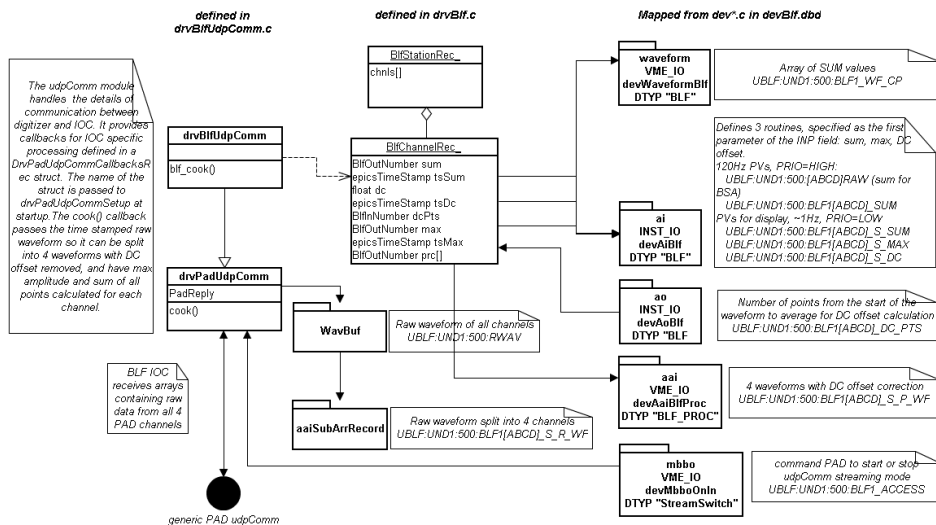


# Beam Loss Fiber

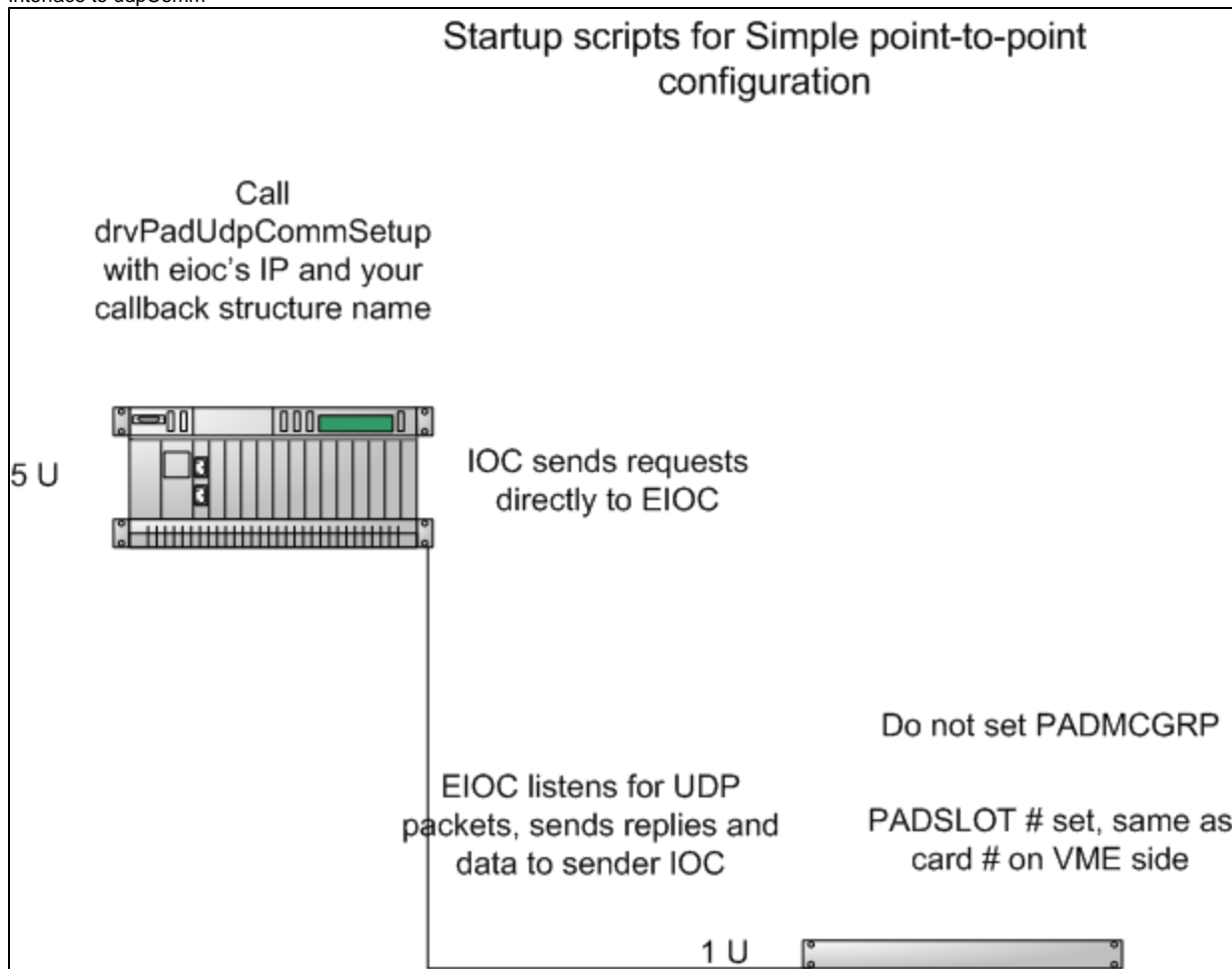
The Beam Loss Fiber is used to identify the location of beam losses. The sensor is similar to the bunch length system, but the Cherenkov sensor is an optical fiber extending the length of the undulator rather than a lucite block. Whereas the bunch length system uses the intensity of the signal from the sensor, the beam loss fiber uses arrival time to deduce the location along the fiber where there is beam loss.

The electronics and software are nearly the same as a bunch length system, as shown in the diagrams below.

Flow of data from udpComm through C code to PVs



Interface to udpComm



Startup scripts for UDP broadcast  
Can be used in a subnet, but spams all hosts  
with requests

Call  
drvPadUdpCommSetup  
with subnet broadcast IP  
(ending in .255) and your  
callback structure name

5 U



IOC sends requests to all  
hosts. Those whose  
PADSLOT match the  
request will respond.



Do not set PADMCGRP

PADSLOT # set, same as  
card # on VME side

EIOC listens for UDP  
packets, sends replies and  
data to sender IOC

1 U



Startup scripts for UDP multicast  
Can be used in a subnet, requests only go to  
EIOCs subscribed to this IOC's multicast  
address

Call  
drvPadUdpCommSetup  
with multicast IP (for  
iochostname-padg) and  
your callback structure  
name

5 U



IOC sends requests  
multicast. Switch forwards  
only to EIOCs subscribed  
to that multicast group  
(iochostname-padg)



PADMCGRP set to  
iochostname-padg

PADSLOT # set, same as  
card # on VME side

EIOC listens only for  
multicast packets, ignores  
broadcasts, sends replies  
and data to sender IOC

1 U

