# bus\_link

2019 / Tokyo

### **Overview**

Link data of Tokyo bus network.

#### License

Use is permitted only for the 2025 Summer Course on Behavior Modeling in Transportation Networks.

## **Data Column Specification**

Column Name	Data Type	Description
LinkID	Int64	Link Number the 10000000s: Walking Link (DRM) the 20000000s: Railroad Link the 30000000s: Bus Link the 40000000s: Railroad Station Walking NW Connector the 50000000s: Bus Stop Walking NW Connector the 100000000s: Walking Link (Toyosu Detailed Network)
route ID	Int64	Route number
operator name	String	For bus links, enter the bus operator's name. For rail links, enter the rail operator's name. For walking links, enter expressway, national highway, prefectural road, city road, or other. For car links, enter the road type in the first digit and the road administrator in the tenth digit.
route name	String	For buses, route number For trains, railway line name For roads, road line name For car links, route number
link type code	Int64	1: Walking Link (W) DRM Walking DRM links within the Toyosu area are set to 0 with directional restrictions. 2: Railroad Link (R) 3: Bus Link (B) 10: Toyosu Pedestrian Link (WD)

Column Name	Data Type	Description
		11: Walking Link Mesh Connector Link (WW) Set between DRM boundary nodes 13: Walking Link Toyosu Detailed Net and DRM Connector Link (WDW) 14: Toyosu Station Link (WT) 21: Walking to Railroad Station Connector Link (RC_ON) Basic fee charged, waiting time required 22: Railroad Station to Walking Connector Link (RC_OFF) No basic fee charged, no waiting time 23: Station to Railroad Transfer Link (TS_ON) No basic fee charged, waiting time required 31: Walking to Bus Stop Connector Link (BC_ON) Basic fee charged, waiting time required 32: Bus Stop to Walking Connector Link (BC_OFF) No basic fee charged, no waiting time
link type	String	Name corresponding to link type code Example) If the link type code is 1W
morning service interval (min)	Int64	Enter the interval in minutes
daytime service interval (min)	Int64	Enter the interval in minutes
holiday service interval (min)	Int64	Enter the interval in minutes
speed (km/h)	Float64	Link's movement speed
length (km)	Float64	Link length
direction restrictions	String	One-way link or two-way link 0: No access 1: Two-way link 2: One-way link (from source node to destination node) 3: One-way link (from destination node to source node)
turn restrictions	Int64	If the direction link for link A is link B, and the product of the turn restriction values for link A and link B is 4, then the turn restriction
fare code	Int64	0: No charge link 1: 1 or more charge link See price code table
Fare system	Int64	See the fee code table
Base fare	Int64	See the fee code table

Column Name	Data Type	Description
Distance-based fare	Float64	See the fee code table
Pavement structure code	Int64	0: Unknown Designated outside Toyosu 1: Crosswalk 2: Crossing link without crosswalk 3: Pedestrian bridge 4: Inside station 5: Underground walkway 6: At-grade walkway 7: Walkway over bridge 8: Promenade in park 9: Public open space -94: Corner of intersection (set width code based on the main direction of the intersecting road) -96: Stairs -97: No shoulder (road without sidewalk or shoulder) -1: Unknown (set for construction areas around Harumi)
Pavement width code	Int64	0: Unknown (not surveyed) 1: No sidewalk 2: Less than 2m 3: 2m-3.5m 4: 3.5m-4.5m 5: 4.5m or more
Station layout code	Int64	0: Links outside the station 1: Stairs 2: Escalators 3: Elevators 4: Ticket gates 5: Passageways 6: Dummy
3D structure	Int64	-3: 3rd basement floor -2: 2nd basement floor -1: 1st basement floor 0: Above ground 1: 1st above ground 99: Unknown (uninvestigated)
ONodelD	Int64	Starting node number Under 2000: Toyosu pedestrian node the 10000000s: Pedestrian node the 20000000s: Railroad node the 30000000s: Bus node
ONodeName	String	Starting node name ONode Type 1 (for walking): DRM mesh + node number ONode Type 2 (for trains): Train station name ONode Type 3 (for buses): Bus stop name
ONodeLat	Float64	Origin coordinates World Geodetic System Longitude
ONodeLon	Float64	Origin coordinates World Geodetic System Latitude
DNodelD	Int64	End node number

Column Name	Data Type	Description
DNodeName	String	End point node name
DNodeLat	Float64	End point coordinates World Geodetic System Longitude
DNodeLon	Float64	End point coordinates World Geodetic System Latitude

#### **Hash Value**

 $\verb|c478| adffbcd3263| ee 280| aa355| dd530171| b88041| afde869| d0fea1| d220| f9ba0| e58| additionally below the property of the property of$ 

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