

FRC: Network Tables

AdvantageKit Sources

AdvantageKit/Timestamp Long

AdvantageKit/Drive

```
  Gyro
    └── OdometryYawPositions Roatation2d[]
    └── OdometryYawTimestamps double[]
    └── YawPosition Roatation2d
  Module0
    ├── OdometryDrivePositionsRad
    ├── OdometryTimestamps double[]
    ├── OdometryTurnPositions Roatation2d[]
    ├── TurnAbsolutePosition Roatation2d
    └── TurnPosition Roatation2d
```

AdvantageKit/DriverStation

```
  AllianceStation boolean
  AllianceStation int
  DSAttached boolean
  EmergencyStop boolean
  Enabled boolean
  EventName String
  FMSAttached String
  Joystick0
    ├── AxisTypes Joystick Axis Mapping
    ├── AxisValues Joystick Axis Type
    ├── ButtonValues Button State (Bitmask)
    ├── POVs D-Pad Actions (Angle)
    └── Type Controller Type (Enum)
  Joystick1
  Joystick2
  Joystick3
  Joystick4
  Joystick5
  MatchNumber int
  MatchTime int
  MatchType int
  ReplayNumber int
  Test boolean
```

AdvantageKit/NetworkInputs

```
  SmartDashboard
```

AdvantageKit/PowerDistribution

```
  ChannelCount int
  Faults int
  StickyFaults int
  Temperature float
  TotalCurrent float
  TotalEnergy float
  TotalPower float
  Voltage float
```

AdvantageKit/RadioStatus

```
  Connected boolean
  Status JSON
```

AdvantageKit/RealOutputs

```
  Alerts
  Console text
  LoggedRobot
    ├── FullCycleMS float
    ├── GCCounts int
    ├── GCTimeMS float
    ├── LogPeriodicMS float
    └── UserCodeMS float
  Logger
    ├── AlertLogMS float
    ├── AutoLogMS float
    ├── ConduitCaptureMS float
    ├── ConduitSaveMS float
    ├── ConsoleMS float
    ├── DashboardInputsMS float
    ├── DriverStationMS float
    ├── EntryUpdateMS float
    ├── QueuedCycles int
    └── RadioLogMS float
  Odometry
    └── Robot Pose2d
  PathPlanner Alerts
  SwerveChassisSpeeds
    ├── Measured ChassisSpeeds
    └── Setpoints ChassisSpeeds
  SwerveStates
    ├── Measured SwerveModuleState[]
    ├── SetpointsOptimized SwerveModuleState[]
    └── Setpoints SwerveModuleState[]
```

AdvantageKit/SystemStats

```
  3v3Rail
    ├── Active boolean
    ├── CurrentFaults int
    ├── Current float
    └── Voltage float
  5vRail
    ├── Active boolean
    ├── CurrentFaults int
    ├── Current float
    └── Voltage float
  6vRail
    ├── Active boolean
    ├── CurrentFaults int
    ├── Current float
    └── Voltage float
  BatteryCurrent float
  BatteryVoltage float
  BrownedOut boolean
  BrownoutVoltage float
  CANBus
    ├── OffCount int
    ├── ReceiveErrorCount int
    ├── TransmitErrorCount int
    ├── TxFullCount int
    └── Utilization float
  Comments
  CommsDisableCount int
  CPU(TempCelcius int
  EpochTimeMicros Long
  FPGAButton boolean
  FPGARevision int
  FPGAVersion int
  NTClients
    ├── AdvantageScope@1
    │   ├── Connected boolean
    │   ├── IPAddress String 127.0.0.1
    │   ├── Port int
    │   └── ProtocolVersion int
    └── Elastic@2
      ├── Connected boolean
      ├── IPAddress String 127.0.0.1
      ├── Port int
      └── ProtocolVersion int
  RSLState boolean
  SerialNumber String
  SystemActive boolean
  SystemTimeValid boolean
  TeamNumber int
```

Note: data types were manually entered and could differ from WPILib or AdvantageKit

Dashboard & Misc Sources

PathPlanner

```
  activePath Pose2d
  Alerts Alerts
  currentPose Pose2d
  targetPose Pose2d
  vel float
```

Shuffleboard

```
  .metadata
  .recording
```

SmartDashboard

```
  Alerts Alerts
  Auto Choices
  └── active
  └── default
    └── options
      ├── 0 None
      ├── 1 Example Auto
      ├── 2 Drive Wheel Radius Characterization
      ├── 3 Drive Simple FF Characterization
      ├── 4 Drive SysId (Quasistatic Forward)
      ├── 4 Drive SysId (Quasistatic Reverse)
      ├── 7 Drive SysId (Dynamic Forward)
      └── 7 Drive SysId (Dynamic Reverse)
  PathPlanner Alerts
```

FMSInfo

```
  EventName String
  FMSControlData int
  GameSpecificMessage String
  IsRedAlliance boolean
  MatchNumber int
  MatchType enum
  ReplayNumber int
  StationNumber int
```

LiveWindow

```
  └── .status
    └── LW Enabled boolean
```

Photonvision Sources

```
AdvantageKit/RealOutputs
└── PhotonAlerts Alerts
    └── Vision
        ├── Camera0
        │   ├── RobotPosesAccepted Pose3d[]
        │   ├── RobotPoses Pose3d[]
        │   ├── RobotPosesRejected Pose3d[]
        │   └── TagPoses Pose3d[]
        └── Summary
            ├── RobotPosesAccepted Pose3d[]
            ├── RobotPoses Pose3d[]
            ├── RobotPosesRejected Pose3d[]
            └── TagPoses Pose3d[]

AdvantageKit/Vision
└── Camera0
    ├── LatestTargetObservation TargetObservation
    ├── PoseObservations PoseObservation[]
    └── TagIds

CameraPublisher
└── camera_1-processed
    ├── connected boolean
    ├── description String
    ├── mode 960x720 MJPEG 30 fps
    ├── modes String[]
    ├── source cv:
    └── streams
        └── 0 mjpg:http://
            └── hostname.local:1182
                └── /?action=stream
    camera_1-raw
    ├── connected boolean
    ├── description String
    ├── mode 960x720 MJPEG 30 fps
    ├── modes
    ├── modes String[]
    ├── source cv:
    └── streams
        └── 0 mjpg:http://
            └── hostname.local:1181
                └── /?action=stream

/photonvision/camera_1/cameraDistortion is either double[5] or double[8]
/photonvision/camera_1/cameraIntrinsics is double[9], a *3x3 matrix *

photonvision
└── camera_1
    ├── cameraDistortion Lens Model Distortion Coefficients
    ├── cameraIntrinsics double[9] OpenCV Camera Calibration Intrinsics
    ├── driverMode boolean
    ├── driverModeRequest boolean
    ├── fps double
    ├── fpsLimit int
    ├── fpsLimitRequest int
    ├── hasTarget boolean
    ├── heartbeat int
    ├── latencyMillis double
    ├── pipelineIndexRequest int
    ├── pipelineIndexState int
    ├── rawBytes bytes[]
    ├── result_proto PhotonPipelineResult
    ├── targetPixelsX double
    ├── targetPixelsY double
    ├── targetPose double[] Transform3d
    ├── targetSkew double
    └── targetYaw double Rotation2d
    ledModeRequest int

SmartDashboard
└── PhotonAlerts Alerts
    └── VisionSystemSim-main
        └── Sim Field
            ├── apriltag double[32*3]
            ├── cameras double[3]
            ├── Robot double[3]
            └── visibleTargetPoses
```