



QUICK REFERENCE GUIDE

Reader-Host Commands

ALR-9650

ALR-9900

ALR-9800

ALR-8800

February 2008



8102074-000 Rev. C

General Commands

Help	Display descriptive help text (h)
Info	Display current settings (i)
!	Repeat last command
Save	Save current settings to permanent storage
Quit	Quit the current connection; Telnet only (Q)
ReaderName	The user-defined name for the reader
ReaderType	A brief description of the reader
ReaderVersion	The release number for the reader firmware
DSPVersion	The version of the reader's DSP firmware
BaudRate	Serial interface baud rate (9600, 19200, 38400, 57600, 115200)
Uptime	The elapsed time (seconds) since the reader was last booted
Username	Username for network access (default: "alien")
Password	Password for network access (default: "password").
MaxAntenna	The index of the maximum addressable antenna (1, 2, 3)
AntennaSequence	The sequence of antennas (up to 8) to use when reading tags (0, 1 , 2, 3).
RFAttenuation	Amount of RF attenuation (dB/10) from max power (0 – 150) Or RFAttenuation = x y, where x = specific ant, y = attenuation
RFLevel	The RF power level (dBm/10) in absolute terms (316 – 16.6)
RFModulation	The Class1/Gen2 RF modulation scheme (HS, STD, DRM)
FactorySettings	Return all settings to their factory defaults
Reboot	Reboot the reader
Service	View status, start/stop, & enable autostarting of auxiliary services.

Network Commands

MACAddress	Reader's unique network interface identifier (aa:bb:cc:xx:yy:zz)
DHCP	Whether to dynamically configure network settings (On , Off)
IPAddress	This reader's IP Address (default: 192.168.1.100)
Hostname	This reader's network Hostname (alien-xyyzz) last 3 bytes of MAC
UpgradeAddress	URL for fetching reader firmware upgrades (0.0.0.0)
NetworkUpgrade	Whether to attempt to fetch new firmware on next boot (Off , On)
Gateway	Address of the Gateway server on the LAN
Netmask	This reader's network subnet mask (255.255.255.0)
DNS	Address of the DNS server on the LAN
NetworkTimeout	Time (sec) before closing an idle network connection (90 sec)
CommandPort	TCP port used to connect to the reader (23)
HeartbeatAddress	Destination address for Heartbeat messages (255.255.255.255)
HeartbeatPort	Destination port for Heartbeat messages (3988)
HeartbeatTime	Time, in seconds, between Heartbeat messages (30)
HeartbeatCount	Total number of heartbeat messages to send (-1)
WWWWPort	Reader's web server port number [0 turns off web server] (80)
Ping	Ping a network address
DebugHost	Enable logging of all issued commands
HostLog	Dump the log of host activity

TagList Commands

PersistTime	Time (sec) tag remains on internal TagList (0, X, -1)
TagListFormat	Display format for TagList (Text , Terse, XML, Custom)
TagListAntennaCombine	Combine tag reads of antennas into one entry (On , Off)
TagListCustomFormat	Display string of TagList in custom format (%i , %k, %d, %t, %D, %T, %r, %a, %A, %p, %P, %N, %H, %l, %M)
TagListMillis	Enable millisecond time resolution in TagLists (On, Off)
TagList ("t")	Get the current TagList held in memory, up to 6,000
Clear Taglist	Clear TagList or IOList (given by command argument)
StreamHeader	Include TagStream header upon connection (On , Off)
TagStreamMode	Control the TagStream function (On, Off)
TagStreamAddress	Streamed Tag data destination (hostname:port , serial)
TagStreamKeepAliveTime	Time (sec) to hold an idle TagStream socket open (30)
TagStreamFormat	Format for TagStream data (Text, Terse , XML, Custom)
TagStreamCustomFormat	Display string of TagStream custom format (%i , %k , %d, %t, %D, %T, %r, %a, %A, %p, %P, %N, %H, %l, %M)

