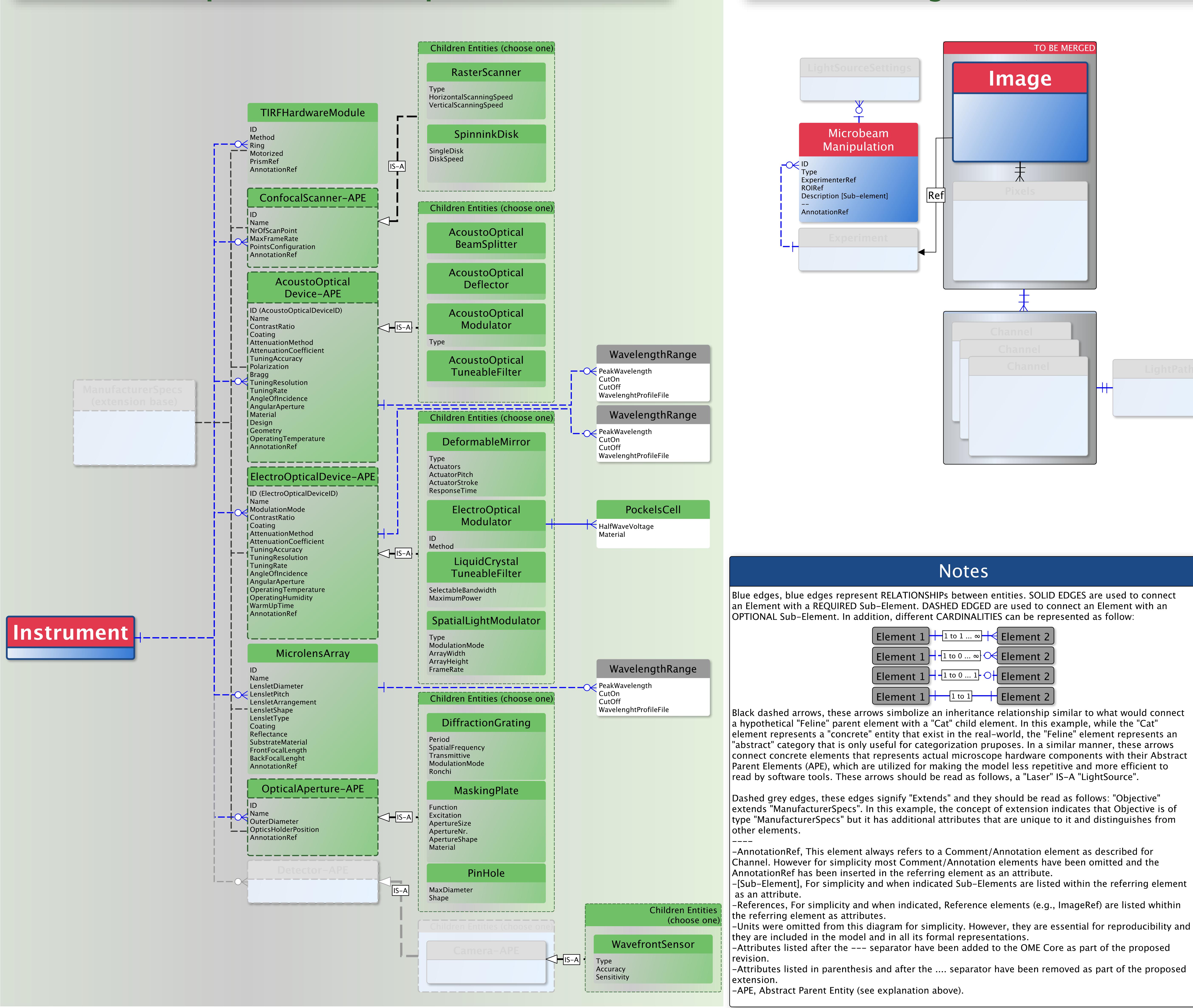
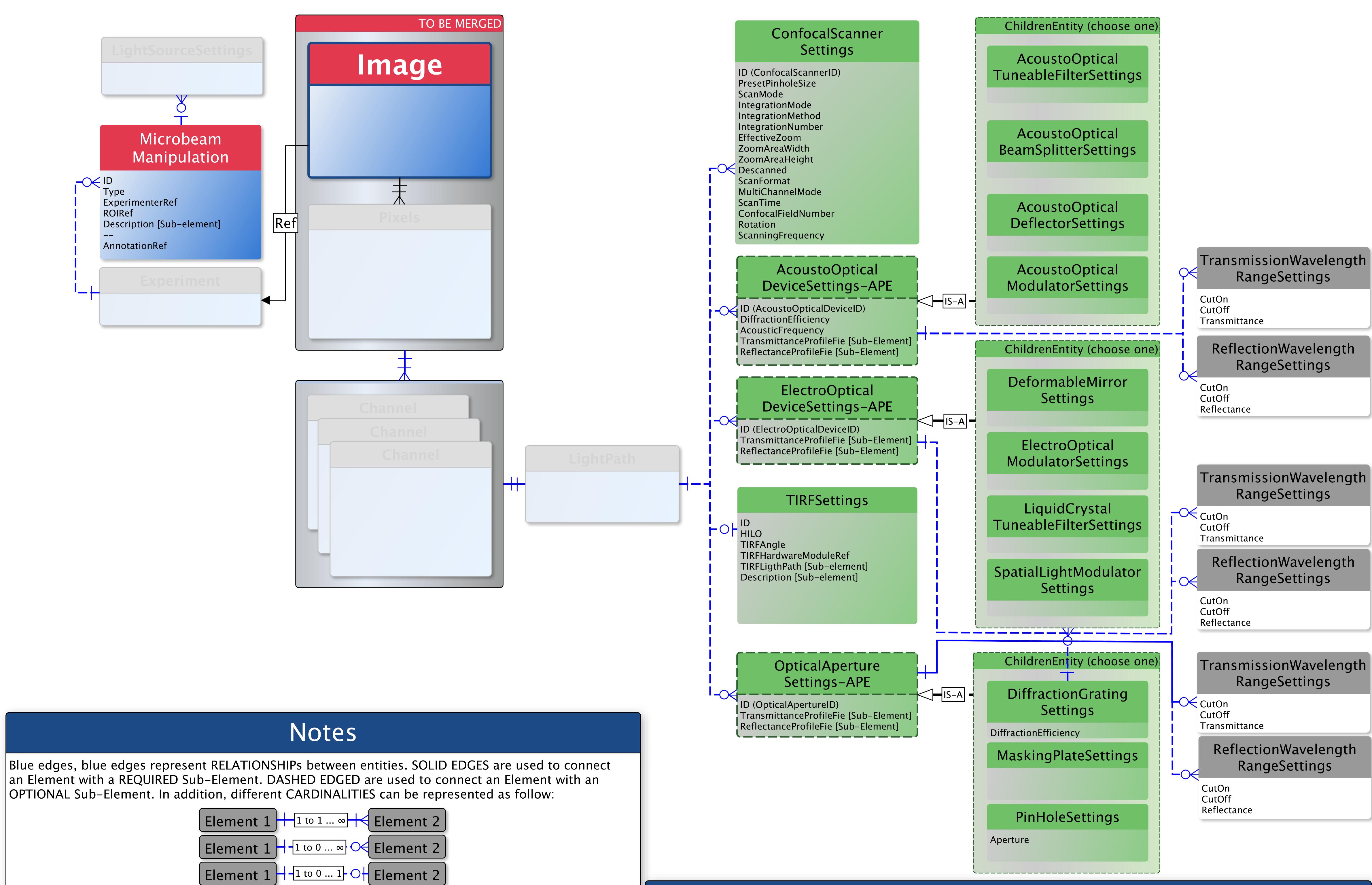
4DN-BINA-OME Advanced & Confocal Extension Microscope HARDWARE Specifications



