



SCS_Xlator_CR351 Rev. 2.01

This document lists the functions of the CR351 translator. The translator processes II data received from and transmitted to the CR351

DATA TO CONTROLLER

CONTROL

t3 p4 s50 v1 Reader 1 operational normal, set reader_status.op_stat (port 1) to 1
04, F1H, 25H, 0, status of reader 2 (reader.stat_op)

t3 p5 s50 v1 Reader 2 operational normal, set reader_status.op_stat (port 2) to 1
04, F1H, 25H, status of reader 1 (reader.stat_op), 0

t3 p4 s50 v2 Reader 1 operational isolate, set reader_status.op_stat (port 1) to 2
04, F1H, 25H, 1, status of reader 2 (reader.stat_op)

t3 p5 s50 v2 Reader 2 operational isolate, set reader_status.op_stat (port 2) to 2
04, F1H, 25H, status of reader 1 (reader.stat_op), 1

t3 p1 s50 v1	2,1,1	Open latch 1
t3 p1 s50 v2	2,1,0	Close latch 1
t3 p1 s50 v3	2,1,3	Open latch 1 permanent
t3 p1 s50 v4	2,1,2	Close latch 1 permanent
t3 p2 s50 v1	2,2,1	Open latch 2
t3 p2 s50 v2	2,2,0	Close latch 2
t3 p2 s50 v3	2,2,3	Open latch 2 permanent
t3 p2 s50 v4	2,2,2	Close latch 2 permanent
t3 p3 s50 v1	3,3,1,x	Open Aux, x is the pulse length OUTPUT_STATUS.L1_PULSE
t3 p3 s50 v2	3,3,0,x	Close Aux, x is the pulse length OUTPUT_STATUS.L2_PULSE
t3 p3 s50 v3	3,3,3,x	Open Aux permanent, x is the pulse length OUTPUT_STATUS.L3_PULSE
t3 p3 s50 v4	3,3,2,x	Close Aux permanent, x is the pulse length OUTPUT_STATUS.L4_PULSE
t3 p6 s50 v1	2,0,1	Buzzer ON
t3 p6 s50 v2	2,0,0	Buzzer OFF
t3 p7 s50 v1	1,18H	Reader 1, LED flash
t3 p8 s50 v1	1,19H	Reader 2, LED flash

SET-UP

t4 n? s6 v0 I/O Queries
1, 9 I/O request
1, F0H Version request

t4 n? s4 x1 Set RTC
9, F4H, sec, min, hr, DOW, date, month, year ls, year ms DOW 1=Monday

t4 n? s4 x2 Set holidays, one message per holiday (number 1 to 30)
05, F1H, 14, 15+holiday number, day (holidays.date), month (holidays.month)

t4 n? s4 x3 TIME ZONES sets i=0 to 5
07, F1H, 10H, i*8, Z1_Shr, Z1_Smin, Z1_Ehr, Z1_Emin (time_zone.??????? Referenced by i+1)
07, F1H, 10H, i*8+1, Z2_Shr, Z2_Smin, Z2_Ehr, Z2_Emin
07, F1H, 10H, i*8+2, Z3_Shr, Z3_Smin, Z3_Ehr, Z3_Emin
07, F1H, 10H, i*8+3, Z4_Shr, Z4_Smin, Z4_Ehr, Z4_Emin
07, F1H, 10H, i*8+4, Z5_Shr, Z5_Smin, Z5_Ehr, Z5_Emin
07, F1H, 10H, i*8+5, Z6_Shr, Z6_Smin, Z6_Ehr, Z6_Emin
07, F1H, 10H, i*8+6, Z7_Shr, Z7_Smin, Z7_Ehr, Z7_Emin
07, F1H, 10H, i*8+7, Z8_Shr, Z8_Smin, Z8_Ehr, Z8_Emin

