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| **Common** | | | |
| **Proto super-file** | **Proto sub-files** | **Super-message** | **Sub-message** |
| header.proto | error\_code.proto | Header | StatusPb |
| monitor\_log.proto | header.proto | MonitorMessage | Header |
| vehicle\_config.proto | 1.header.proto  2.geometry.proto | Transform | Point3D(2)  Quaternion(2) |
| VehicleConfig | Header(1) |
| monitor\_log.proto | header.proto | MonitorMessage | Header |
| car\_sound.proto | header.proto | SoundRequest | Header |
| drive\_event.proto | 1.header.proto  2.pose.proto | DriveEvent | Header(1)  Pose(2) |
| gnss\_status.proto | header.proto | StreamStatus | Header |
| InsStatus | Header |
| GnssStatus | Header |
| vehicle\_state.proto | 1.chassis.proto  2.pose.proto | VehicleState | GearPosition(1)  DrivingMode(1)  Pose(2) |

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| **Control** | | | |
| **Proto super-file** | **Proto sub-files** | **Super-message** | **Sub-message** |
| control\_cmd.proto | 1.chassis.proto  2.header.proto  3.vehicle\_signal.proto  4.pad\_msg.proto  5.drive\_state.proto | ControlCommand | Header(2)  DrivingMode(1)  GearPosition(1)  VehicleSignal(3)  PadMessage(4)  EngageAdvice(5)  TurnSignal(3) |
| InputDebug | Header(2) |
| control.proto | 1.chassis.proto  2.pad\_msg.proto  3.lat\_controller\_conf.proto  4.lon\_controller\_conf.proto  5.mpc\_controller\_conf.proto | ControlConf | DrivingMode(1)  DrivingAction(2)  LatControllerConf(3)  LonControllerConf(4)  MPCControllerConf(5) |
| lat\_controller\_conf.proto | gain\_scheduler\_conf.proto | LatControllerConf | GainScheduler |
| lon\_controller\_conf.proto | 1.calibration\_table.proto  2.pid\_conf.proto | LonControllerConf | PidConf(2)  ControlCalibrationTable(1) |
| mpc\_controller\_conf.proto | 1.calibration\_table.proto  2.gain\_scheduler\_conf.proto | MPCControllerConf | GainScheduler(2)  ControlCalibrationTable(1) |
| pad\_msg.proto | 1.chassis.proto  2.header.proto | PadMessage | DrivingMode(1)  Header(2) |

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| **Drivers** | | | |
| **Proto super-file** | **Proto sub-files** | **Super-message** | **Sub-message** |
| sensor\_canbus\_conf.proto | can\_card\_parameter.proto | SensorCanbusConf | CANCardParameter |
| conti\_radar\_conf.proto | can\_card\_parameter.proto | CanConf | CANCardParameter |
| gnss.proto | 1.header.proto  2.geometry.proto | Gnss | Header(1)  PointLLH(2)  Point3D(2) |
| GnssRange | Header(1) |
| gnss\_best\_pose.proto | header.proto | GnssBestPose | Header |
| gnss\_status.proto | header.proto | StreamStatus | Header |
| InsStatus | Header |
| GnssStatus | Header |
| imu.proto | 1.header.proto  2.geometry.proto | Imu | Header(1)  Point3D(2) |
| ins.proto | 1.header.proto  2.geometry.proto | InsStat | Header(1) |
| Ins | Header(1)  PointLLH(2)  Point3D(2) |
| conti\_radar.proto | 1.header.proto  2.conti\_radar\_conf.proto | RadarState\_201 | OutputType(2)  RcsThreshold(2) |
| ContiRadarObs | Header(1) |
| ContiRadar | Header(1) |
| delphi\_esr.proto | header.proto | DelphiESR | Header |
| mobileye.proto | header.proto | Mobileye | Header |

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| **Dreamview** | | | |
| **Proto super-file** | **Proto sub-files** | **Super-message** | **Sub-message** |
| hmi\_status.proto | system\_status.proto | HMIStatus | SystemStatus |
| simulation\_world.proto | 1.monitor\_log.proto  2.planning\_internal.proto | SimulationWorld | MonitorMessage(1)  PlanningData(2) |

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| **Monitor** | | | |
| **Proto super-file** | **Proto sub-files** | **Super-message** | **Sub-message** |
| monitor\_conf.proto | adapter\_config.proto | TopicConf | MessageType |
| online\_report.proto | 1.vehicle\_state.proto  2.static\_info.proto | VehicleStateReport | VehicleInfo(2)  VehicleState(1) |
| system\_status.proto | 1.header.proto  2.monitor\_conf.proto | SystemStatus | Header(1) |
| ModuleStatus | ProcessStatus(2)  TopicStatus(2) |

