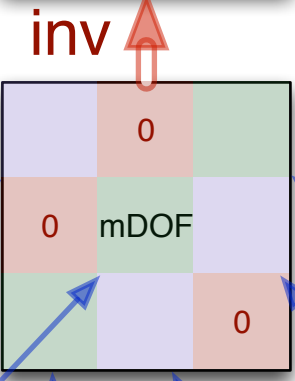
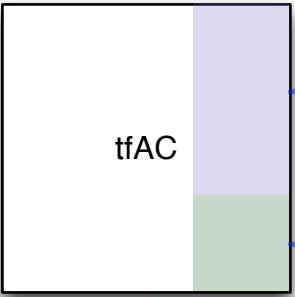


Optickle 1 tickle

- Number Of...**
- Ndrv = drives
 - Nlnk = links
 - Nprb = probes
 - Nrf = RF components
 - Naf = audio frequencies
- $Nfld = Nlnk * Nrf = \text{RF fields}$
 $Narf = 2 * Nfld = \text{audio fields}$
 $Ndof = Narf + Ndrv = \text{DOFs}$

Overall Transfer Matrix

$Ndof \times Ndof$



Overall Scattering Matrix

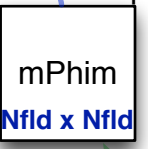
$Ndof \times Ndof$



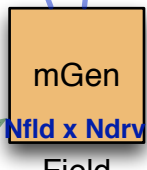
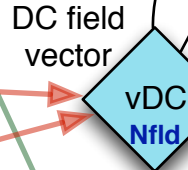
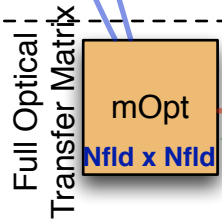
field-to-field

field-to-optic

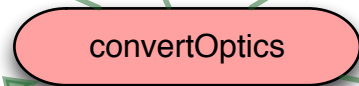
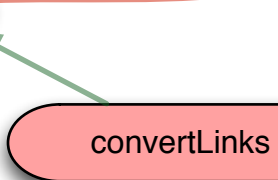
optic-to-field