Time group – one byte per time zone
bit 0=time_group.??_MON, bit 1=time_group.??_TUE, bit
2=time_group.??_WED, bit 3=time_group.??_THU
bit 4=time_group.??_FRI, bit 5=time_group.??_SAT, bit
6=time_group.??_SUN, bit 7=time_group.??_HOL

t4 n? s4 x10 ACCESS time groups i=1 to 15
11, F1H, 10H, i+63, z1, z2, z3, z4, z5, z6, z7, z8 (time_group.?? Referenced by i)

t4 n? s4 x11 RD1 active (referenced from cr351.1_TG)
11, F1H, 10H, 79, z1, z2, z3, z4, z5, z6, z7, z8

t4 n? s4 x11 RD2 active (referenced from cr351.2_TG)
11, F1H, 10H, 80, z1, z2, z3, z4, z5, z6, z7, z8

t4 n? s4 x12 PIN1 active (referenced from cr351.1_PIN)
11, F1H, 10H, 81, z1, z2, z3, z4, z5, z6, z7, z8

t4 n? s4 x12 PIN2 active (referenced from cr351.2_PIN)
11, F1H, 10H, 82, z1, z2, z3, z4, z5, z6, z7, z8

t4 n? s4 x13 DOOR 1 open (referenced from output_status.L1_OUT_TG, port 1)
11, F1H, 10H, 83, z1, z2, z3, z4, z5, z6, z7, z8

t4 n? s4 x13 DOOR 2 open (referenced from Output_status.L1_OUT_TG, port 2)
11, F1H, 10H, 84, z1, z2, z3, z4, z5, z6, z7, z8

t4 n? s4 x14 Input time groups (i=61 to 75, referenced by i)
11, F1H, 10H, 24+i, z1, z2, z3, z4, z5, z6, z7, z8

t4 n? s4 x15 Aux Output time group (from Outputs_status.L1_OUT_TG, port 3)
11, F1H, 10H, 100, z1, z2, z3, z4, z5, z6, z7, z8

t4 n? s4 x100
04, F1H, 00, 0,0 Controller type CR351
03, F1H, 01, cr351.1_CLICK Latch Click
03, F1H, 02, cr351.1_AC Action Complete
03, F1H, 03, cr351.BOOTH Booth
03, F1H, 04, cr351. (1_NOC + 2_NOC*2) Latch NOC
03, F1H, 05, cr351.DOORS Doors
03, F1H, 06, cr351.2_CAPTURE Capture
05, F1H, 07, 00, cr351.1_ENA,2_ENA Rd enabled on loop
03, F1H, 08, cr351.APB_RESET AUX 1 APB reset

03, F1H, 09, cr351.AUX_OUT	AUX is output
03, F1H, 0AH, reader_status.RD_DB(port 1)	DB Mode
03, F1H, 0BH, general.CLIENT	Client Code
03, F1H, 0CH, general.SITE	Site Code
04, F1H, 0DH, reader_status.APB(port 1), reader_status.APB(port 2)	APB reader
03, F1H, 0FH, reader_status.BIT_TYPE(port 1)	Card Type
03, F1H, 11H, general.LRC	MAG cards LRC
04, F1H, 12H, ls general.OFFSET, ms general.OFFSET	Card offset
06, F1H, 13H, gen.START_FAC, gen.END_FAC, gen.START_NR, gen.END_NR	Card bits location
03, F1H, 14H, cr351.1_BEEP	Beep mode
03, F1H, 15H, cr351.1_LONG	Door open too long
03, F1H, 16H, cr351.1_LATCH	Latch Time
03, F1H, 17H, cr351.1_TRY	Attempts
03, F1H, 18H, cr351.1_DIS_TIME	Disabled time
03, F1H, 19H, reader_status.ATB(port 1)	ATB, use reader 1
03, F1H, 1DH, cr351.1_LEDS	Leds type
04, F1H, 25H, reader_status.STAT_OP(port 1), reader_status.STAT_OP(port 2)	ISOLATE reader
06, F1H, 26H, input_status.L3_CTR_TG(port 3)-60, TG)	Door open ill group-60(open close same
input_status.L3_CTR_TG(port 3)-60,	
input_status.L3_CTR_TG(port 4)-60,	
input_status.L3_CTR_TG(port 4)-60	
0AH, F1H, 27H, input_status.L1_CTR_TG(port 5)-60,	Aux 1 level 1
input_status.L2_CTR_TG(port 5)-60,	Aux 1 level 2
input_status.L1_CTR_TG(port 6)-60,	Aux 2 level 1
input_status.L2_CTR_TG(port 6)-60,	Aux 2 level 2
input_status.L1_CTR_TG(port 7)-60,	Aux 3 level 1
input_status.L2_CTR_TG(port 7)-60,	Aux 3 level 2
input_status.L1_CTR_TG(port 8)-60,	Aux 4 level 1
input_status.L2_CTR_TG(port 8)-60	Aux 4 level 2
0CH, 60H, 0, reader_status.NAME(port 1) 1 ST 10 chars	
0CH, 60H, 1, reader_status.NAME(port 1) 2 ND 10 chars	
0CH, 61H, 0, reader_status.NAME(port 2) 1 ST 10 chars	
0CH, 61H, 1, reader_status.NAME(port 2) 2 ND 10 chars	

CARD SETUP

Card data is described in the document SCS_Card_Access.doc.