I/O Commands

ExternalInput	Current state of the digital input pins (0)
ExternalOutput	Current state of the digital output pins (0)
InvertExternalInput	Invert reported state of the digital input pins? (On, Off)
InvertExternalOutput	Invert reported & applied digital output state? (On, Off)
InitExternalOutput	Initial state of digital output pins on startup (0)
IOList ("ios")	Get the current IOList held in memory
IOType	Which I/Os to track & report from the IOList (DI, DO, DIO)
IOListFormat	Format for the IOList (Text , Terse, XML, Custom)
IOListCustomFormat	Format string for custom IOList (%E , %e, %T, %t, %d, %D, %v , %N, %H, %l, %M)
IOStreamMode	Control the IOStream function (On, Off)
IOStreamAddress	Destination address of streamed IO data (hostname:port)
IOStreamKeepAliveTime	Time (sec) to hold an idle IOStream socket open (30)
IOStreamFormat	Format for the IOStream (Text, Terse , XML, Custom)
IOStreamCustomFormat	Format string for custom IOStream format (%E , %e, %T, %t, %d, %D, %v , %N, %H, %l, %M)

Notes:

- Default options shown **highlighted**
- Serial F/W upgrades no longer supported

Acquire Commands

AcquireMode	The method used to acquire tags (Global Scroll, Inventory). <i>Note: Inventory adjusts Q, Global Scroll uses fixed Q setting</i>
TagType	Bitmap value specifying tag protocols [16 = C1G2] (0, ..., 31)
AcqMask	Mask to acquire specific tags [bitLen, bitPtr, XX XX...] (0)=all
AcqC1Mask	C1/G1 tag mask [bitPtr, bitLen, XX XX...] (-1) = inactive
AcqG2Mask	C1/G2 tag mask [bank, bitPtr, bitLen, XX XX...] (-1) = inactive
AcqG2MaskAction	Whether AcqG2Mask selects tags that match or don't match (Include , Exclude)
AcqC1Cycles	Number of C1G1 cycles in each inventory (1, ..., 255)
AcqC1Count	Number of C1G1 reads in each cycle (1, ..., 3 , ..., 255)
AcqC1EnterWakeCount	Number of wakes before each C1G1 cycle (0, ..., 3 , ..., 255)
AcqC1ExitWakeCount	Number of wakes after all C1G1 cycles (0, ..., 255)
AcqC1SleepCount	Number of sleeps issued after each C1G1 read (0, 1 , ..., 255)
AcqG2Cycles	Number of C1G2 cycles in each inventory (1, ..., 255)
AcqG2Count	Number of C1G2 reads in each cycle (1, ..., 3 , ..., 255)
AcqG2Q	Starting Q parameter for C1G2 reads (0, 1, 2, 3 , 4, 5, 6, 7)
AcqG2Select	Number of B → A selects prior to a C1G2 cycle (0, 1 , ..., 255)
AcqG2Session	C1G2 session used during inventories (0, 1 , 2, 3)
AcqG2AccessKey	Access Pwd to access protected C1G2 tags (00 00 00 00)
AcqC0Cycles	Number of Class0 cycles in each inventory (1, ..., 255)
AcqC0Count	Number of Class0 reads in each cycle (1, ..., 5 , ..., 255)
Wake	Wake all C1G1 tags in the field
Sleep	Sleep all C1G1 tags in the field

AutoMode Commands

AutoMode	Control the AutoMode function (On, Off)
AutoWaitOutput	Output state while waiting for start trigger (-1, 0 , ..., 255)
AutoWorkOutput	Output state while performing AutoMode action (-1, 0 , ..., 255)
AutoTrueOutput	Output state when AutoMode evaluates TRUE (-1, 0 , ..., 255)
AutoFalseOutput	Output state when AutoMode evaluates FALSE (-1, 0 , ..., 255)
AutoStartTrigger	Input edges (<i>Rising</i> , <i>Falling</i>) to trigger AutoMode to start (0 , 0) = <i>bypass or read continuously</i>
AutoStopTrigger	Input edges (<i>Rising</i> , <i>Falling</i>) to trigger AutoMode to stop (0 , 0)
AutoStopTimer	Maximum time (msec) to spend performing AutoAction (-1, 0, ..., 1000 , ..., 86400000). -1=off, 86400000=24 hrs
AutoStartPause	Delay (msec) after a trigger before starting AutoAction (0 , ..., 86400000)
AutoStopPause	Delay (msec) after a trigger before stopping AutoAction (0 , ..., 86400000)
AutoTruePause	Pause (msec) after AutoMode evaluates TRUE (0 , ..., 86400000)
AutoFalsePause	Pause (msec) after AutoMode evaluates FALSE (0 , ..., 86400000)
AutoModeTriggerNow	Manually trigger AutoMode (start trigger emulation)
AutoAction	Action to perform in AutoMode (Acquire , ProgramEPC, ProgramAndLockEPC, Erase, Kill)
AutoModeReset	Turn OFF AutoMode & reset AutoMode parameters to default

