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2. A beam steering apparatus comprising:
- a) a first $N \times M$ array of mirrors, wherein N and M are integers and each mirror in the first array is configured to rotate about a single first axis; and
 - b) a second $N \times M$ array of mirrors, wherein each mirror in the second array is configured to rotate about a single second axis;
- further comprising a column photodetector array, wherein a signal input to the beam steering apparatus may be steered onto any row in said column photodetector array, wherein each mirror in the first or second array may be coupled to a corresponding fiber in an $N \times M$ fiber array.
3. A beam steering apparatus comprising:
- a) a first $N \times M$ array of mirrors, wherein N and M are integers and each mirror in the first array is configured to rotate about a single first axis; and
 - b) a second $N \times M$ array of mirrors, wherein each mirror in the second array is configured to rotate about a single second axis;

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- further comprising a row photodetector array, wherein a signal input to the beam steering apparatus may be steered onto any column in said row photodetector array, wherein each mirror in the first or second array may be coupled to a corresponding fiber in an $N \times M$ fiber array.
4. A beam steering apparatus comprising:
- a) a first $N \times M$ array of mirrors, wherein N and M are integers and each mirror in the first array is configured to rotate about a single first axis; and
 - b) a second $N \times M$ array of mirrors, wherein each mirror in the second array is configured to rotate about a single second axis;
- further comprising a grid photodetector array, wherein a signal input to the beam steering apparatus may be steered onto any row and column in said photodetector array, wherein each mirror in the first or second array may be coupled to a corresponding fiber in an $N \times M$ fiber array.

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