Event: t4 n? s27 xref

If the dB mode of reader 1 of the controller is 2:

To mux: card xref, status, tg_R2
0 1 2 3 4 5 6
Node 5 20H xl xm stat tg_R2

If the dB mode of reader 1 of the controller is 6:

To mux: card xref, status, PIN (in BCD, LS digits 1st)
0 1 2 3 4 5 6 7 8 9
Node 8 20H xl xm stat pin10 pin32 pin54 pin76
e.g. pin 12345
Node 8 20H xl xm stat 45 23 01 00

If the dB mode of reader 1 of the controller is 10:

To mux: card xref, status, card number, PIN
0 1 2 3 4 5 6 7 8 9 10 11 12 13
Node 0CH 20H xl xm stat B10 B32 B54 B76 pinL pinM tg2 B98

Status byte:

Bit 0 to 3: Cards time group
Bit 4: Pass-back card (0=not, 1=pass-back)
Bit 5: Capture status (0=normal, 1=capture)
Bit 6: Reader 1 (0=no access, 1=enabled)
Bit 7: Reader 2 (0=no access, 1=enabled)

If the cards time group is not zero, the TG_R2 is also the cards time group (duplication of bit 0 to 3 in status byte). If the cards time group is zero, the controller needs the time group for each reader as set in the cards area group. The status byte contains the time group for reader 1 and the byte TG_2 contains the time group for reader 2. The data is obtained from area_zone_group.area_TG, referenced by card_data.area_grp (to area_zone_group.area_gr) and reader_status.area_to (to area_zone_group.area_zn). If the data is not found, the card is not enabled for that reader and the data is irrelevant and set to 0.

If xref is 0, send all cards to controller – this is done by changing the controller dB type to 0 (this clears the database in the controller), back to reader 1 dB type (reader_status.db_mode of reader 1), then send only card that are enabled on either reader).

To mux: 241, 10, dB type
0 1 2 3 4
Node 3 F1H 10 dB type

If controller number is 0, send to all controllers that are CR351.

Event: t4 n? s7 **Disable/reset card(s)**

If xref is zero, all cards are reset by setting dB type to 0, back to reader 1 dB type (as described above). If xref is not zero, card set-up is sent with status of 0 (disabled) as described above.

DATA FROM CONTROLLER

CARD DATA

Card data is described in the document SCS_Card_Access.doc. *Card data from controllers may contain only 10 bytes, set B98 to 00. Card events set the event v field with the cards trigger group (F_CD_CG), used to trigger counters and events.

CARD ENTERED READER 1

From mux: date,hr,min,sec,card number
0 1 2 3 4 5 6 7 8 9 10 11 12*
Node 0BH 21H h m s xl xm B10 B32 B54 B76 B98
Event: t1 p1 s1022 xref vtrg
ToDo: BOOKING READER, LATE READER

CARD ENTERED READER 2

From mux: date,hr,min,sec,card number
0 1 2 3 4 5 6 7 8 9 10 11 12*
Node 0BH 22H h m s xl xm B10 B32 B54 B76 B98
Event: t1 p2 s1022 xref vtrg
ToDo: BOOKING READER, LATE READER

REVERSED READER 1

From mux: date,hr,min,sec,card number
0 1 2 3 4 5 6 7 8 9 10 11 12
Node 0BH 23H h m s xl xm B10 B32 B54 B76 B98
⇒ Event: t1 p2 s1022 xref vtrg (note p2)

REVERSED READER 2

From mux: date,hr,min,sec,card number
0 1 2 3 4 5 6 7 8 9 10 11 12
Node 0BH 24H h m s xl xm B10 B32 B54 B76 B98
⇒ Event: t1 p1 s1022 xref vtrg (note p1)

DURESS PIN READER 1

From mux: date,hr,min,sec,card number
0 1 2 3 4 5 6 7 8 9 10 11 12*
Node 0BH 25H h m s xl xm B10 B32 B54 B76 B98
Event: t1 p1 s1039 xref vtrg (equivalent to entered 1022, but is alarm)

