

TSAN 015 INTEGRA H AB SLC 5

Dataradio Technical Support

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Within the U.S.A.	1-800-992-7774	International	1-507-833-8819
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Product: Integra-H and Allen Bradley SLC 5/0X PLC

Application: Provide interface information necessary for the configuration of the Integra-H wireless modem to an Allen Bradley SLC 5/0X PLC. Figure 1 shows the wiring information for this application.

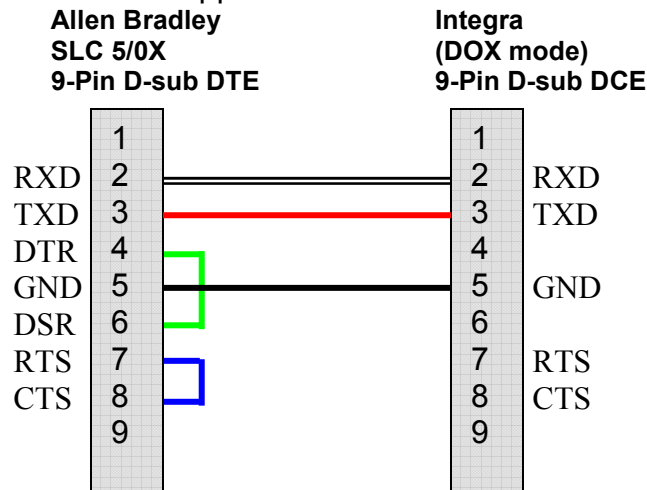


Figure 1: Wiring Interface for AB SLC 5/0X to Dataradio Integra.

Set-up Model SLC5/0X PLC

Configuration

- Driver: DF1 Half-duplex Master
- Baud: 9600 bps
- Parity: None
- Stop Bits: 1
- Node Address: 1 (dependent on application)

Figure 2: Allen Bradley SLC 5/0X Channel Configuration

SLC 503 Channel 0 Configuration

The screenshot shows the 'Channel Configuration' dialog box with the 'Chan. 0 - System' tab selected. The configuration parameters are as follows:

Parameter	Value
Driver	DF1 Half Duplex Master
Node Address	1 (decimal)
Baud	9600
Parity	NONE
Stop Bits	1
Control Line	Half Duplex w/o Continuous Carrier
Error Detection	CRC
Polling Mode	Msg. Don't allow Slaves to Initiat
Duplicate Packet Detect	<input type="checkbox"/>
Reply Msg. Timeout (x20 ms)	1
ACK Timeout (x20 ms)	50
RTS Off Delay (x20 ms)	3
RTS Send Delay (x20 ms)	8
Message Retries	3
Pre Transmit Delay (x1 ms)	0

Protocol Control

- Control Line: half duplex without continuous carrier
- Error detection: CRC
- Polling Mode: do not allow remotes to initiate
- Duplicate Packet Detect: disabled
- Reply Msg. Timeout (x 20 ms): 1

- ACK Timeout (x 20 ms): 50
- RTS Off Delay (x 20 ms): 3
- RTS Send Delay (x 20 ms): 8
- Message Retries: 3
- Pre Transmit Delay: 0

Setup Integra-H

Integra configuration parameters are set using the Integra-H Field Programming Software. Locate the parameters tab. Each of the three tabs are shown in figures 3-5 and should be configured as follows.

Modem Tab

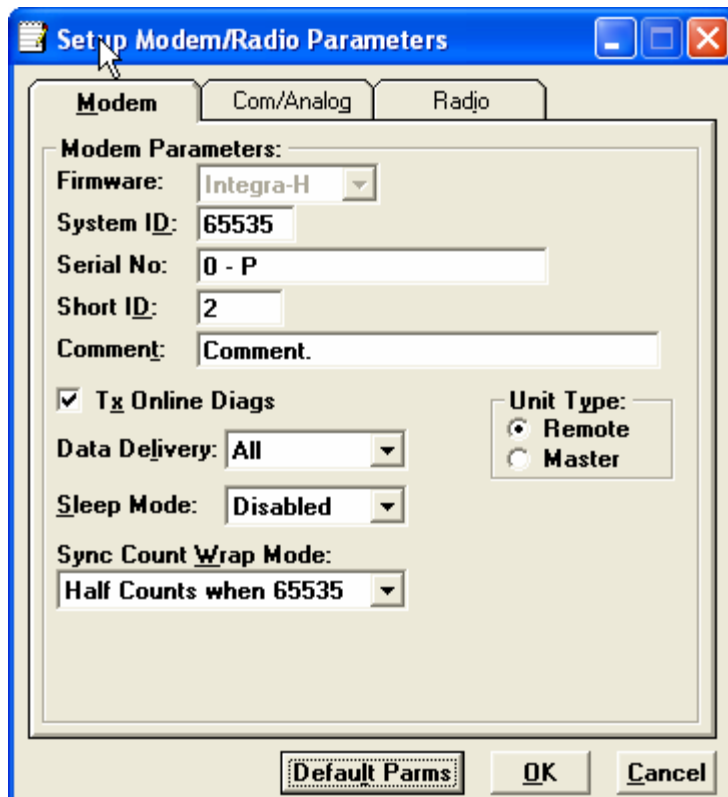


Figure 3: Integra-H set-up Modem parameters screen

- Firmware: Integra-H (3.03 or most current)
- System ID: This number can be set from 1-1024 (excluding 255) and must be a unique number common to all units in the same communication network
- Serial No.: factory assigned for unit identification
- Short ID: This number can be set from 1-1024 (excluding 255). It identifies an individual unit in the network.
- Comment: User supplied comment
- TX Online Diagnostics: Enabled for diagnostics
- Data Delivery: Selects which data should be deliver to the COM port – All
- Sleep Mode: disabled (usually)
- Sync Count Wrap Mode: Half counts when 65535
- Unit Type: Master or remote

