



SCS_Xlator_CR355 Rev. 2.02

This document lists the functions of the CR355 translator. The translator processes data received from and transmitted to the CR355. Data to controllers in the format xxH are in the hexadecimal format.

DATA TO CONTROLLER

CONTROL

t3 p? s50 v? 4, 0, p, v, x Control output (p=1-32) to value 1(open), 2 (close), 3(open perm) or 4 (close perm), x is the pulse length OUTPUT_STATUS.Lv_PULSE

SET-UP

t4 n? s6 v0 I/O Queries
 1, 9 I/O request
 1, F0H Version request
 3, F0H, 0, x Version request, x is the processor number
 0 in uP, equal to 1,240
 1=reader 1 base uP, 2=reader 1 front 0, 3=reader 1 front 1
 4=reader 2 base uP, 5=reader 2 front 0, 6=reader 2 front 1
 3, F0H, 1, x ID request, x is the processor number
 0 in uP
 1=reader 1 base uP, 2=reader 1 front 0, 3=reader 1 front 1
 4=reader 2 base uP, 5=reader 2 front 0, 6=reader 2 front 1

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, 0EH, 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
 0BH, 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)
 0BH, F1H, 10H, 79, z1, z2, z3, z4, z5, z6, z7, z8

t4 n? s4 x11 RD2 active (referenced from cr351.2_TG)
 0BH, F1H, 10H, 80, z1, z2, z3, z4, z5, z6, z7, z8

t4 n? s4 x12 PIN1 active (referenced from cr351.1_PIN)
 0BH, F1H, 10H, 81, z1, z2, z3, z4, z5, z6, z7, z8

t4 n? s4 x12 PIN2 active (referenced from cr351.2_PIN)
 0BH, 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, output_status.type 6)
 0BH, 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, output_status.type 7)
 0BH, 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)
 0BH, F1H, 10H, 24+i, z1, z2, z3, z4, z5, z6, z7, z8

t4 n? s4 x15 Aux Output time groups (i=76 to 90)
 0BH, F1H, 10H, 24+i, z1, z2, z3, z4, z5, z6, z7, z8

t4 n? s4 x100
 04, F1H, 0, 0, x Controller type x=1 for CR355 (0 for CR351)
 06, F1H, 0, 1, port,input_status.type, input_status.levels
 Input port type (port 1 to 24)
 0=none
 1=Aux input
 2=R1 APB
 3=R2 APB
 4=APB reset
 5=Action complete 1
 6=Action complete 2
 7=Booth persence
 8=Capture 1 (card drop)
 9=Capture 2 (card drop)
 10=Egress 1
 11=Egress 2
 12=R1 enable
 13=R2 enable
 14=Tamper 1
 15=Tamper 2
 If port not found, send nothing
 05, F1H, 0, 2, port,output_status.type Output port type (port 1 to 32)
 0=none
 1=Aux output
 2=Buzzer 1
 3=Buzzer 2
 4=Capture 1
 5=Capture 2
 6=Latch 1
 7=Latch 2
 8=Isolate R1 (virtual)
 9=Isolate R2 (virtual)
 10=R1 green LED
 11=R2 green LED
 12=R1 red LED
 13=R2 red LED
 14=R1 yellow LED
 15=R2 yellow LED
 If port not found, send nothing

07, F1H, 0, 3, cr351.front1_1, cr351.front1_2,cr351.front2_1, cr351.front2_2 Front processors

0CH, F1H, 0, 4, port, T1, T2, T3, T4, P1, P2, P3, P4 Input port type (port 1 to 24, levels 1 to 4)
 If port not found, send Tx=0 and Px=0
 Type for each level: 0=input (F_IN_L1to4_COUNTER=0), 1=counter (F_IN_L1to4_COUNTER<>0)
 Period in seconds for each level when count changes reported (F_IN_L1to4_COUNTER_DELAY, 0=immediate)

7, F1H, 0, 5, port, level, count, ms count Input port type (port 1 to 24, levels 1 to 4)