DURESS PIN READER 2

From mux: date,hr,min,sec,card number
0 1 2 3 4 5 6 7 8 9 10 11 12*
Node 0BH 26H h m s xl xm B10 B32 B54 B76 B98
Event: t1 p2 s1039 xref vtrg (equivalent to entered 1022, but is alarm)

CARD OUT OF TIME READER 1

From mux: date,hr,min,sec,card number
0 1 2 3 4 5 6 7 8 9 10 11 12*
Node 0BH 27H h m s xl xm B10 B32 B54 B76 B98
Event: t1 p1 s1021 xref vtrg

CARD OUT OF TIME READER 2

From mux: date,hr,min,sec,card number
0 1 2 3 4 5 6 7 8 9 10 11 12*
Node 0BH 28H h m s xl xm B10 B32 B54 B76 B98
Event: t1 p1 s1021 xref vtrg

CARD OUT OF AREA READER 1

From mux: date,hr,min,sec,card number
0 1 2 3 4 5 6 7 8 9 10 11 12*
Node 0BH 29H h m s xl xm B10 B32 B54 B76 B98

Event: t1 p1 s1020 xref vtrg

CARD OUT OF AREA READER 2

From mux: date,hr,min,sec,card number
0 1 2 3 4 5 6 7 8 9 10 11 12*
Node 0BH 2AH h m s xl xm B10 B32 B54 B76 B98

Event: t1 p2 s1020 xref vtrg

WRONG PIN READER 1

From mux: date,hr,min,sec,card number
0 1 2 3 4 5 6 7 8 9 10 11 12*
Node 0BH 2BH h m s xl xm B10 B32 B54 B76 B98

Event: t1 p1 s26 xref vtrg

WRONG PIN READER 2

From mux: date,hr,min,sec,card number
0 1 2 3 4 5 6 7 8 9 10 11 12*
Node 0BH 2CH h m s xl xm B10 B32 B54 B76 B98

Event: t1 p2 s26 xref vtrg

DOOR 1 NOT OPENED

From mux: date,hr,min,sec,card number
0 1 2 3 4 5 6 7 8 9 10 11 12*
Node 0BH 32H h m s xl xm B10 B32 B54 B76 B98

Event: t2 p3 s1050 xref v5

DOOR 2 NOT OPENED

From mux: date,hr,min,sec,card number
0 1 2 3 4 5 6 7 8 9 10 11 12*
Node 0BH 33H h m s xl xm B10 B32 B54 B76 B98

Event: t2 p4 s1050 xref v5

CAPTURE CARD AT READER 1

From mux: date,hr,min,sec,card number
0 1 2 3 4 5 6 7 8 9 10 11 12*
Node 0BH 58H h m s xl xm B10 B32 B54 B76 B98

Event: t1 p1 s32 xref vtrg

CAPTURE CARD AT READER 2

From mux: date,hr,min,sec,card number
0 1 2 3 4 5 6 7 8 9 10 11 12*
Node 0BH 5AH h m s xl xm B10 B32 B54 B76 B98

Event: t1 p2 s32 xref vtrg

ATB ERROR READER 1

From mux: date,hr,min,sec,card number
0 1 2 3 4 5 6 7 8 9 10 11 12*
Node 0BH 5BH h m s xl xm B10 B32 B54 B76 B98

Event: t1 p1 s46 xref vtrg alarm if F_RD_ALARM_TG active

ATB ERROR READER 2

From mux: date,hr,min,sec,card number
0 1 2 3 4 5 6 7 8 9 10 11 12*
Node 0BH 5CH h m s xl xm B10 B32 B54 B76 B98