COM/Analog Tab

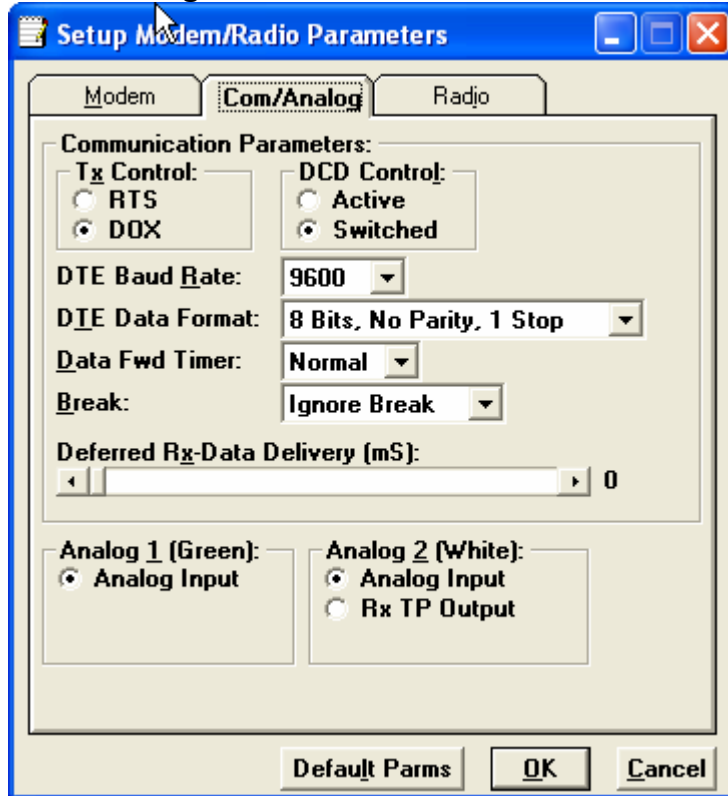


Figure 4: Integra-H set-up COM/Analog parameters screen

- TX Control: DOX
- DCD Control: switched
- DTE Baud Rate: 9600
- DTE Data Format: 8 bits, no parity,
- Data Forward Timer: normal
- Break: Ignore break
- Deferred Rx-Data Delivery: 0 (typically)
- Analog 1 (green): Input enabled
- Analog 2 (white): Input enabled

Radio Tab

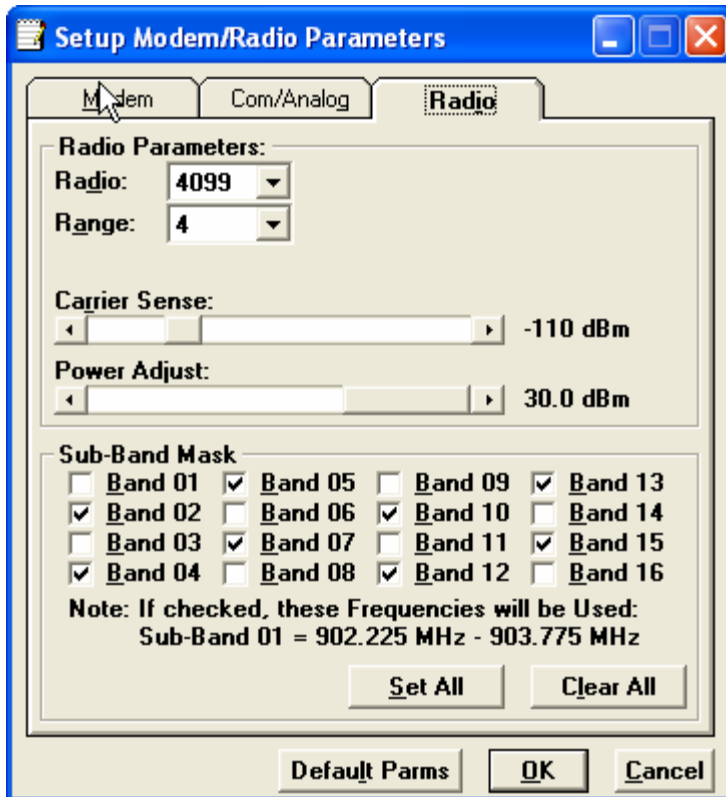


Figure 5: Integra-H set-up Radio parameters screen

- Radio: 4099; displays unit model – not adjustable
- Range: 5; displays unit range – not adjustable
- Carrier Sense: -110 dBm; Carrier is indicated when RSSI level crosses above the set level. Carrier sense is used for data recovery, in the interpretation of diagnostics and to turn on the front panel CS LED. The threshold may be raised to prevent false carrier sense operation in the presence of noise, intermodulation, or other sources of interference. The carrier sense threshold can be adjusted in 1 level dBm increments from -130 dBm to -40 dBm.
- Power Adjust: 30.0 dBm; The power adjust slider is used to set back the output power of the Integra-H when used with higher gain antennae or in close proximity of each other. The power can be set in 0.5 dBm increments from 20 dBm (0.1 watts) to 30 dBm (1 watt).
- Sub-band Mask: This selection allows the user to choose the usable hopping frequencies in blocks of 32 channels (1.55 MHz) over the full 512 channel-hopping band. A minimum of 2 bands must be selected to comply with FCC regulations.
- Set All: Selects all sub-bands for use
- Clear All: Clears all checked boxes. If less than two boxes are checked, the program will select the lower band adjacent to the one selected, or select the first two bands if none are selected.

Always refer to the Integra-H Technical Manual for proper set-up. Factory defaults are recommended for beginning settings.