C H A P T E R 6

RFC-1317: RS-232 MIB Objects

The Catalyst 2800 and the Catalyst 2100 support the following RFC-1317 groups:

- Generic RS-232-like group

- RS-232-like general port table

- RS-232-like asynchronous port group

- RS-232-like synchronous port group

- Input signal table

- Output signal table

The associated MIB objects for these groups are described below.

The Generic RS-232-like Group

Implementation of this group is mandatory for all systems that have RS-232-like hardware ports supporting higher level services such as character streams or network interfaces.

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.

Valid Values: 1

The RS-232-like General Port Table

rs232PortTable

This MIB object displays a list of port entries. The number of entries is given by the value of rs232Number.

rs232PortEntry

This MIB object displays status and parameter values for a port.

rs232PortIndex (integer)

This read-only MIB object displays a unique value for each port. Its value ranges between 1 and the value of rs232Number.

rs232PortType (integer)

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

Valid Values: rs232 (2)

rs232PortInSigNumber (integer)

This read-only MIB object displays the number of input signals for the port in the input signal table (rs232PortInSigTable).

rs232PortOutSigNumber (integer)

This read-only MIB object displays the number of output signals for the port in the output signal table (rs232PortOutSigTable).

rs232PortInSpeed (integer)

This read-write MIB object contains the port's input speed in bits per second.

Valid Values: 300

                        1200

                        2400

                        9600

                        19200

Default Value: 9600

rs232PortOutSpeed (integer)

This read-write MIB object contains the port's output speed in bits per second.

Valid Values: 300

                        1200

                        2400

                        9600

                        19200

Default Value: 9600

RS-232-like Asynchronous Port Group

Implementation of this group is mandatory if the system has any asynchronous ports. Otherwise it is not present.

rs232AsyncPortTable

This MIB object displays a list of asynchronous port entries. The maximum entry number is given by the value of rs232Number. Entries need not exist for synchronous ports.

rs232AsyncPortEntry

This MIB object displays status and parameter values for an asynchronous port.

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)

This read-write MIB object contains the port's number of bits in a character.

Valid Values: 7 or 8

rs232AsyncPortStopBits (integer)

This read-write MIB object contains the port's number of stop bits.

Valid Values: one (1)

two (2)

Default Value: one (1)

rs232AsyncPortParity (integer)

This read-write MIB object contains the port's sense of a character parity bit.

Valid Values: none   (1)

odd   (2)

even   (3)

mark   (4)

space (5)

Default Value: one   (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, a port may autobaud to values different from the set values for speed, parity, and character size. As a result a network management system may temporarily observe values different from what was previously set.

Valid Values: enabled (1)

disabled (2)

Default Value: one   (1)

rs232AsyncPortParityErrs (counter)

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

rs232AsyncPortFramingErrs (counter)

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*.

rs232AsyncPortOverrunErrs (counter)

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

The Input Signal Table

rs232InSigTable

This MIB object displays a list of port input control signal entries.

rs232InSigEntry (integer)

This MIB object displays input control signal status for a hardware port.

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 provides identification of a hardware signal. The signals and their values are:

- rts   Request to Send (1)
- cts   Clear to Send (2)
- dsr   Data Set Ready (3)
- dtr   Data Terminal Ready (4)

- ri   Ring Indicator (5)

- dcd   Received Line Signal Detector (6)

- sq   Signal Quality Detector (7)

- srs   Data Signaling Rate Selector (8)

- srts   Secondary Request to Send (9)

- scts   Secondary Clear to Send (10)

- sdcd   Secondary Received Line Signal Detector (11)

rs232InSigState (integer)

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

Valid Values: none (1)

on   (2)

off   (3)

rs232InSigChanges (counter)

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

The Output Signal Table

rs232OutSigTable

This MIB object displays a list of port output control signal entries.

rs232OutSigEntry

This MIB object displays the output control signal status for a hardware port.

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 a hardware signal. The signals and values are the following:

>- rts   Request to Send (1)
>- cts   Clear to Send (2)
>- dsr   Data Set Ready (3)
>- dtr   Data Terminal Ready (4)
>- ri   Ring Indicator (5)
>- dcd   Received Line Signal Detector (6)
>- sq   Signal Quality Detector (7)
>- srs   Data Signaling Rate Selector (8)
>- srts   Secondary Request to Send (9)
>- scts   Secondary Clear to Send (10)
>- sdcd   Secondary Received Line Signal Detector (11)

rs232OutSigState (integer)

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

>Valid Values: none (1)

>on   (2)

>off   (3)

rs232OutSigChanges (counter)

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