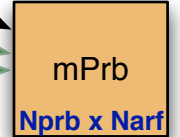
propagation phases



L/c vector



sigAC

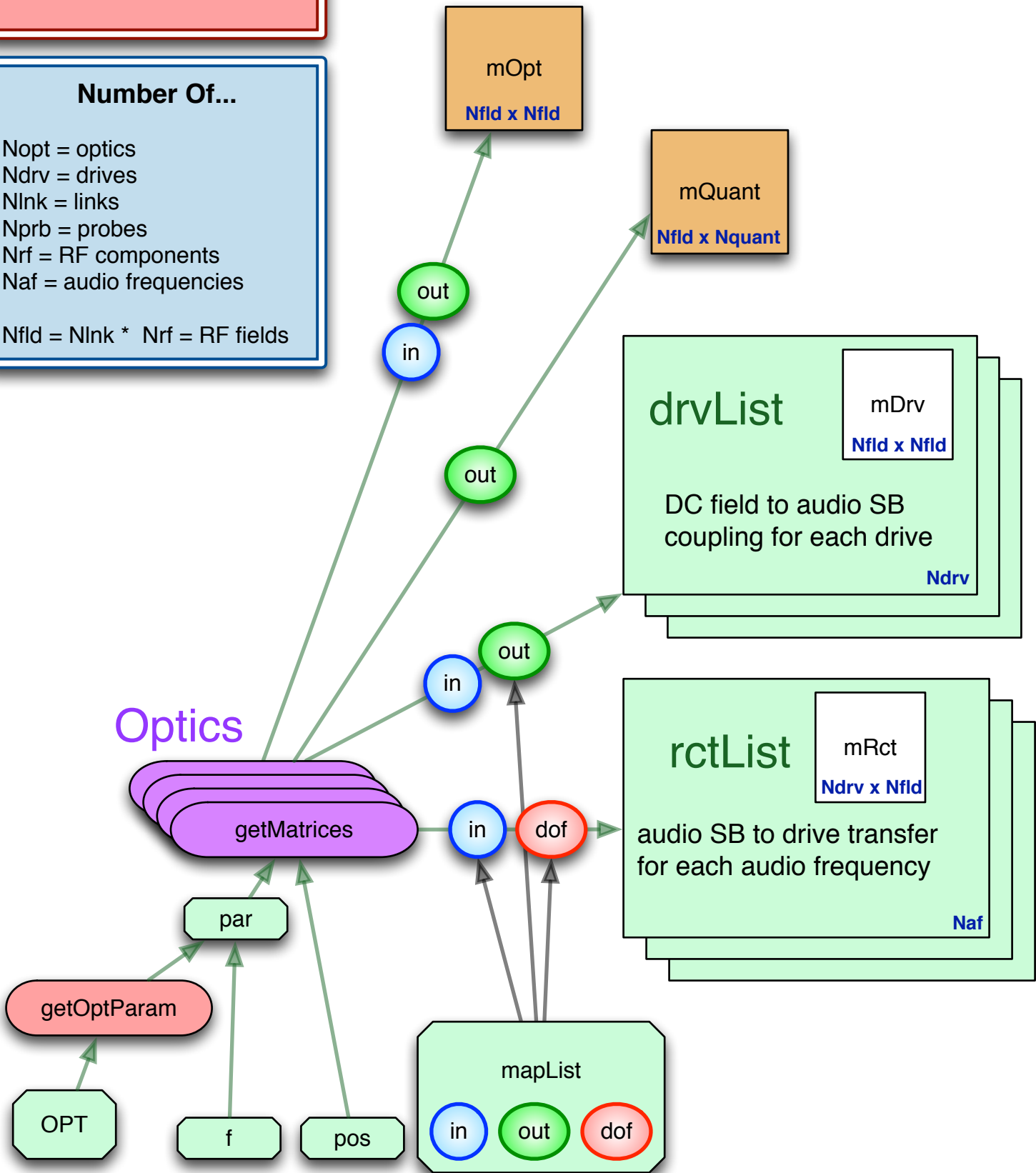


Optickle 1 convertOptics

Number Of...

Nopt = optics
 Ndrv = drives
 Nlnk = links
 Nprb = probes
 Nrf = RF components
 Naf = audio frequencies