Event: t1 p2 s46 xref vtrg alarm if F_RD_ALARM_TG active

CONTROL MONITOR

DOOR 1 OPEN TOO LONG

From mux: date,hr,min,sec
0 1 2 3 4 5

Node 4 10H h m s
Event: t2 p3 s1050 v4

DOOR 2 OPEN TOO LONG

From mux: date,hr,min,sec
0 1 2 3 4 5
Node 4 11H h m s
Event: t2 p4 s1050 v4

DOOR 1 OPEN ILLEGALLY

From mux: date,hr,min,sec
0 1 2 3 4 5
Node 4 16H h m s
Event: t2 p3 s1050 v3

DOOR 2 OPEN ILLEGALLY

From mux: date,hr,min,sec
0 1 2 3 4 5
Node 4 17H h m s
Event: t2 p4 s1050 v3

DOOR 1 OPENED

From mux: date,hr,min,sec
0 1 2 3 4 5
Node 4 34H h m s
Event: t2 p3 s50 v2

DOOR 2 OPENED

From mux: date,hr,min,sec
0 1 2 3 4 5
Node 4 35H h m s
Event: t2 p4 s50 v2

DOOR 1 CLOSED

From mux: date,hr,min,sec
0 1 2 3 4 5
Node 4 36H h m s
Event: t2 p3 s50 v1

DOOR 2 CLOSED

From mux: date,hr,min,sec
0 1 2 3 4 5
Node 4 37H h m s
Event: t2 p4 s50 v1

LATCH 1

From mux: date,hr,min,sec, latch status
0 1 2 3 4 5 6
Node 5 1 h m s ? ?=0 then latch closed and v=2; Else open and v=3
Event: t3 p1 s52 v_

LATCH 2

From mux: date,hr,min,sec, latch status
0 1 2 3 4 5 6
Node 5 2 h m s ? ?=0 then latch closed and v=2; Else open and v=3
Event: t3 p2 s52 v_

PUSH BUTTON 1

From mux: date,hr,min,sec
0 1 2 3 4 5
Node 4 30H h m s
Event: t2 p1 s50 v1

PUSH BUTTON 2

From mux: date,hr,min,sec
0 1 2 3 4 5
Node 4 31H h m s
Event: t2 p2 s50 v1

AUX 1 CLOSE

From mux: date,hr,min,sec
0 1 2 3 4 5
Node 4 40H h m s
Event: t2 p5 s1050 v1

AUX 1 OPEN

From mux: date,hr,min,sec
0 1 2 3 4 5
Node 4 41H h m s
Event: t2 p5 s1050 v2

AUX 2 CLOSE

From mux: date,hr,min,sec
0 1 2 3 4 5
Node 4 42H h m s
Event: t2 p6 s1050 v1

AUX 2 OPEN

From mux: date,hr,min,sec
0 1 2 3 4 5
Node 4 43H h m s
Event: t2 p6 s1050 v2

AUX 3 CLOSE

From mux: date,hr,min,sec
0 1 2 3 4 5
Node 4 44H h m s
Event: t2 p7 s1050 v1

AUX 3 OPEN

From mux: date,hr,min,sec
0 1 2 3 4 5
Node 4 45H h m s
Event: t2 p7 s1050 v2

AUX 4 CLOSE

From mux: date,hr,min,sec
0 1 2 3 4 5
Node 4 46H h m s
Event: t2 p8 s1050 v1

AUX 4 OPEN

From mux: date,hr,min,sec
0 1 2 3 4 5
Node 4 47H h m s
Event: t2 p8 s1050 v2

AUX OUTPUT CLOSE

From mux: date,hr,min,sec
0 1 2 3 4 5
Node 4 4AH h m s
Event: t3 p3 s52 v1

AUX OUTPUT OPEN

From mux: date,hr,min,sec

0 1 2 3 4 5
Node 4 4BH h m s
Event: t3 p3 s52 v2

POWERED UP

From mux: date,hr,min,sec
0 1 2 3 4 5
Node 4 F7H h m s
Event: t4 n? s3

OFF-LINE

From mux:
0 1 2
Node 1 F8H
Event: t4 n? s2

ON-LINE

From mux:
0 1 2
Node 1 F9H
Event: t4 n? s1
Event: t4 n? s4 x1 Send the time

NODE STATUS

From mux: node,status
0 1 2 3 4 5
Node 4 FBH 3 node status
Event: t4 n? s1 if status mod 2=1
Event: t4 n? s2 if status mod 2=0

VERSION

From mux: node,version
0 1 2 3.....
Node ? F0H version.....

MVG DATA

MVG REQUEST

From mux: hr,min,sec, xref, cardnumber

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		
Node	10H	60H	h	m	s	xl	xm	B10	B32	B54	B76	B98	Bba	Bdc	Bfe	Bhg	Bji		Reader 1
Node	10H	61H	h	m	s	xl	xm	B10	B32	B54	B76	B98	Bba	Bdc	Bfe	Bhg	Bji		Reader 2

Xref (xl,xm) ignored.