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| **Localization** | | | |
| **Proto super-file** | **Proto sub-files** | **Super-message** | **Sub-message** |
| gnss\_pnt\_result.proto | gnss\_raw\_observation.proto | GnssPntResult | GnssTimeType |
| gps.proto | 1.header.proto  2.pose.proto | Gps | Header(1)  Pose(2) |
| imu.proto | 1.header.proto  2.pose.proto | Imu | Header(1)  Pose(2) |
| localization.proto | 1.header.proto  2.pose.proto  3.geometry.proto  4.pnc\_point.proto | Uncertainty | Point3D(3) |
| LocalizationEstimate | Header(1)  Pose(2)  TrajectoryPoint(4) |
| LocalizationStatus | Header(1) |
| measure.proto | 1.header.proto  2.geometry.proto | IntegMeasure | Header(1)  Point3D(2) |
| pose.proto | geometry.proto | Pose | PointENU  Quaternion  Point3D |
| sins\_pva.proto | 1.header.proto  2.geometry.proto | IntegSinsPva | Header(1)  PointLLH(2)  Point3D(2) |

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| **Perception** | | | |
| **Proto super-file** | **Proto sub-files** | **Super-message** | **Sub-message** |
| data\_generator.proto | geometry.proto | DataGeneratorObstacle | Point2D  Point3D |
| perception\_map\_roi.proto | 1.header.proto  2.map.proto | PerceptionMapROI | Header(1)  Header(2) |
| perception\_obstacle.proto | 1.error\_code.proto  2.header.proto | PerceptionObstacles | Header(2)  ErrorCode(1) |
| traffic\_light\_detection.proto | header.proto | TrafficLightDetection | Header |

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| **Planning** | | | |
| **Proto super-file** | **Proto sub-files** | **Super-message** | **Sub-message** |
| decision.proto | 1.geometry.proto  2.vehicle\_signal.proto  3.routing.proto | ObjectStop | PointENU(1) |
| ObjectYield | PointENU(1) |
| ObjectFollow | PointENU(1) |
| ObjectOvertake | PointENU(1) |
| MainStop | PointENU(1)  ChangeLaneType(3) |
| MainCruise | ChangeLaneType(3) |
| MainMissionComplete | PointENU(1) |
| MainDecision | VehicleSignal(2) |
| dp\_st\_speed\_config.proto | st\_boundary\_config.proto | DpStSpeedConfig | StBoundaryConfig |
| lattice\_structure.proto | 1.pnc\_point.proto  2.lattice\_sampling\_config.proto | DiscretizedReferenceLine | PathPoint(1) |
| SampleBound | LatticeSamplingConfig(2) |
| planning.proto | 1.header.proto  2.vehicle\_signal.proto  3.drive\_state.proto  4.pnc\_point.proto  5.chassis.proto  6.map\_id.proto  7.decision.proto  8.planning\_internal.proto | ADCTrajectory | Header(1)  TrajectoryPoint(4)  PathPoint(4)  GearPosition(5)  DecisionResult(7)  Debug(8)  VehicleSignal(2)  Id(6)  EngageAdvice(3) |
| planning\_config.proto | 1.dp\_poly\_path\_config.proto  2.dp\_st\_speed\_config.proto  3.qp\_spline\_path\_config.proto  4.qp\_st\_speed\_config.proto  5.poly\_st\_speed\_config.proto | EMPlannerConfig | DpPolyPathConfig(1)  DpStSpeedConfig(2)  QpSplinePathConfig(3)  QpStSpeedConfig(4)  PolyStSpeedConfig(5) |
| planning\_internal.proto | 1.header.proto  2.chassis.proto  3.pnc\_point.proto  4.localization.proto  5.routing.proto  6.traffic\_light\_detection.proto  7.sl\_boundary.proto  8.decision.proto | SpeedPlan | SpeedPoint(3) |
| StGraphBoundaryDebug | SpeedPoint(3) |
| STGraphDebug | SpeedPoint(3) |
| DecisionTag | ObjectDecisionType(8) |
| ObstacleDebug | SLBoundary(7) |
| SampleLayerDebug | SLPoint(3) |
| DpPolyGraphDebug | SLPoint(3) |
| PlanningData | LocalizationEstimate(4)  Chassis(2)  RoutingResponse(5)  TrajectoryPoint(3)  Path(3)  Header(1) |
| CloudReferenceLineRequest | LaneSegment(5) |
| CloudReferenceLineRoutingRequest | RoutingResponse(5) |
| SignalLightDebug | Color(6) |
| poly\_st\_speed\_config.proto | st\_boundary\_config.proto | PolyStSpeedConfig | StBoundaryConfig |
| qp\_st\_speed\_config.proto | st\_boundary\_config.proto | QpStSpeedConfig | StBoundaryConfig |

