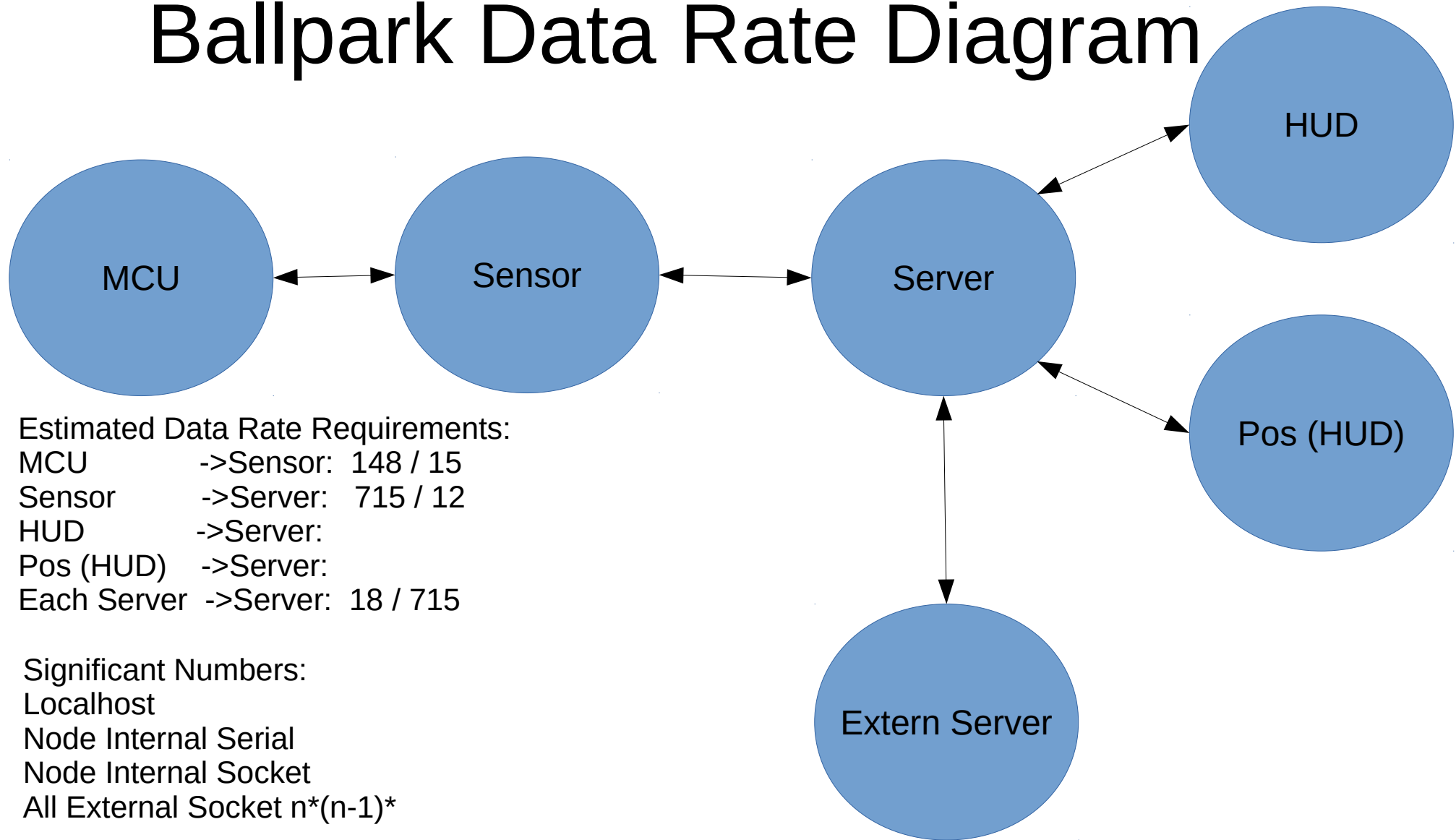


Ballpark Data Rate Diagram



Key:

Rate Units:

[Up/Down] (Bytes/Sec) * (Refresh Rate)

Expansion Scaling:

s → Number of Serial Sensor MCU Node Per Node

n → Number of Nodes Total

Example Strings:

MCU->Sensor:

```
{"all_data":1}  
{"sonic_us":[0],"pressure_bits":[617],"battery_bits":[671],"acc_g":[1.00,0.08,0.02],"velocity_ms":[0.02],"dist_mm":[0.00],"compass_degN":[110.30]}  
148/15
```

Sensor->Server

```
{"update_user": {"name": "Dummy",  
  "markerStruct": {"paint_level_full": 100, "tank_pressure": 0, "last_modify": "eus 2016-03-01 14:03:30.339000", "paint_level": 0,  
    "batteries": [0], "first_modify": "eus 2016-03-01 14:03:30.339000"}, "last_modify": "eus 2016-03-01 14:03:36.950000", "uid": 0,  
  "posStruct": {"altitude": 0, "long": "", "planet": "earth", "last_modify": "eus 2016-03-01 14:03:30.339000",  
    "lat": "", "heading": 0, "first_modify": "eus 2016-03-01 14:03:30.339000"},  
  "scanStruct": {"last_modify": "eus 2016-03-01 14:03:30.339000",  
    "pointStruct": {"O": {"y": 0.0, "x": 0.0, "deg_N": 0.0, "dist_m": 0.0}},  
    "first_modify": "eus 2016-03-01 14:03:30.339000"}, "first_modify": "eus 2016-03-01 14:03:30.359000"}  
}  
{"ME": 118}  
715/12
```

HUD->Server

Pos (HUD)->Server

Extern Server->Server

```
{"get_user": 312}  
{"update_user": {"name": "Dummy",  
  "markerStruct": {"paint_level_full": 100, "tank_pressure": 0, "last_modify": "eus 2016-03-01 14:03:30.339000", "paint_level": 0,  
    "batteries": [0], "first_modify": "eus 2016-03-01 14:03:30.339000"}, "last_modify": "eus 2016-03-01 14:03:36.950000", "uid": 0,  
  "posStruct": {"altitude": 0, "long": "", "planet": "earth", "last_modify": "eus 2016-03-01 14:03:30.339000",  
    "lat": "", "heading": 0, "first_modify": "eus 2016-03-01 14:03:30.339000"},  
  "scanStruct": {"last_modify": "eus 2016-03-01 14:03:30.339000",  
    "pointStruct": {"O": {"y": 0.0, "x": 0.0, "deg_N": 0.0, "dist_m": 0.0}},  
    "first_modify": "eus 2016-03-01 14:03:30.339000"}, "first_modify": "eus 2016-03-01 14:03:30.359000"}  
}
```

(Up/Down) Bytes/Sec * (Refresh Rate)