Nfld = Nlnk * Nrf = RF fields



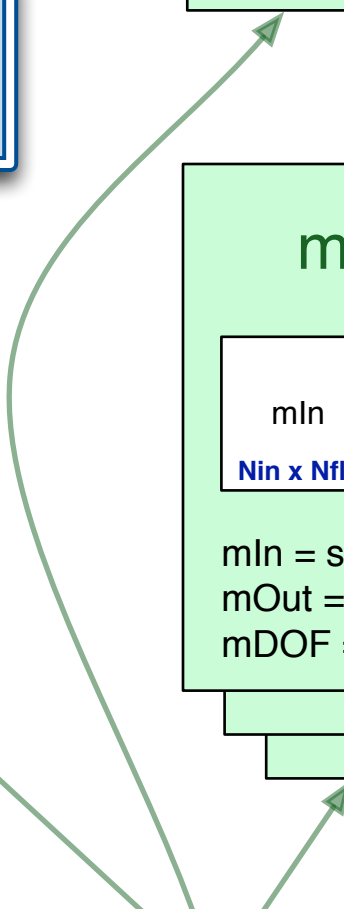
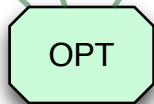
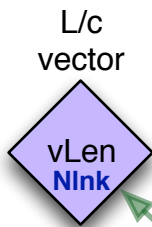
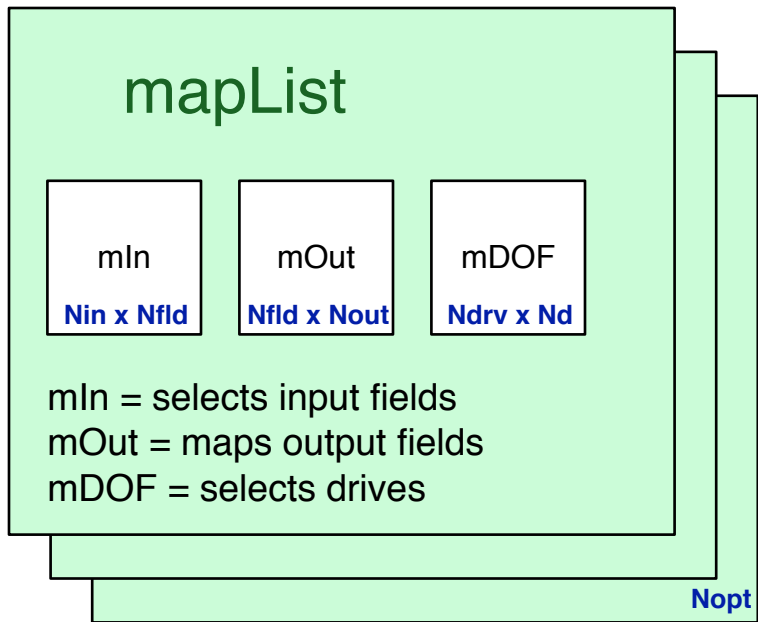
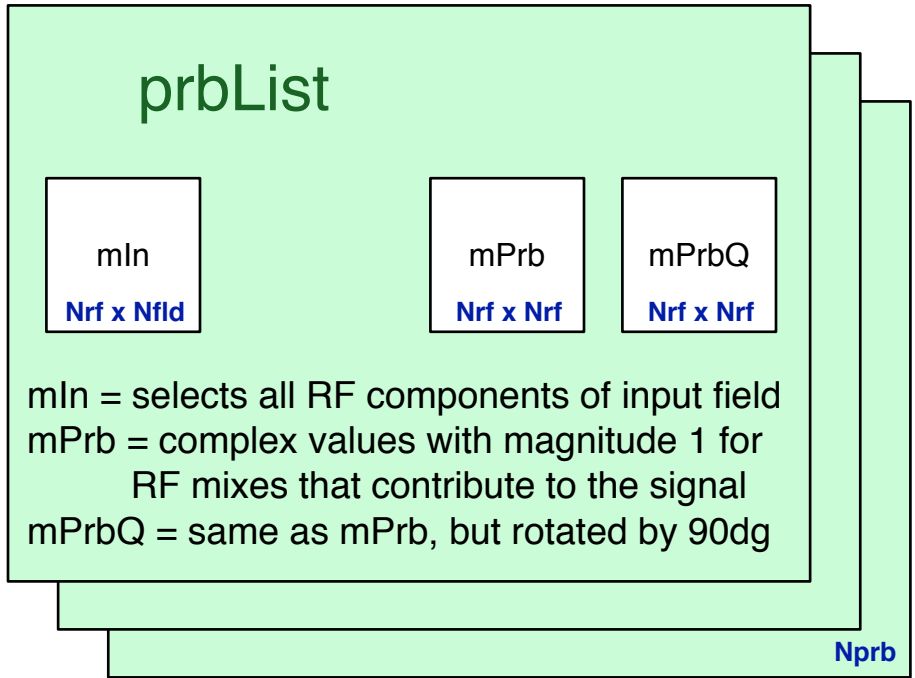
Optickle 1 convertLinks

Number Of...

Nopt = optics
 Ndrv = drives
 Nlnk = links
 Nprb = probes
 Nrf = RF components
 Nfld = Nlnk * Nrf = RF fields

For each optic...

Nin = inputs x Nrf
 Nout = outputs x Nrf
 Nd = drives



Optickle 1 Optic. getMatrices

Number Of...
For each optic...
Nin = inputs x Nrf
Nout = outputs x Nrf
Nd = drives

mRct
Nd x Nin x Naf

Transfer from audio SBs at each input to each drive variable (e.g., via radiation pressure). This is done for each RF component. Optics which do not mix RF components are block diagonal with Nrf blocks.

mDrv
Nout x Nin x Nd

Transfer from drives to audio SBs at each output to due to DC fields at each input. This is done for each RF component. Optics which do not mix RF components are block diagonal with Nrf blocks.

Field transfer from optic inputs to optic outputs. This is done for each RF component. Optics which do not mix RF components are block diagonal with Nrf blocks. mOpt is used to compute DC fields, as well as audio SB transfer.

mOpt
Nout x Nin

Transfer from each independent quantum noise source to audio SBs at each output. This is done for each RF component. Optics which do not mix RF components are block diagonal with Nrf blocks.

mQuant
Nout x Nquant

getFieldMatrix

getReactMatrix

getDriveMatrix

getNoiseMatrix

par

pos

getOptParam

f