03, 0F1H, 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
04, F1H, 06, cr351.2_CAPTURE, cr351.1_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
05, F1H, 0AH, rd_stat.RD_DB(p1), rd_stat.own_tg, rd_stat.pin	DB Mode
03, F1H, 0BH, general.CLIENT	Client Code
03, F1H, 0CH, general.SITE	Site Code
04, F1H, 0DH, rd_stat.APB(p1), rd_stat.APB(p 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.S_FAC, gen.E_FAC, gen.S_NR, gen.E_NR	Card bits locations
03, F1H,14H, cr351.1_BEEP	Beep mode
04, F1H, 15H, ls cr351.1_LONG, ms 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
04, F1H, 19H, reader_status.ATB(p1), reader_status.ATB(p2)	ATB minutes
04, F1H, 1AH, reader_status.ATB_L(p1), reader_status.ATB_L(p2)	ATB readers linked
04, F1H, 1DH, cr351.1_LEDS, cr351.2_LEDS	Leds type
04, F1H, 25H, rd_stat.STAT_OP(p1), rd_stat.STAT_OP(p2)	ISOLATE reader

0AH, 0F1H, 28H, port, input_status.L1_CTR_TG-60, input_status.L2_CTR_TG-60, Input time groups
 status.L3_CTR_TG-60, status.L4_CTR_TG-60, status.L5_CTR_TG-60, status.L6_CTR_TG-60,
 status.L7_CTR_TG-60 Port =1 to 24, levels 1 to 7 (if port of level not
 found, send 0)

04, F1H, 29H, port, output_status.L1_CTR_TG-75 Output time groups Port =1 to 32

0CH, 60H, 0, reader_status.NAME(port 1) 1ST 10 chars
 0CH, 60H, 1, reader_status.NAME(port 1) 2ND 10 chars

0CH, 61H, 0, reader_status.NAME(port 2) 1ST 10 chars
 0CH, 61H, 1, reader_status.NAME(port 2) 2ND 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 4 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 (controllers ignores 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

Must have CR355 V1.25
Node 0DH 20H xl xm stat B10 B32 B54 B76 pin10 pin32 tg2 B98 pin54

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 0AH 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 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 13
Node 0CH 21H d 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 13
Node 0CH 22H d 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 13
Node 0CH 23H d 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 13
Node 0CH 24H d 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 13
Node 0CH 25H d 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 13
Node 0CH 26H d 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 13
Node 0CH 27H d 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 13
Node 0CH 28H d h m s xl xm B10 B32 B54 B76 B98
Event: t1 p2 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 13
Node 0CH 29H d 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 13
Node 0CH 2AH d 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 13
Node 0CH 2BH d 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 13
Node 0CH 2CH d h m s xl xm B10 B32 B54 B76 B98

Event: t1 p2 s26 xref vtrg

CARD WRONG FORMAT READER 1

From mux: date,hr,min,sec
0 1 2 3 4 5 6
Node 5 38H d h m s

Event: t1 p1 s1044

CARD WRONG FORMAT READER 2

From mux: date,hr,min,sec
0 1 2 3 4 5 6
Node 5 39H d h m s

Event: t1 p2 s1044

CARD WRONG FACILITY READER 1

From mux: date,hr,min,sec, Client, Site, Card
0 1 2 3 4 5 6 7 8 9 10 11 12 13
Node 0CH 3AH d h m s cc sc B10 B32 B54 B76 B98

Event: t1 p1 s1045 xf z2a z3b z4c z5d
f=cc*256 + sc
a=ls 6 digits, b next 6 digits, c next 6, d ms digits (to number, -1 is none)

CARD WRONG FACILITY READER 2

From mux: date,hr,min,sec, Client, Site, Card
0 1 2 3 4 5 6 7 8 9 10 11 12 13
Node 0CH 3BH d h m s cc sc B10 B32 B54 B76 B98

Event: t1 p2 s1045 xf z2a z3b z4c z5d
f=cc*256 + sc
a=ls 6 digits, b next 6 digits, c next 6, d ms digits (to number, -1 is none)

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 13
Node 0CH 58H d 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 13
Node 0CH 5AH d h m s xl xm B10 B32 B54 B76 B98

Event: t1 p2 s32 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 13
Node 0CH 32H d h m s xl xm B10 B32 B54 B76 B98
Event: t2 pport s1050 xref v? (?=7 if levels=7, else ?=5, port type=5)

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 13
Node 0CH 33H d h m s xl xm B10 B32 B54 B76 B98
Event: t2 pport s1050 xref v? (?=7 if levels=7, else ?=5, port type=6)

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 13
Node 0CH 5BH d h m s xl xm B10 B32 B54 B76 B98
Event: t1 p1 s1046 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 13
Node 0CH 5CH d 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

INPUT CHANGED

From mux: date,hr,min,sec, port, value
0 1 2 3 4 5 6 7 8
Node 7 80H d h m s port value
Event: t2 pport s1050 vvalue

