

chrome.serial

Description:	Use the chrome.serial API to read from and write to a device connected to a serial port.
Availability:	Since Chrome 23.
Permissions:	"serial"
Learn More:	Accessing Hardware Devices

Summary

DataBits ParityBit StopBits ConnectionOptions ConnectionInfo Methods getDevices - chrome.serial.getDevices(function callback) connect - chrome.serial.connect(string path, ConnectionOptions options, function callback) update - chrome.serial.update(integer connectionId, ConnectionOptions options, function callback) disconnect - chrome.serial.disconnect(integer connectionId, function callback) setPaused - chrome.serial.setPaused(integer connectionId, function callback) getInfo - chrome.serial.getInfo(integer connectionId, function callback) getConnections - chrome.serial.getConnections(function callback) send - chrome.serial.send(integer connectionId, ArrayBuffer data, function callback) flush - chrome.serial.flush(integer connectionId, function callback) getControlSignals - chrome.serial.getControlSignals(integer connectionId, function callback) setControlSignals - chrome.serial.setControlSignals(integer connectionId, object signals, function callback) setBreak - chrome.serial.setBreak(integer connectionId, function callback) clearBreak - chrome.serial.clearBreak(integer connectionId, function callback) Events onReceive onReceive	Types
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onReceive	<pre>clearBreak - chrome.serial.clearBreak(integer connectionId, function callback)</pre>
	Events
onReceiveError	onReceive
	onReceiveError

Types

DataBits

Enum

ParityBit

Enum	
"no", "odd", or "even"	

StopBits

Enum	
"one", or "two"	

ConnectionOptions

Since Chrome 33.

properties		
boolean	(optional) persistent	Flag indicating whether or not the connection should be left open when the application is suspended (see Manage App Lifecycle). The default value is "false." When the application is loaded, any serial connections previously opened with persistent=true can be fetched with getConnections.
string	(optional) name	An application-defined string to associate with the connection.
integer	(optional) bufferSize	The size of the buffer used to receive data. The default value is 4096.
integer	(optional) bitrate	The requested bitrate of the connection to be opened. For compatibility with the widest range of hardware, this number should match one of commonly-available bitrates, such as 110, 300, 1200, 2400, 4800, 9600, 14400, 19200, 38400, 57600, 115200. There is no guarantee, of course, that the device connected to the serial port will support the requested bitrate, even if the port itself supports that bitrate. 9600 will be passed by default.
DataBits	(optional) dataBits	"eight" will be passed by default.
ParityBit	(optional) parityBit	"no" will be passed by default.
StopBits	(optional) stopBits	"one" will be passed by default.
boolean	(optional) ctsFlowControl	Flag indicating whether or not to enable RTS/CTS hardware flow control. Defaults to false.
integer	(optional) receiveTimeout	The maximum amount of time (in milliseconds) to wait for new data before raising an onReceiveError event with a "timeout" error. If zero, receive timeout errors will not be raised for the connection. Defaults to 0.
integer	(optional) sendTimeout	The maximum amount of time (in milliseconds) to wait for a send operation to complete before calling the callback with a "timeout" error. If zero, send timeout errors will not be triggered. Defaults to 0.

ConnectionInfo

Since Chrome 33.

properties		
integer	connectionId	The id of the serial port connection.
boolean	paused	Flag indicating whether the connection is blocked from firing onReceive events.
boolean	persistent	See ConnectionOptions.persistent
string	name	See ConnectionOptions.name
integer	bufferSize	See ConnectionOptions.bufferSize
integer	receiveTimeout	See ConnectionOptions.receiveTimeout
integer	sendTimeout	See ConnectionOptions.sendTimeout
integer	(optional) bitrate	See ConnectionOptions.bitrate. This field may be omitted or inaccurate if a non-standard bitrate is in use, or if an error occurred while querying the underlying device.
DataBits	(optional) dataBits	See ConnectionOptions.dataBits. This field may be omitted if an error occurred while querying the underlying device.
ParityBit	(optional) parityBit	See ConnectionOptions.parityBit. This field may be omitted if an error occurred while querying the underlying device.
StopBits	(optional) stopBits	See ConnectionOptions.stopBits. This field may be omitted if an error occurred while querying the underlying device.
boolean	(optional) ctsFlowControl	See ConnectionOptions.ctsFlowControl. This field may be omitted if an error occurred while querying the underlying device.

