	TNM_OFF_SEC_D	TNM_OFF_SEC_U	','	TNM_OFF_MIN_D	TNM_OFF_MIN_U	-	-	-	-	-	-	-	-	-	-	-	-

TNM_OFF_MIN_D and TNM_OFF_MIN_U
'00' to '59' set night mode end minutes.

TNM_OFF_HR_D and TNM_OFF_HR_U
'00' to '23' set night mode end hours.

Example: ***sf,00,09*** *Timed night mode ends at 9:00.*

AMBIENT NIGHTMODE: WRITE @GXTP7I

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
's'	'g'	','	ANM_EN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ANM_EN
'0' - Disables ambient-light night mode.(Display operation stops).
'1' - Enables ambient-light night mode.(Display operation continues).

Example: ***sg,1*** *Enables ambient-light night mode.*

AMBIENT_NIGHTMODE LOWLIMIT: WRITE @UCNXSH

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
's'	'h'	','	ANM_LL_D	ANM_LL_U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ANM_LL_D and ANM_LL_U
'00' to '10' set ambient light level for ambient nightmode low limit below which the ambient-light night mode is on.

Example: ***sh,01*** *Sets ambient-light night mode low level to 1.*

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AMBIENT_NIGHTMODE HIGHLIMIT: WRITE @HO88XM

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
's'	'i'	','	AN-M_HL_D	AN-M_HL_U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ANM_HL_D and ANM_HL_U
'00' to '10' set ambient light level for ambient nightmode high limit above which the ambient-light night mode is off.

Example: ***sh,02*** *Sets ambient-light night mode high level to 2.*

TIME FORMAT: WRITE @ZKQ9B3

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
's'	'j'	','	T_F	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

T_F
'0' - 12-hour format display.
'1' - 24-hour format display.

Example: ***sj,1*** *Sets the displayed time format to 24-hour.*

MESSAGE: WRITE @NQSFDQ

0	1	2	3-102
's'	'k'	','	MSG

MSG
100 character string. Musb be terminated with a nextline character. String itself can contain only these characters:
0123456789ABCDEFGHIJKLMNOPQRSTU-VWXYZ!"#$%&()*+,-./:;<=>?@[]^_~{|} '

Example: ***sk,HELLO WORLD\n*** *Sets the the message to "HELLO WORLD".*

MESSAGE SPEED: WRITE @6V886A

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
's'	'l'	','	MSG_S_D	MSG_S_U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

MSG_S_D and MSG_S_U
'00' to '10' set message scroll speed.

Example: sl,05 Sets medium scroll speed for messages.

OFFSET: WRITE @UU0FEH

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
's'	'm'	','	OFFS_-SIGN	OFFS_D	OFFS_U	-	-	-	-	-	-	-	-	-	-	-	-	-	-

OFFS_SIGN
'+' or '-' to set weather to slow down or to speed up the RTC
OFFS_D and OFFS_U
'00' to '99' to set the offset value in ppm. Note, that the actual offset value that the RTC operates with may slightly differ from the one set because the RTC offset accuracy does not represent an integer value.
To calculate offset value, use the following formula:
offset =((fm-fs)/fs)*1000000
fm – measured RTC frequency ouput during factory test.
fs – the frequency standard used, in this case 4096Hz.

Example: ***sm,+50*** *Sets the RTC offset to +51ppm. In this case used factory data is: fm=4096.21 Hz fs=4096 Hz offset=+51.27ppm.*

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SHOW1...SHOW6: WRITE @A43OJD

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
'w'	'a'	','	SHOW1_X	','	SHOW1_T_D	SHOW1_T_U	-	-	-	-	-	-	-	-	-	-	-	-	-

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
'w'	'b'	','	SHOW2_X	','	SHOW2_T_D	SHOW2_T_U	-	-	-	-	-	-	-	-	-	-	-	-	-

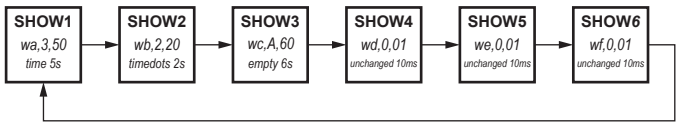
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
'w'	'c'	','	SHOW3_X	','	SHOW3_T_D	SHOW3_T_U	-	-	-	-	-	-	-	-	-	-	-	-	-

