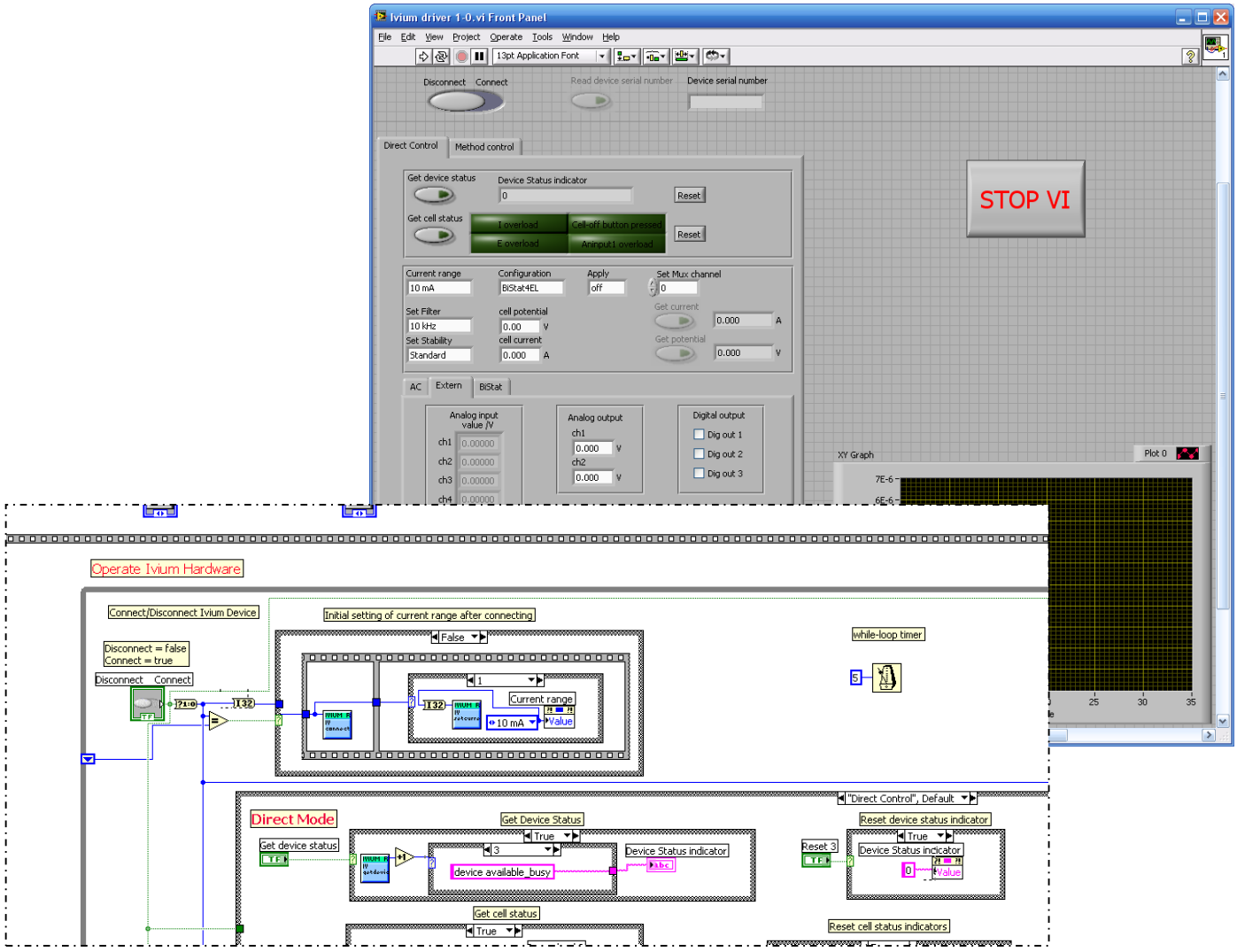
LabVIEW

NATIONAL INSTRUMENTS

For LabVIEW control of Ivium instruments

Ivium Instruments are standard delivered with a full software package. Besides the IviumSoft instrument control and data evaluation software, this includes a LabVIEW virtual instrument library with an extensive range of command vi's that can be included in your own LabVIEW control application. Furthermore, an example of a full LabVIEW application is set-up that allows Ivium instrument control. For convenience and identification the user interface is mostly identical to that of the IviumSoft. Using this example, in a quick and easy way desired functions can be copied and incorporated into other LabVIEW control applications.