Event: t1 n? s40 x0 v0 z10 z2ls 6 digits cardnumber z3 6 digits cardnumber
z4 6 digits cardnumber z5ms 2 msdigits cardnumber

Digits converted to hex

Send TCP message to request data from MVG

SOS00[card number|reader number|YYYYMMDDhhmmss]*reader number|cardnumber

MVG DATA

TCP message from MVG

SOS00xx[1st line display][second line display]*reader number|cardnumber

Event: t1 n? s41 x0 vxx z10 z2ls 6 digits cardnumber z3 6 digits cardnumber
z4 6 digits cardnumber z5ms 2 msdigits cardnumber

Digits converted to hex

To mux (port 1)	0	1	2	3	4	5	6	7	8	9	10	11	12	13					
Node	0CH	62H	0	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9						Reader 1, 1 st half line 1
Node	0CH	62H	1	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9						Reader 1, 2 st half line 1
Node	0CH	64H	0	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9						Reader 1, 1 st half line 2
Node	0CH	64H	1	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9						Reader 1, 1 st half line 2

if xx is zero Node 3 1 1 1 Open door 1

To mux (port 2)	0	1	2	3	4	5	6	7	8	9	10	11	12	13					
Node	0CH	63H	0	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9						Reader 2, 1 st half line 1
Node	0CH	63H	1	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9						Reader 2, 2 st half line 1
Node	0CH	65H	0	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9						Reader 2, 1 st half line 2
Node	0CH	65H	1	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9						Reader 2, 1 st half line 2