OUTPUT CHANGED

From mux: date,hr,min,sec, port, value
0 1 2 3 4 5 6 7 8
Node 7 81H d h m s port value
Event: t3 pport s52 vvalue

COUNT CHANGED

From mux: date,hr,min,sec, port, level, count value
0 1 2 3 4 5 6 7 8 9 10
Node 9 82H d h m s port level lsCount msCount
Event: t6 Sysno s71 xinput v? z1Level or (minimum)
t6 Sysno s70 xinput v? z1Level or (maximum)
t6 Sysno s72 xinput v? z1Level (available, between , min and max)

Port 1 to 24
x contains the input reference number, referenced to via port
Sysno is read from F_IN_L1to4_COUNTER of the input
? is the input count
level 1 to 5

STATUS MONITOR

VERSION

From mux: node,version
0 1 2 3.....
Node 0BH F0H version 10 bytes

0 1 2 3 4 5.....
 Node 0DH F0H 0 uP version 10 bytes
 0 in uP, equal to 0BH, F0H (F_CNTR_VERSION)
 1=rd 1 base uP (F_CNTR_VERSION_1), 2=rd 1 front 0 (F_CNTR_VERSION_2),
 3=rd 1 front 1 (F_CNTR_VERSION_3), 4=rd 2 base uP (F_CNTR_VERSION_4),
 5=rd 2 front 0 (F_CNTR_VERSION_5), 6=rd 2 front 1 (F_CNTR_VERSION_6)

From mux: node,ID

Node 0DH F0H 1 uP ID 10 bytes
 0=CNTRL_ID
 1=rd 1 base uP (CNTRL_ID_1), 2=rd 1 front 0 (CNTRL_ID_2),
 3=rd 1 front uP (CNTRL_ID_3), 4=rd 2 base uP (CNTRL_ID_4),
 5=rd 2 front 0 (CNTRL_ID_5), 6=rd 2 front 1 (CNTRL_ID_6)

POWERED UP

From mux: date,hr,min,sec

0 1 2 3 4 5 6
 Node 5 0F7H d 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

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 z5ls 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	1	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9		Reader 1, 2 nd half line 1	
Node	0CH	62H	0	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9		Reader 1, 1 st half line 1	
Node	0CH	64H	1	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9		Reader 1, 2nd half line 2	
Node	0CH	64H	0	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	1	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9		Reader 2, 2nd half line 1	
Node	0CH	63H	0	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9		Reader 2, 1 st half line 1	
Node	0CH	65H	1	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9		Reader 2, 2nd half line 2	
Node	0CH	65H	0	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

CR355 TABLE: DATA TO CONTROLLER

1	2	3	4	5	6	7	8	9	10	11	12	13	Description	Event
04h	00h	port	Val		xpul								Control output	t3 p? s50 xpul vval
01h	09h												I/O request	t4 n? s6 v0
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	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9	MVG LCD 1, line 1 1 st half	t1 n1 s41 x0
0Ch	62h	1	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9	MVG LCD 1, line 1 2nd ha	
0Ch	63h	0	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9	MVG LCD 2, line 1 1 st half	t1 n2 s41 x0
0Ch	63h	1	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9	MVG LCD 2, line 1 2nd ha	
0Ch	64h	0	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9	MVG LCD 1, line 2 1 st half	t1 n1 s41 x0
0Ch	64h	1	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9	MVG LCD 1, line 2 2nd ha	
0Ch	65h	0	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9	MVG LCD 2, line 2 1 st half	t1 n2 s41 x0
0Ch	65h	1	c0	c1	c2	c3	c4	c5	c6	c7	c8	c9	MVG LCD 2, line 2 2nd ha	
01h	F0h												Version request	t4 n? s6 v0
03h	F0h	0	uP										Version request uP	t4 n? s6 v0
03h	F0h	1	uP										ID request uP	t4 n? s6 v0
04h	F1h	0	0	1									Controller type CR355	t4 n? s4 x100
06h	F1h	0	1	port	type	levels							Input type, levels	t4 n? s4 x100
05h	F1h	0	2	port	type								Output type	t4 n? s4 x100
07h	F1h	0	3	F1	F2	F3	F4						Front processors	t4 n? s4 x100
0Ch	F1h	0	4	port	T1	T2	T3	T4	P1	P2	P3	P4	Input port type	t4 n? s4 x100
07h	F1h	0	5	port	level	cntLs	cntMs						Input port count	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
05h	F1h	0Ah	dB mode	own tg	pin								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 0+	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-72H	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		Set output tg 1-15	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
0Ah	F1h	28h	Port	L1tg	L2tg	L3tg	L4tg	L5tg	L6tg	L7tg			Input time groups	t4 n? s4 x100
04h	F1h	29h	Port	L1tg									Output 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