4DN-BINA-OME Advanced & Confocal Extension Image ACQUISITION Settings



Legend

This is a Entity-Relationship diagrammatic representation of a proposed REVISION of the OME Core data model (blue/red boxes) along side a proposed OME BASIC EXTENSION (grey boxes) developed by members of the Imaging Working Group of the 4D Nucleome network (https://www.4dnucleome.org) and by members of the BINA Quality Control and Data Management Working Group (https://www.bioimagingna.org/qc-dm-wg).

The Entity-Relationship formalism can be utilized to model information about a real-world situation or an actual object (in this case a Microscope INSTRUMENT and an IMAGE acquired using that Instrument) by using three types of model

- 1) ENTITIES, represented by Boxes;
- 2) RELATIONSHIPS, represented by blue lines connecting boxes; and
- 3) ATTRIBUTES, represented by fields within boxes

1) ENTITIES correspond to NOUNS = the items we want to collect information about.

3) ATTRIBUTES correspond to ADJECTIVES = they describe the actual information (in our case metadata) that we want to

In order to interpret the schema please start either from the <INSTRUMENT> element for the Microscope Hardware

1) An Instrument has a Microscope Body, might rest on a Microscope Table, utilizes a Light Source and magnifies the

sample using an Objective.

-AnnotationRef, This element always refers to a Comment/Annotation element as described for

- When describing a real-life situation or object:
- 2) RELATIONSHIPS correspond to VERBS = actions/states/occurrences that connect Entities with each other

record about each Entity.

Specifications section of the diagram or from the <IMAGE> element of the Image Acquisition Settings sections. Then | follow the blue lines to the connected boxes and think something like:

2) Alternatively, an Image was produced as part of a specific Experiment, was collected in a specific Imaging Environment and using specific Microscope Settings and has four Channels.

For questions or comments please contact: caterina.strambio@umassmed.edu