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
'w'	'd'	','	SHOW4_X	','	SHOW4_T_D	SHOW4_T_U	-	-	-	-	-	-	-	-	-	-	-	-	-

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
'w'	'e'	','	SHOW5_X	','	SHOW5_T_D	SHOW5_T_U	-	-	-	-	-	-	-	-	-	-	-	-	-

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
'w'	'f'	','	SHOW6_X	','	SHOW6_T_D	SHOW6_T_U	-	-	-	-	-	-	-	-	-	-	-	-	-

Show slot system
Information is displayed in a circular fashion such that what is programmed to be shown for SHOW1 slot gets displayed first for a set time, then subsequently SHOW2 slot is displayed and so on. When the sequence reaches the end, it then switches back to displaying SHOW1. again. Show slot system is disabled while the device is in draw mode.



SHOW*n*_X
'0' - display doesn't change for a set time.
'1' - displays deadline timer in dot format.
'2' - displays regular time in dot format.
'3' - displays regular time in sequence of two digits.
'4' - displays an image.
'5' - displays text message.
'6' - displays weather info.
'7' - hours only in two digit format.
'8' - minutes only in two digit format.
'A' - displays black for a set time

SHOW*n*_D and SHOW*n*_U
'01' to '99' to set the slot display time in tens of miliseconds. Seting display time to '50' will result in 5 seconds of display time.

Example: ***wa,3,40*** *Sets SHOW1 slot to display regular time for 4 seconds.*

DISPLAY SYMBOL: WRITE @FSR3HA

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
'c'	'a'	','	DISP_SYM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

DISP_SYM
Single character to be displayed. Supported characters:
0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ!"#$%&()*+,-./:;<=>?@[]^_~{|} '

Example: ***ca,@*** *Displays @.*

DISPLAY OPERATIONS: WRITE @U3KIEK

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
'c'	'b'	','	DISP_OP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

DISP_OP
'0' - fill display.
'1' - clear display.
'2' - display a sequence of all supported characters.

Example: ***cb,0*** *Fills display.*

DISPLAY DRAW MODE: WRITE @ONMESS

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
'c'	'c'	','	DM_EN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

DM_EN
'0' - disables draw mode.
'1' - enables draw mode. Draw mode overrides normal display operation.

Example: ***cc,1*** *Enables draw mode.*

DISPLAY SET PIXEL: WRITE @D1FVG4

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
'c'	'd'	','	SET_X_D	SET_X_U	','	SET_Y_D	SET_Y_U	','	SET_DISP_D	SET_DISP_U	-	-	-	-	-	-	-	-	-

SET_X_D and SET_X_U
'00' to '06' - set the column of the pixel that is to be set. A value of '00' represents the leftmost column.

SET_Y_D and SET_Y_U
'00' to '06' - set the row of the pixel that is to be set. A value of '00' represents the topmost row.

SET_DISP_D and SET_DISP_U
'00' to '02' - set the display number in the BRO system to address.

Example: ***cd,03,03,01*** *Sets the middle pixel of the second display in a three or two display BRO setup.*

DISPLAY CLEAR PIXEL: WRITE @D71FLG

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
'c'	'e'	','	CLR_X_D	CLR_X_U	','	CLR_Y_D	CLR_Y_U	','	CLR_DISP_D	CLR_DISP_U	-	-	-	-	-	-	-	-	-

CLR_X_D and CLR_X_U
'00' to '06' - set the column of the pixel that is to be cleared. A value of '00' represents the leftmost column.

CLR_Y_D and CLR_Y_U
'00' to '06' - set the row of the pixel that is to be cleared. A value of '00' represents the topmost row.

CLR_DISP_D and CLR_DISP_U
'00' to '02' - set the display number in the BRO system to address.

Example: ***ce,06,06,00*** *Clears the bottom-right pixel of the first display in any number of display BRO setup.*

Changes made in this document:

Initial revision - published on AUG 6 2017 - valid from commit 0de92b2