C H A P T E R 6

RS-232 MIB

Note EIA/TIA-232 was known as the recommended standard RS-232 before its acceptance as a standard by the Electronic Industries Association (EIA) and Telecommunications Industry Association (TIA). Because RS-232 appears in the names of supported MIB objects, this manual also uses RS-232.

The RS-232 MIB is associated with the FastHub ifTable out-of-band management interface. The FastHub supports the following RFC-1317 groups:

- Generic RS-232-like group
- Asynchronous RS-232-like port group
- Input signal table
- Output signal table

The associated MIB objects for these groups are described below.

Generic RS-232-like Group

Implementation of this group is mandatory.

rs232Number (integer)

This read-only MIB object displays the number of ports (regardless of their current state) in the RS-232-like general port table.

Default Value: 1

rs232PortTable

This table contains a list of port entries. The number of entries is given by the value of rs232Number. Each entry defines the following:

rs232PortIndex (integer)

This read-only MIB object displays a unique value for each port. Its value ranges between 1 and the value of rs232Number. By convention, hardware port numbers map directly to external connectors. The value for each port must remain constant from one reinitialization of the network management module (NMM) to the next reinitialization.

rs232PortType (integer)

This read-only MIB object displays the port's hardware type.

Valid Values:	other	(1)
	rs232	(2)
	rs422	(3)
	rs423	(4)
	v35	(5)
Default Value:	rs232	(2)

rs232PortInSigNumber (integer)

This read-only MIB object displays the number of input signals for the port in the input signal table (rs232PortInSigTable). The table contains entries for only those signals the software can detect.

Default Value: 4

rs232PortOutSigNumber (integer)

This read-only MIB object displays the number of output signals for the port in the output signal table (rs232PortOutSigTable). The table contains entries for only those signals the software can assert.

Default Value: 2

rs232PortInSpeed (integer)

This read-write MIB object specifies the port input speed in bits per second.

Default Value: 9600

rs232PortOutSpeed (integer)

This read-write MIB object specifies the port output speed in bits per second.

Default Value: 9600

RS-232-like Asynchronous Port Group

rs232AsyncPortTable

A list of asynchronous port entries. The maximum entry number is given by the value of rs232Number. Each entry defines the following:

rs232AsyncPortIndex (integer)

This read-only MIB object displays a unique value for each port. Its value is the same as rs232PortIndex for the port.

rs232AsyncPortBits (integer [7 to 8])

This read-write MIB object specifies for this port the number of bits in a character.

Default Value: 8

rs232AsyncPortStopBits (integer)

This read-write MIB object specifies for this port the number of stop bits.

Valid Values:	one	(1)
	two	(2)
Default Value:	one	(1)

rs232AsyncPortParity (integer)

This read-write MIB object specifies for this port the sense of a character parity bit.

Valid Values:	none	(1)
	odd	(2)
	even	(3)

	mark	(4)
	space	(5)
Default Value:	none	(1)

rs232AsyncPortAutobaud (integer)

This read-write MIB object is used to control the port's ability to automatically sense input speed. When rs232PortAutoBaud is enabled (1), a port can autobaud to values different from the set values for speed, parity, and character size. As a result, the NMM might temporarily observe values different from those previously set.

Valid Values:	enabled	(1)
	disabled	(2)
Default Value:	enabled	(1)

rs232AsyncPortParityErrs (integer)

This read-only MIB object displays the total number of characters with a parity error input from the port since system reinitialization and while the port state was *up* or *test*.

Initial Value: 0

rs232AsyncPortFramingErrs (integer)

This read-only MIB object displays the total number of characters with a framing error input from the port since system reinitialization and while the port state was *up* or *test*.

Initial Value: 0

rs232AsyncPortOverrunErrs (integer)

This read-only MIB object displays the total number of characters with an overrun error input from the port since system reinitialization and while the port state was *up* or *test*.

Initial Value: 0

Input Signal Table

rs232InSigTable

This table contains a list of port input control signal entries. Each entry defines the following:

rs232InSigPortIndex (integer)

This read-only MIB object displays the value of rs232PortIndex for the port to which this entry belongs.

rs232InSigName (integer)

This read-only MIB object identifies the hardware signal, as follows:

rts   Request to Send

cts   Clear to Send

dsr   Data Set Ready

dtr   Data Terminal Ready

ri   Ring Indicator

dcd   Received Line Signal Detector

sq   Signal Quality Detector

srs   Data Signaling Rate Selector

srts   Secondary Request to Send

scts   Secondary Clear to Send

sdcd   Secondary Received Line Signal Detector

Valid Values:	rts	(1)
	cts	(2)
	dsr	(3)
	dtr	(4)
	ri	(5)
	dcd	(6)
	sq	(7)
	srs	(8)
	srts	(9)
	scts	(10)
	sdcd	(11)

rs232InSigState (integer)

This read-only MIB object displays the current signal state.

Valid Values:	none	(1)
	on	(2)
	off	(3)

rs232InSigChanges (integer)

This read-only MIB object displays the number of times the signal has changed from on to off or from off to on.

Output Signal Table

rs232OutSigTable

This table contains a list of port output control signal entries. Each entry defines the following:

rs232OutSigPortIndex (integer)

This read-only MIB object reads the value of rs232PortIndex for the port to which this entry belongs.

rs232OutSigName (integer)

This read-only MIB object identifies the hardware signal, as follows:

rts	Request to Send
cts	Clear to Send
dsr	Data Set Ready
dtr	Data Terminal Ready
ri	Ring Indicator
dcd	Received Line Signal Detector
sq	Signal Quality Detector
srs	Data Signaling Rate Selector
srts	Secondary Request to Send

scts   Secondary Clear to Send

sdcd   Secondary Received Line Signal Detector

Valid Values:	rts	(1)
	cts	(2)
	dsr	(3)
	dtr	(4)
	ri	(5)
	dcd	(6)
	sq	(7)
	srs	(8)
	srts	(9)
	scts	(10)
	sdcd	(11)

rs232OutSigState (integer)

This read-only MIB object displays the current signal state.

Valid Values:	none	(1)
	on	(2)
	off	(3)

rs232OutSigChanges (integer)

This read-only MIB object displays the number of times the signal has changed from on to off or from off to on.