Symbol	Name	Class Name	Typedef	Base Class
$\mathbf{q} \in \mathbb{R}^{DOF}$	Joint Position	JointPosition	JPos	VectorDof
$\dot{\mathbf{q}} \in \mathbb{R}^{DOF}$	Joint Velocity	JointVelocity	JVel	VectorDof
$\ddot{\mathbf{q}} \in \mathbb{R}^{DOF}$	Joint Acceleration	JointAcceleration	JAcc	VectorDof
$\boldsymbol{\tau}_{\mathrm{q}} \in \mathbb{R}^{DOF}$	Joint Effort	JointEffort	JTorque	VectorDof
$\mathbf{x} \in \mathbb{R}^{3}$	Linear Position	LinearPosition	LPos	Vector3
$\dot{\mathbf{x}} \in \mathbb{R}^{3}$	Linear Velocity	LinearVelocity	LVel	Vector3
$\ddot{\mathbf{x}} \in \mathbb{R}^{3}$	Linear Acceleration	LinearAcceleration	LAcc	Vector3
$\mathbf{Q} \in \mathbb{H}$	Angular Position	AngularPosition	APos	Quaternion
$\boldsymbol{\omega} \in \mathbb{R}^{3}$	Angular Velocity	AngularVelocity	AVel	Vector3
$\boldsymbol{\alpha} = \dot{\boldsymbol{\omega}} \in \mathbb{R}^{3}$	Angular Acceleration	AngularAcceleration	AAcc	Vector3
$\mathbf{X} = [\mathbf{x}, \mathbf{Q}] \in \mathbb{R}^{7}$	Cartesian Position	CartesianPosition	CPos	Vector7
$\dot{\mathbf{X}} = [\dot{\mathbf{x}}, \boldsymbol{\omega}] \in \mathbb{R}^{6}$	Cartesian Velocity	CartesianVelocity	CVel	Vector6
$\ddot{\mathbf{X}} = [\ddot{\mathbf{x}}, \boldsymbol{\alpha}] \in \mathbb{R}^{6}$	Cartesian Acceleration	CartesianAcceleration	CAcc	Vector6
$\mathbf{T} \in \mathbb{R}^{4 \times 4}$	Homogeneous Transformation	HomogeneousTransformation	HTf	Transform3
$\mathbf{f} \in \mathbb{R}^{3}$	Force	Force	Force	Vector3
$\boldsymbol{\mu} \in \mathbb{R}^{3}$	Moment	Moment	Moment	Vector3
$\mathbf{W} = [\mathbf{f}, \boldsymbol{\mu}] \in \mathbb{R}^{6}$	Wrench	Wrench	Wrench	Vector6
$\mathbf{FT} = \mathbf{W} = [\mathbf{f}, \boldsymbol{\mu}] \in \mathbb{R}^{6}$	Force Torque Sensor	ForceTorqueSensor	FTSensor	Wrench
$\mathbf{IMU} = [\ddot{\mathbf{x}}, \mathbf{Q}, \boldsymbol{\omega}]$	Inertial Measurement Unit Sensor	ImuSensor	ImuSensor	[LAcc, APos, AVel]
$\mathbf{p} \in \mathbb{R}^{3}$	Zero Moment Point (ZMP)	ZeroMomentPoint	Zmp	LinearPosition
$\dot{\mathbf{p}} \in \mathbb{R}^{3}$	ZMP Velocity	ZeroMomentPointP	ZmpP	LinearVelocity
$\ddot{\mathbf{p}} \in \mathbb{R}^{3}$	ZMP Acceleration	ZeroMomentPointPP	ZmpPP	LinearAcceleration
$\boldsymbol{\zeta} \in \mathbb{R}^{3}$	Divergent Component of Motion (DCM)	DivergentComponentOfMotion	Dcm	LinearPosition
$\dot{\boldsymbol{\zeta}} \in \mathbb{R}^{3}$	DCM Velocity	DivergentComponentOfMotionP	DcmPP	LinearVelocity
$\ddot{\boldsymbol{\zeta}} \in \mathbb{R}^{3}$	DCM Acceleration	DivergentComponentOfMotionPP	DcmPP	LinearAcceleration
$\mathbf{r}_i \in \mathbb{R}^{3}$	Virtual Repellent Point (VRP)	VirtualRepellentPoint	Vrp	LinearPosition
$\boldsymbol{\zeta}_i \in \mathbb{R}^{3}$	DCM way point (DCMWP)	DcmWayPoint	DcmWp	LinearPosition
$\boldsymbol{\zeta}_{\mathrm{DS,ini},i} \in \mathbb{R}^{3}$	Initial double support way point for the DCM	DcmDoubleSupportInitialWayPoint	DcmDsIWp	LinearPosition
$\boldsymbol{\zeta}_{\mathrm{DS,final},i} \in \mathbb{R}^{3}$	Final double support way point for the DCM	DcmDoubleSupportFinalWayPoint	DcmDsFWp	LinearPosition
$\dot{\boldsymbol{\zeta}}_{\mathrm{DS,ini},i} \in \mathbb{R}^{3}$	Velocity of the initial double support way point for the DCM	DcmDoubleSupportInitialWayPointP	DcmDsIWpP	LinearVelocity
$\dot{\boldsymbol{\zeta}}_{\mathrm{DS,final},i} \in \mathbb{R}^{3}$	Velocity of the final double support way point for the DCM	DcmDoubleSupportFinalWayPointP	DcmDsFWpP	LinearVelocity
$\mathbf{DCMPS} = \left[\mathbf{r}_i, \boldsymbol{\zeta}_i, \boldsymbol{\zeta}_{\mathrm{DS,ini},i}, \boldsymbol{\zeta}_{\mathrm{DS,final},i}, \dot{\boldsymbol{\zeta}}_{\mathrm{DS,ini},i}, \dot{\boldsymbol{\zeta}}_{\mathrm{DS,final},i}\right]$	DCM Point Set	DcmPointSet	DcmPs	[Vrp, DcmWp, DcmDsIWp, DcmDsFWp, DcmDsIWpP, DcmDsFWpP]
$\mathbf{X}_{\mathrm{FS},i} \in \mathbb{R}^{7}$	Foot Step Cartesian Position	FootStepCartesianPosition	FsCPos	CartesianPosition
$l_i \in \{\mathrm{L}, \mathrm{R}\}$	Leg Identifier (Left/Right leg)	FootStepLegIdentifier	FsLId	LegIdentifier
$s_i \in \{0, 1\}$	Foot Step End Flag	FootStepEndFlag	FsEndF	bool
$n_i \in \mathbb{R}_0^{+}$	Foot Step Number	FootStepNumber	FsNum	unsigned int
$\mathbf{FS} = \left[\mathbf{X}_{\mathrm{FS},i}, l_i, s_i, n_i\right]$	Foot Step	FootStep	Fs	[FsCPos, FsLId, FsEndF, FsNum]