if xx is zero Node 3 2 1 1 Open door 2

CR351 TABLE: DATA TO CONTROLLER

1	2	3	4	5	6	7	8	9	10	11	12	13	Description	Event
02h	00h	1or0											Buzzer on or off	t3 p6 s50 v1 or 2
02h	01h	1or0											Open or close latch 1	t3 p1 s50 v1 or 2
02h	01h	3or2											Open or close latch 1 per	t3 p1 s50 v3 or 4
02h	02h	1or0											Open or close latch 2	t3 p2 s50 v1 or 2
02h	02h	3or2											Open or close latch 2 per	t3 p2 s50 v3 or 4
03h	03h	1or0	pulse 1,2										Open or close aux 1	t3 p3 s50 v1 or 2
03h	03h	3or2	pulse 1,2										Open or close aux 1 per	t3 p3 s50 v3 or 4
01h	09h												I/O request	t4 n? s6 v0
01h	18h												LED R1 flash	t3 p7 s50 v1
01h	19h												LED R2 flash	t3 p8 s50 v1
05h	20h	xLs	xMs	status	tg 2								Card set-up dB2	t4 n? s27 xref
08h	20h	xLs	xMs	status	Pin 1	Pin 2	Pin 3	Pin 4					Card set-up dB6	t4 n? s27 xref
0Ch	20h	xLs	xMs	status	B10	B32	B54	B76	PinL	PinM	tg2	B98	Card set-up dB10	t4 n? s27 xref
0Ch	62h	0,1	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9	MVG LCD 1, line 1 1,2 half	t1 n1 s41 x0
0Ch	63h	0,1	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9	MVG LCD 2, line 1 1,2 half	t1 n2 s41 x0
0Ch	64h	0,1	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9	MVG LCD 1, line 2 1,2 half	t1 n1 s41 x0
0Ch	65h	0,1	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9	MVG LCD 2, line 2 1,1 half	t1 n2 s41 x0
01h	F0h												Version request	t4 n? s6 v0
04h	F1h	0	0	0									Controller type CR355	t4 n? s4 x100
03h	F1h	1	click										Latch click	t4 n? s4 x100
03h	F1h	2	complete										Action complete	t4 n? s4 x100
03h	F1h	3	booth										Booth	t4 n? s4 x100
03h	F1h	4	latch										Latch NOC	t4 n? s4 x100
03h	F1h	5	doors										Doors	t4 n? s4 x100
03h	F1h	6	capture										Capture	t4 n? s4 x100
04h	F1h	7	r1 ena	r2 ena									Rd enable on loop	t4 n? s4 x100
03h	F1h	8	APB res										APB reset	t4 n? s4 x100
03h	F1h	9	aux out										Aux out	t4 n? s4 x100
03h	F1h	0Ah	dB mode										DB mode, own tg, PIN dB	t4 n? s4 x100
03h	F1h	0Bh	client										Client code	t4 n? s4 x100
03h	F1h	0Ch	Site										Site code	t4 n? s4 x100
04h	F1h	0Dh	APB r1	APB r2									Reader APB	t4 n? s4 x100
05h	F1h	0Eh	10H+H	date	mon								Set holidays	t4 n? s4 x2
03h	F1h	0Fh	Bits										Card type	t4 n? s4 x100
07h	F1h	10h	00H-07H	Shr	Smin	Ehr	Emin						Set access tz 1-8	t4 n? s4 x3
07h	F1h	10h	08H-0FH	Shr	Smin	Ehr	Emin						Set reader tz 1-8	t4 n? s4 x3
07h	F1h	10h	10H-17H	Shr	Smin	Ehr	Emin						Set pin tz 1-8	t4 n? s4 x3
07h	F1h	10h	18H-1FH	Shr	Smin	Ehr	Emin						Set latch tz 1-8	t4 n? s4 x3
07h	F1h	10h	20H-27H	Shr	Smin	Ehr	Emin						Set input tz 1-8	t4 n? s4 x3
07h	F1h	10h	28H-2FH	Shr	Smin	Ehr	Emin						Set output tz 1-8	t4 n? s4 x3
0Bh	F1h	10h	40H-4EH	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		Set access tg 1-15	t4 n? s4 x10
0Bh	F1h	10h	4FH,50H	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		Set R1, R2 tg	t4 n? s4 x11
0Bh	F1h	10h	51H,52H	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		Set P1, P2 tg	t4 n? s4 x12
0Bh	F1h	10h	53H,54H	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		Set D1, D2 latch tg	t4 n? s4 x13
0Bh	F1h	10h	55H-63H	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		Set input tg 1-15	t4 n? s4 x14
0Bh	F1h	10h	64H	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		Set AUX out tg	t4 n? s4 x15
03h	F1h	11h	LRC										Card type	t4 n? s4 x100
03h	F1h	12h	offset Ls	offsetMs									Card offset	t4 n? s4 x100
06h	F1h	13h	S fac	E fac	S nr	Enr							Facility, nr start, end	t4 n? s4 x100
03h	F1h	14h	beep										Beep mode	t4 n? s4 x100
04h	F1h	15h	Long Ls	long Ms									Door open too long	t4 n? s4 x100
03h	F1h	16h	latch										Latch time	t4 n? s4 x100
03h	F1h	17h	Try										Illegal attempts	t4 n? s4 x100
03h	F1h	18h	disable										Disable time	t4 n? s4 x100
03h	F1h	19h	ATB										ATB	t4 n? s4 x100
03h	F1h	1Dh	Leds										Led type	t4 n? s4 x100
04h	F1h	25h	isolate r1	isolate r2									Isolate readers	t4 n? s4 x100
06h	F1h	26h	p3L3tg	p3L3tg	p4L3tg	p4L3tg							Door illegal time groups	t4 n? s4 x100
0Ah	F1h	27h	p5L1tg	p5L2tg	p6L1tg	p6L2tg	p7L1tg	p7L2tg	p8L1tg	p8L2tg			Aux input time groups	t4 n? s4 x100
0Ch	F1h	60h	0	name..	..	..	..	..	..	..	..	..	1 st 10 chars R1 name	t4 n? s4 x100
0Ch	F1h	60h	1	name..	..	..	..	..	..	..	..	..	2 st 10 chars R1 name	t4 n? s4 x100
0Ch	F1h	61h	0	name..	..	..	..	..	..	..	..	..	1 st 10 chars R2 name	t4 n? s4 x100
0Ch	F1h	61h	1	name..	..	..	..	..	..	..	..	..	2 st 10 chars R2 name	t4 n? s4 x100
09h	F4h	s	M	h	DOW	D	M	Yls	YMs				Set the time	t4 n? s4 x1
03h	03h	3or2	pulse 1,2										Open or close aux 1 per	t3 p3 s50 v3 or 4
02h	00h	1or0											Buzzer on or off	t3 p6 s50 v1 or 2
01h	18h												LED R1 flash	t3 p7 s50 v1
01h	19h												LED R2 flash	t3 p8 s50 v1