CR355 TABLE: DATA FROM CONTROLLER

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Description	Event
0Ch	21h	D	H	M	s	xL	xM	b10	b32	b54	b76	b98			Card entered R1	t1 p1 s1022 xref vtrg
0Ch	22h	D	H	M	s	xL	xM	b10	b32	b54	b76	b98			Card entered R2	t1 p2 s1022 xref vtrg
0Ch	25h	D	H	M	s	xL	xM	b10	b32	b54	b76	b98			Duress PIN R1	t1 p1 s1039 xref vtrg
0Ch	26h	D	H	M	s	xL	xM	b10	b32	b54	b76	b98			Duress PIN R2	t1 p2 s1039 xref vtrg
0Ch	27h	D	H	m	s	xL	xM	b10	b32	b54	b76	b98			Card out out time R1	t1 p1 s1021 xref vtrg
0Ch	28h	D	H	m	s	xL	xM	b10	b32	b54	b76	b98			Card out out time R2	t1 p2 s1021 xref vtrg
0Ch	29h	D	H	m	s	xL	xM	b10	b32	b54	b76	b98			Card out area R1	t1 p1 s1020 xref vtrg
0Ch	2Ah	D	H	m	s	xL	xM	b10	b32	b54	b76	b98			Card out area R2	t1 p2 s1020 xref vtrg
0Ch	2Bh	D	H	m	s	xL	xM	b10	b32	b54	b76	b98			Wrong PIN R1	t1 p1 s26 xref vtrg
0Ch	2Ch	D	H	m	s	xL	xM	b10	b32	b54	b76	b98			Wrong PIN R2	t1 p2 s26 xref vtrg
0Ch	32h	D	H	m	s	xL	xM	b10	b32	b54	b76	b98			Door not opened R1	t2 p? s1050 xref v5 or 7
0Ch	33h	D	H	m	s	xL	xM	b10	b32	b54	b76	b98			Door not opened R2	t2 p? s1050 xref v5 or 7
05h	38h	D	H	m	s										Wrong card format R1	t1 p1 s1044
05h	39h	D	H	m	s										Wrong card format R2	t1 p2 s1044
05h	3Ah	D	H	m	s	cc	sc	b10	b32	b54	b76	b98			Wrong facility R1	t1 p1 s1045
05h	3Bh	D	H	m	s	cc	sc	b10	b32	b54	b76	b98			Wrong facility R2	t1 p2 s1045
0Ch	58h	D	H	m	s	xL	xM	b10	b32	b54	b76	b98			Card capture R1	t1 p1 s32 xref vtrg
0Ch	5Ah	D	H	m	s	xL	xM	b10	b32	b54	b76	b98			Card capture R2	t1 p2 s32 xref vtrg
0Ch	5Bh	D	H	m	s	xL	xM	b10	b32	b54	b76	b98			ATB error R1	t1 p1 s46 xref vtrg
0Ch	5Ch	D	H	m	s	xL	xM	b10	b32	b54	b76	b98			ATB error R2	t1 p2 s46 xref vtrg
11h	60h	D	H	m	s	xL	xM	b10	b32	b54	b76	b98	bBA ..		MVG request R1	t1 p1 s40 z1 z2 z3 z4
11h	61h	D	H	m	s	xL	xM	b10	b32	b54	b76	b98	bBA ..		MVG request R2	t1 p1 s40 z1 z2 z3 z4
07h	80h	D	H	m	s	port	val								Input changed	t2 pport s1050 vval
07h	81h	D	H	m	s	port	val								Output changed	t3 pport s52 vval
09h	82h	D	H	m	s	port	level cntL cntM								Count changed	t6 Sys s70-2 xin vcnt z1lev
0Bh	F0h	ver..	..	..	..	..	..	..	..	..	..	..	..	..	Version	
0Dh	F0h	0	uP	ver..	..	..	..	..	..	..	..	..	..	..	uP Version	
0Dh	F0h	1	uP	ID..	..	..	..	..	..	..	..	..	..	..	uP ID	
05h	F7h	D	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