```
function param = parameter
    param.serial_port = @serial_port;
    param.camera_webcam = @camera_webcam;
    param.camera_infrared = @camera_infrared;
    param.camera_laser = @camera_laser;
    param.camera_multispectral = @camera_multispectral;
end

function serial = serial_port(callback_receive)
%#SERIAL_PORT Initialize serial port
%#
%# SYNOPSIS serial_port
%# INPUT none
%# OUTPUT serial: The camera object
%#
    % set serial port identifiers
    port = 'COM2';
    baudrate = 115200;
    terminator = 'CR/LF';

    % initialize serial port
    serial = class_serial_port(port, baudrate, terminator,
    callback_receive);
end

function camera = camera_webcam
%#CAMERA_WEBCAM Initialize webcam for QR-Code analyse
%#
%# SYNOPSIS camera_webcam
%# INPUT none
%# OUTPUT camera: The camera object
%#        camera.inited: Implies whether the initialization has
succeeded
%#        camera.handle: raw camera handle
%#
    % set camera identifiers
    name = 'QR-Code webcam';
    model = 'USB2.0 Camera';
    format = 'YUY2_640x480';

    % initialize camera
    camera = class_videoinput(name, 'winvideo', format, 'rgb',
    model);
end

function camera = camera_infrared()
%#CAMERA_INFRARED Initialize infrared camera
%#
%# SYNOPSIS camera_infrared
```

```
47  %# INPUT list: optional explicit gigecamlist()
48  %# OUTPUT camera: The camera object
49  %#
50      % set camera identifiers
51      name = 'infrared camera';
52      % manufacturer = 'FLIR Systems AB';
53      model = 'FLIR AX5';
54      format = 'Mono16';
55
56      % initialize camera
57      camera = class_videoinput(name, 'gige', format,
        'grayscale', model);
58  end
59
60  function camera = camera_laser()
61  %#CAMERA_LASER Initialize camera for laserline 3D analyse
62  %#
63  %# SYNOPSIS camera_laser
64  %# INPUT list: optional explicit gigecamlist()
65  %# OUTPUT camera: The camera object
66  %#
67      % set camera identifiers
68      name = 'laser camera';
69      % manufacturer = 'TU Ilmenau QBV RF';
70      model = 'CamSys-EV76C560-Laser';
71      format = 'Mono8';
72
73      % initialize camera
74      camera = class_videoinput(name, 'gige', format,
        'grayscale', model);
75
76      function handle = set_ROI_pos(handle)
77          handle.ROIPosition = [0, 0, 220, 450];
78      end
79      camera.config(@set_ROI_pos);
80  end
81
82  function camera = camera_multispectral(list)
83  %#CAMERA_MULTISPECTRAL Initialize multispectral camera
84  %#
85  %# SYNOPSIS camera_multispectral
86  %# INPUT list: optional explicit gigecamlist()
87  %# OUTPUT camera: The camera object
88  %#
89      % set camera identifiers
90      name = 'multispectral camera';
91      manufacturer = 'TU Ilmenau QBV';
92      model = 'CamSys-EV76C560';
93      format = 'Mono8';
```

```
94
95        % initialize camera
96        camera = class_gigecam(name, format, model, manufacturer,
          list);
97        function handle = set_ExposureTime(handle)
98            handle.ExposureTime = 35000;
99        end
100       camera.config(@set_ExposureTime);
101   end
102
```