

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
- └ CPUTempCelcius 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 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
```

/photonvision/camera_1/cameraDistortion is either double[5] or double[8]

/photonvision/camera_1/cameraIntrinsics is double[9], a *3x3 matrix *