CR351 TABLE: DATA FROM CONTROLLER

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Description	Event
05h	01h	H	M	s	0or1										L1 closed or open	t3 p1 s1050 v2 or 3
05h	01h	H	M	s	0or1										L2 closed or open	t3 p2 s1050 v2 or 3
04h	10h	H	M	s											Open too long D1	t2 p3 s1050 v4
04h	11h	H	M	s											Open too long D2	t2 p4 s1050 v4
04h	16h	H	M	s											Open illegally D1	t2 p3 s1050 v3
04h	17h	H	M	s											Open illegally D2	t2 p4 s1050 v3
04h	34h	H	M	s											Door 1 open	t2 p3 s1050 v2
04h	35h	H	M	s											Door 2 open	t2 p4 s1050 v2
04h	36h	H	M	s											Door 1 closed	t2 p3 s1050 v1
04h	37h	H	M	s											Door 2 closed	t2 p4 s1050 v1
04h	30h	H	M	s											Egress 1	t2 p1 s50 v1
04h	31h	H	M	s											Egress 2	t2 p2 s50 v1
04h	40h	H	M	s											Aux 1 closed	t2 p5 s1050 v1
04h	41h	H	M	s											Aux 1 open	t2 p5 s1050 v2
04h	42h	H	M	s											Aux 2 closed	t2 p6 s1050 v1
04h	43h	H	M	s											Aux 2 open	t2 p6 s1050 v2
04h	44h	H	M	s											Aux 3 closed	t2 p7 s1050 v1
04h	45h	H	M	s											Aux 3 open	t2 p7 s1050 v2
04h	46h	H	M	s											Aux 4 closed	t2 p8 s1050 v1
04h	47h	H	M	s											Aux 4 open	t2 p8 s1050 v2
04h	4Bh	H	M	s											Aux out closed	t3 p3 s52 v1
04h	4Ch	H	M	s											Aux out open	t3 p3 s52 v2
0Bh	21h	H	M	s	xL	xM	b10	b32	b54	b76	b98				Card entered R1	t1 p1 s1022 xref vtrg
0Bh	22h	H	M	s	xL	xM	b10	b32	b54	b76	b98				Card entered R2	t1 p2 s1022 xref vtrg
0Bh	25h	H	M	s	xL	xM	b10	b32	b54	b76	b98				Duress PIN R1	t1 p1 s1039 xref vtrg
0Bh	26h	H	M	s	xL	xM	b10	b32	b54	b76	b98				Duress PIN R2	t1 p2 s1039 xref vtrg
0Bh	27h	H	m	s	xL	xM	b10	b32	b54	b76	b98				Card out out time R1	t1 p1 s1021 xref vtrg
0Bh	28h	H	m	s	xL	xM	b10	b32	b54	b76	b98				Card out out time R2	t1 p2 s1021 xref vtrg
0Bh	29h	H	m	s	xL	xM	b10	b32	b54	b76	b98				Card out area R1	t1 p1 s1020 xref vtrg
0Bh	2Ah	H	m	s	xL	xM	b10	b32	b54	b76	b98				Card out area R2	t1 p2 s1020 xref vtrg
0Bh	2Bh	H	m	s	xL	xM	b10	b32	b54	b76	b98				Wrong PIN R1	t1 p1 s26 xref vtrg
0Bh	2Ch	H	m	s	xL	xM	b10	b32	b54	b76	b98				Wrong PIN R2	t1 p2 s26 xref vtrg
0Bh	32h	H	m	s	xL	xM	b10	b32	b54	b76	b98				Door not opened R1	t2 p3 s1050 xref v5 or 7
0Bh	33h	H	m	s	xL	xM	b10	b32	b54	b76	b98				Door not opened R2	t2 p4 s1050 xref v5 or 7
0Bh	58h	H	m	s	xL	xM	b10	b32	b54	b76	b98				Card capture R1	t1 p1 s32 xref vtrg
0Bh	5Ah	H	m	s	xL	xM	b10	b32	b54	b76	b98				Card capture R2	t1 p2 s32 xref vtrg
0Bh	5Bh	H	m	s	xL	xM	b10	b32	b54	b76	b98				ATB error R1	t1 p1 s46 xref vtrg
0Bh	5Ch	H	m	s	xL	xM	b10	b32	b54	b76	b98				ATB error R2	t1 p2 s46 xref vtrg
10h	60h	H	m	s	xL	xM	b10	b32	b54	b76	b98	bBA	..	..	MVG request R1	t1 p1 s40 z1 z2 z3 z4
10h	61h	H	m	s	xL	xM	b10	b32	b54	b76	b98	bBA	..	..	MVG request R2	t1 p1 s40 z1 z2 z3 z4
0Bh	F0h	ver..	..	..	..	..	..	..	..	..	..				Version	
04h	F7h	H	m	s											Powered up	t4 n? s3
01h	F8h														Off line	t4 n? s2
01h	F9h														On line	t4 n? s1
04h	FBh	3	node	stat											Node status	t4 n? s1-2