Macro Commands

MacroList	List the names of all of the installed macros. <i>Note: default.arm automatically executes upon a reboot.</i>
MacroView	Display the contents of a named macro
MacroDel	Delete a named macro
MacroDelAll	Delete all macros
MacroRun	Execute the named macro
MacroStartRec	Begin recording a named macro [a-z, A-Z & 0-9 only]
MacroStopRec	Stop the macro currently being recorded

Time Commands

TimeServer	IP address of a network time server
Time	Current local time (YYYY/MM/DD hh:mm:ss)
TimeZone	Local timezone (+/- hours from GMT)

Notify Commands

NotifyFormat	Format of notification messages (Text , Terse, XML, Custom)
NotifyHeader	Include headers & footers in notifications? (On , Off)
NotifyAddress	Destination address for notification messages (email, hostname:port, serial)
NotifyTime	Period (sec) at which timed notifications are sent (0)=off
NotifyTrigger	Event trigger for issuing notification messages (Off , Add, Remove, Change, True, False, TrueFalse) TF = <i>every cycle</i>
NotifyKeepAliveTime	Time (sec) to hold idle notify socket open (0, ..., 30 , ..., 65535)
MailServer	Address of the server used to send e-mail notifications
MailFrom	Reported sender of e-mail notifications (Alien RFID Reader)
NotifyMode	Control the NotifyMode function (On, Off)
NotifyRetryCount	Failed TCP notification retry attempts (-1, ..., 32767). -1=never
NotifyRetryPause	Time (sec) between retrying failed TCP notifications (0, ..., 10 , ..., 32767)
NotifyQueueLimit	Number of failed TCP notifications to queue for later delivery (0, ..., 1000)
NotifyNow	Manually trigger NotifyMode for immediate notification
NotifyInclude	Specify Tag or I/O data to include in the notification messages (Tags , DI, DO, DIO, ALL)

Program Commands

ProgProtocol	Protocol for programming a tag (0, 1, 2). 2=C1G2 protocol
ProgAntenna	Single antenna on which to program tags (0 , 1, 2, 3)
ProgramEPC ProgramUser ProgramKillPw ProgramAccessPw	Program the indicated memory bank. If no data provided, use ProgEPCData, ProgUserData, ProgG2AccessPw, or ProgG2KillPw.
ProgEPCData ProgUserData ProgG2KillPw ProgG2AccessPw ProgC1KillPw	Default data to use when Program ___ commands are used without data provided as an argument. Placeholder data. 12-byte C1G2 default (00 00 00 00 00 00 00 00 00 00 00 00) Optional C1G2 User data. 2-byte default: (00 00) Optional 4-byte C1G2 Kill Password. Default: (00 00 00 00) Optional 4-byte C1G2 Access Pwd. Default: (00 00 00 00) Optional 1-byte C1G1 Kill Password. Default: (01)
ProgramAndLockEPC ProgramAndLockUser	Program & lock tag's EPC or User memory bank with designated EPC / User Data & Access Pwd (if Type=Lock)
ProgG2LockType	C1G2 lock Type used when programming (Lock , PermaLock, PermaUnlock)
ProgEPCDataInc ProgUserDataInc	Conditions to increment ProgEPCData or ProgUserData when programming (Off, Success , Fail, Always)
LockEPC LockUser LockKillPw LockAccessPw	Lock the indicated memory bank using the supplied Access Pwd (or AcqG2AccessPw)
UnlockEPC UnlockUser UnlockKillPw UnlockAccessPw	Unlock the indicated memory bank using the supplied Access Pwd (or AcqG2AccessPw)
Verify	Verify the presence of a C1G1 tag
Erase	Erase a tag in the field
Kill	Kill a tag with the supplied EPC & Kill Password
ProgReadAttempts	# attempts to verify the presence of a tag before programming (1, ..., 5 , 255)
ProgEraseAttempts	# attempts to erase a tag prior to programming (1, ..., 10 , 255)
ProgAttempts	Number of attempts to program a tag (1, ..., 3 , 255)
ProgSuccessFormat	Programming response format (0, 1). 0=Success, 1=ProgID
G2Read G2Write	C1G2 low-level protocol read and write. Read format: Bank, WrPtr, WordCount. Write format: Bank, WrPtr, XX XX XX XX...



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