Methods

getDevices

chrome.serial.getDevices(function callback)

Since Chrome 33.

Returns information about available serial devices on the system. The list is regenerated each time this method is called.

Parameter	S	
function	callback	Called with the list of DeviceInfo objects.

array of	ports	Properties of each object		
object		string	path	The device's system path. This should be passed as the path argument to chrome.serial.connect in order to connect to this device.
		integer	(optional) vendorld	A PCI or USB vendor ID if one can be determined for the underlying device.
		integer	(optional) productId	A USB product ID if one can be determined for the underlying device.
		string	(optional) displayName	A human-readable display name for the underlying device if one can be queried from the host driver.

connect

chrome.serial.connect(string path, ConnectionOptions options, function callback)

Since Chrome 33.

Connects to a given serial port.

Parameters				
string	path	The system path of the serial port to open.		
ConnectionOptions	(optional) options	Port configuration options.		
function	callback	Called when the connection has been opened. The callback parameter should be a function that looks like this: function(ConnectionInfo connectionInfo) {}; ConnectionInfo connectionInfo		

update

chrome.serial.update(integer connectionId, ConnectionOptions options, function callback)

Since Chrome 33.

Update the option settings on an open serial port connection.

Parameters			
integer	connectionId	The id of the opened connection.	
ConnectionOptions	options	Port configuration options.	
function	callback	Called when the configuation has completed. The callback parameter should be a function that looks like this:	

<pre>function(boolean result) {};</pre>		
boolean	result	

disconnect

chrome.serial.disconnect(integer connectionId, function callback)

Since Chrome 33.

Disconnects from a serial port.

Parameters						
integer	connectionId	The id of the opened conne	The id of the opened connection.			
function	callback	Called when the connection The callback parameter sho function(boolean res	ould be a function that looks like this:			
		boolean result				

setPaused

chrome.serial.setPaused(integer connectionId, boolean paused, function callback)

Since Chrome 33.

Pauses or unpauses an open connection.

Parameters							
integer	connectionId	The id of the opened connection.					
boolean	paused	Flag to indicate whether to pause or unpause.					
function	callback	Called when the connection has been successfully paused or unpaused. The callback parameter should be a function that looks like this: function() {};					

getInfo

chrome.serial.getInfo(integer connectionId, function callback)

Since Chrome 33.

Retrieves the state of a given connection.

Parameters						
integer	connectionId	The id of the opened connection.				
function	callback	Called with connection state information when available.				

The callback parameter should be a function function (ConnectionInfo connect	
ConnectionInfo	connectionInfo

getConnections

chrome.serial.getConnections(function callback)

Since Chrome 33.

Retrieves the list of currently opened serial port connections owned by the application.

function callback Called with the list of connections when available. The callback parameter should be a function that looks like this: function(array of ConnectionInfo connectionInfos) {};	Parameters									
	function	callback	The callback parameter should be a functi	ion that looks like this:						
array of ConnectionInfo connectionInfos			array of ConnectionInfo connectionInfos							

send

chrome.serial.send(integer connectionId, ArrayBuffer data, function callback)

Since Chrome 33.

Writes data to the given connection.

Parameters								
integer	connectionId	The id of	The id of the connection.					
ArrayBuffer	data	The data to send.						
function	The	The callba	Called when the operation has completed. The callback parameter should be a function that looks like this: function(object sendInfo) {};					
		object	sendInfo	integer	bytesSent	The number of bytes sent.		
				enum of "disconnected", "pending", "timeout", or "system_error"	(optional) error	An error code if an error occurred. disconnected The connection was disconnected. pending A send was already pending. timeout The send timed out.		



flush

chrome.serial.flush(integer connectionId, function callback)

Flushes all bytes in the given connection's input and output buffers.