THE NETHERLANDS:

Ivium Technologies B.V.
De Zaale 11
5612 AJ Eindhoven
The Netherlands

tel. +31 40 2390600
fax. +31 40 2390601
e-mail info@ivium.eu
www.ivium.com

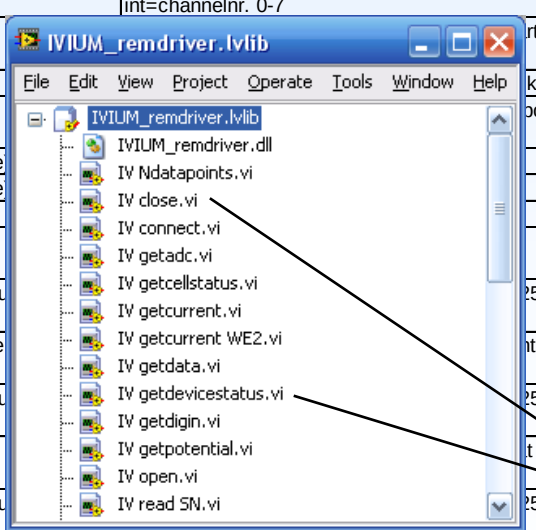
U.S.A.:

Ivium Technologies USA
961687 Gateway Blvd., Suite 201D
Fernandina Beach, FL 32034

phone: 800-303-3885 (toll free) / 904-310-9060 (office)
fax: 904-310-9068
e-mail pete@ivium.us
www.ivium.us

Structure and commands

Imported function	Description
GENERAL	
IV_open	Opens the driver
IV_close	Closes the driver
IV_selectdevice(int)	Select device, applicable for multi-device configurations, default=1
IV_getdevicestatus	Returns status of device: -1=no IviumSoft; 0=not connected;
	1=available_idle; 2=available_busy
IV_readSN(*char)	Returns serial number of selected device, empty string if not connected
IV_connect(int)	Connect to selected device, int=1 for connect, int=0 for disconnect
DIRECT MODE	
IV_getcellstatus(int)	Returns cell status: bit 2=I_ovl, bit 4 =Anin1_ovl, bit 5 = E_ovl,
	bit 7 = CellOff_button pressed
IV_setconnectionmode(int)	Select configuration, 0=off; 1=EStat4EL(default), 2=EStat2EL,
	3=EstatDummy1,4=EStatDummy2,5=EstatDummy 3,6=EstatDummy4
	7=Istat4EL, 8=Istat2EL, 9=IstatDummy, 10=BiStat4EL, 11=BiStat2EL
IV_setpotential(double)	Set cell potential
IV_setpotentialWE2(double)	Set BiStat offset potential
IV_setcurrent(double)	Set cell current (galvanostatic mode)
IV_getpotential(double)	Returns measured potential
IV_setcurrentrange(int)	Set current range, 0=10A, 1=1A, etc,
IV_setcurrentrangeWE2(int)	Set current range for BiStat, 0=10mA, 1=1mA, etc,
IV_getcurrent(double)	Returns measured current
IV_getcurrentWE2(double)	Returns measured current from WE2 (bipotentiostat)
IV_setfilter(int)	Set filter, for int :0=1MHz, 1=100kHz, 2=10kHz, 3=1kHz, 4=10Hz
IV_setstability(int)	Set stability, for int 0=HighSpeed, 1=Standard, 2=HighStability
IV_bistat_mode(int)	Select mode for BiStat, for int 0=standard, 1=scanning
IV_setdac(int,double)	Set dac on external port, int=0 for dac1, int=1 for dac2
IV_getadc(int,double)	Returns measured voltage on external ADC port, int=channelnr. 0-7
IV_setmuxchannel(int)	
IV_setdigout(int)	
IV_getdigin(int)	
IV_setfrequency(double	
IV_setamplitude(double	
IV_getcurrenttrace	
(int ,double,*dou	
IV_getcurrentWE2trace	
(int ,double,*dou	
IV_getpotentialtrace	
(int ,double,*dou	
IV_we32setchannel(int)	Select active WE32 channel (chan)
IV_we32setoffset(int,double)	Set WE32 offset (chan,value), value -2 to +2V.
	Use chan=0 to apply the same offset to all channels.
IV_we32getoffsets(int,*values)	Returns actual WE32 offset values (Nchan,values),
	with Nchan the number of channels (1..32)
IV_we32readcurrents(*values)	Returns array with 32 WE32 current values,



Command hierachy