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| **Prediction** | | | |
| **Proto super-file** | **Proto sub-files** | **Super-message** | **Sub-message** |
| feature.proto | 1.lane\_graph.proto  2.geometry.proto  3.perception\_obstacle.proto | Feature | Point3D(2)  PerceptionObstacle(3)  LaneGraph(1) |
| fnn\_vehicle\_model.proto | fnn\_model\_base.proto | FnnVehicleModel | Layer |
| lane\_graph.proto | geometry.proto | LanePoint | Point3D |
| network\_model.proto | network\_layers.proto | VerificationSample | TensorParameter |
| offline\_feature.proto | feature.proto | Features | Feature |
| Prediction\_conf.proto | perception\_obstacle.proto | ObstacleConf | Type |
| prediction\_obstacle.proto | 1.error\_code.proto  2.header.proto  3.pnc\_point.proto  4.perception\_obstacle.proto | Trajectory | TrajectoryPoint(3) |
| PredictionObstacle | PerceptionObstacle(4) |
| PredictionObstacles | Header(2)  ErrorCode(1) |

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| **Routing** | | | |
| **Proto super-file** | **Proto sub-files** | **Super-message** | **Sub-message** |
| poi | routing | Landmark | LaneWaypoint |
| routing.proto | 1.header.proto  2.geometry.proto  3.error\_code.proto | LaneWaypoint | PointENU(2) |
| RoutingRequest | Header(1) |
| RoutingResponse | Header(1)  StatusPb(3) |
| topo\_graph.proto | map\_geometry.proto | Node | Curve |

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| **Map** |  |  |  |
| **Proto super-file** | **Proto sub-files** | **Super-message** | **Sub-message** |
| map.proto | 1.map\_clear\_area.proto  2.map\_crosswalk.proto  3.map\_junction.proto  4.map\_lane.proto  5.map\_overlap.proto  6.map\_signal.proto  7.map\_speed\_bump.proto  8.map\_stop\_sign.proto  9.map\_yield\_sign.proto  10.map\_road.proto | Map | Crosswalk(2)  Junction(3)  Lane(4)  StopSign(8)  Signal(6)  YieldSign(9)  Overlap(5)  ClearArea(1)  SpeedBump(7)  Road(10) |
| map\_clear\_area.proto | 1.map\_id.proto  2.map\_geometry.proto | ClearArea | Id(1)  Polygon(2) |
| map\_crosswalk.proto | 1.map\_id.proto  2.map\_geometry.proto | Crosswalk | Id(1)  Polygon(2) |
| map\_geometry.proto | geometry.proto | Polygon | PointENU |
| LineSegment | PointENU |
| CurveSegment | PointENU |
| map\_junction.proto | 1.map\_id.proto  2.map\_geometry.proto | Junction | Id(1)  Polygon(2) |
| map\_lane.proto | 1.map\_id.proto  2.map\_geometry.proto | LaneBoundary | Curve(2) |
| Lane | Curve(2)  Id(1) |
| map\_overlap.proto | map\_id.proto | Overlap | Id |
| map\_road.proto | 1.map\_id.proto  2.map\_geometry.proto | BoundaryEdge | Curve(2) |
| RoadROIBoundary | Id(1) |
| Road | Id(1) |
| map\_signal.proto | 1.map\_id.proto  2.map\_geometry.proto  3.geometry.proto | Subsignal | Id(1)  PointENU(3) |
| Signal | Id(1)  Polygon(2)  Curve(2) |
| map\_speed\_bump.proto | 1.map\_id.proto  2.map\_geometry.proto | SpeedBump | Curve(2)  Id(1) |
| map\_stop\_sign.proto | 1.map\_id.proto  2.map\_geometry.proto | StopSign | Curve(2)  Id(1) |
| map\_yield\_sign.proto | 1.map\_id.proto  2.map\_geometry.proto | YieldSign | Curve(2)  Id(1) |