Parameters								
integer	connectionId							
function	callback	The callback parameter should be a funct function(boolean result) $\{\ldots\};$						
		boolean	result					

getControlSignals

chrome.serial.getControlSignals(integer connectionId, function callback)

Retrieves the state of control signals on a given connection.

nteger	connectionId	The id of the connection.							
function	callback	The callba	ick parame	rol signals ar ter should be signals)	e a func	tion that looks like this:			
		object signals	signals	boolean	dcd	DCD (Data Carrier Detect) or RLSD (Receive Line Signal/Detect).			
				boolean	cts	CTS (Clear To Send).			
				boolean	ri	RI (Ring Indicator).			
				boolean	dsr	DSR (Data Set Ready).			

setControlSignals

chrome.serial.setControlSignals(integer connectionId, object signals, function callback)

Sets the state of control signals on a given connection.

Parameters			

integer	connectionId	The id of the connection.				
object	signals	Since Chrome 33. The set of signal changes to send to the device.				
		boolean	(optional) dtr	DTR (Data Terminal Ready).		
		boolean	(optional) rts	RTS (Request To Send).		
function	callback	Called once the control signals have been set. The callback parameter should be a function that looks like this: function(boolean result) {};				
		boolean		result		

setBreak

chrome.serial.setBreak(integer connectionId, function callback)

Since Chrome 45.

Suspends character transmission on a given connection and places the transmission line in a break state until the clearBreak is called.

Parameters							
integer	connectionId	The id of the connection.					
function	callback	The callback parameter should be a functifunction(boolean result) {}; boolean					

clearBreak

chrome.serial.clearBreak(integer connectionId, function callback)

Since Chrome 45.

Restore character transmission on a given connection and place the transmission line in a nonbreak state.

Parameters								
integer	connectionId	The id of the connection.						
function	callback	The callback parameter should be a functifunction(boolean result) {}; boolean						

Events

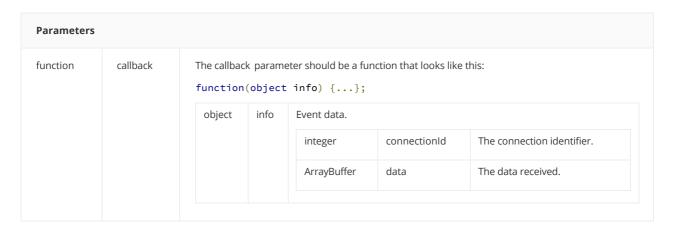
onReceive

Since Chrome 33.

Event raised when data has been read from the connection.

addListener

chrome.serial.onReceive.addListener(function callback)



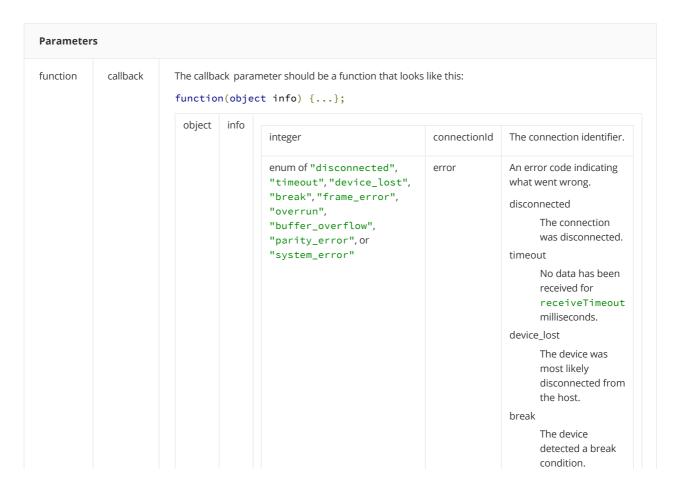
onReceiveError

Since Chrome 33.

Event raised when an error occurred while the runtime was waiting for data on the serial port. Once this event is raised, the connection may be set to paused. A "timeout" error does not pause the connection.

addListener

chrome.serial.onReceiveError.addListener(function callback)



frame_error The device detected a framing error. overrun A character-buffer overrun has occurred. The next character is lost. buffer_overflow An input buffer overflow has occurred. There is either no room in the input buffer, or a character was received after the end-of-file (EOF) character. parity_error The device detected a parity error. system_error A system error occurred and the connection may be unrecoverable.

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