

molex Automotive Networking Connectivity Solution User Guide

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Automotive Networking
Connectivity Solution
Reference Guide

As a leading supplier of high-speed networking solutions, Molex is supporting OEMs in the development of in-vehicle networks that are secure, prioritized, reliable, and have high bandwidth. Building upon its strength in cables, connectors, media modules, and signal integrity innovations, Molex is addressing the increased demand for in-vehicle processing power.

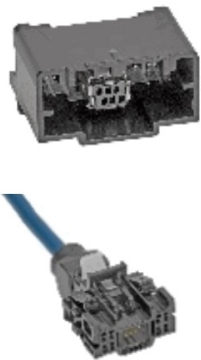
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HSAUTOLINK I

	Speed	Protocol	Cable type	Description	Application
	2 Gbps	Up to 100 Base-T1, USB 2.0 LVDS	UTP, STP	<p>Rugged assembly with positive latching and assembly guide rails provides a proven interface offering durability. Pre-assembled housing and industry-standard header with multiple keying options, meets all USB 2.0 electrical and EMI shielding requirements, and is USCAR-30 compliant.</p>	Connected vehicle services, Diagnostics/ Data upload, Infotainment, Navigation, Telematics, and Display.
				USCAR-30 compliant ensures products are qualified and market-tested to stand up to the rigorous in-vehicle environment. Full-length cable shielding provides superior signal performance and reduced Electro-Magnetic Interference (EMI).	


HSAUTOLINK II HYBRID

	Speed	Protocol	Cable type	Description	Application
	13 Gbps	Up to 1000 Base-T1, USB 2.0, LVDS, FTP	UTP, STP, Twisted, Single wire	Ideal for mixed low speed, high speed, and power applications, supporting infotainment systems, telematics, and camera devices.	Camera sensor-based, Camera, Controller, Diagnostics/Data upload, Infotainment, Navigation, Telematics, ADAS.



HSAUTOLINK II

	Speed	Protocol	Cable type	Description	Application
	13 Gbps	Up to 1000 Base-T1, USB 2.0 /USB 3.0, DisplayPort, LVDS, FTP	UTP, STP, Twisted pair	<p>Manufactured from high-temperature plastic material that is compatible with lead-free through-hole reflow process (Pin-in-Paste) or lead-free selective wave soldering process</p> <p>The rear (soldering) side of right-angle headers features a closed shielded case providing robustness and guarantees signal integrity delivering high EMI protection</p> <p>Compact, low-profile optimizing device-side space savings to meet future needs for increasing high-speed communication links uses proven Molex LFH (Low Force Helix)</p> <p>Flexible, expandable product family with data rates up to 13 Gbps allowing for combined links and supporting multiple protocols in the same connector</p> <p>Compatible with shielded twisted-pair (STP) or jacketed unshielded twisted pair (JUTP) cable construction which is a cost-competitive solution for high-speed differential signaling applications providing construction flexibility</p> <p>Fully protected perimeter seals and wire seals ensure the system is rated to IP67 and IP69K for use in harsh environments and wet locations</p>	Camera sensor-based, Camera, Controller, Diagnostics/Data upload, Infotainment, Navigation, Telematics, ADAS.

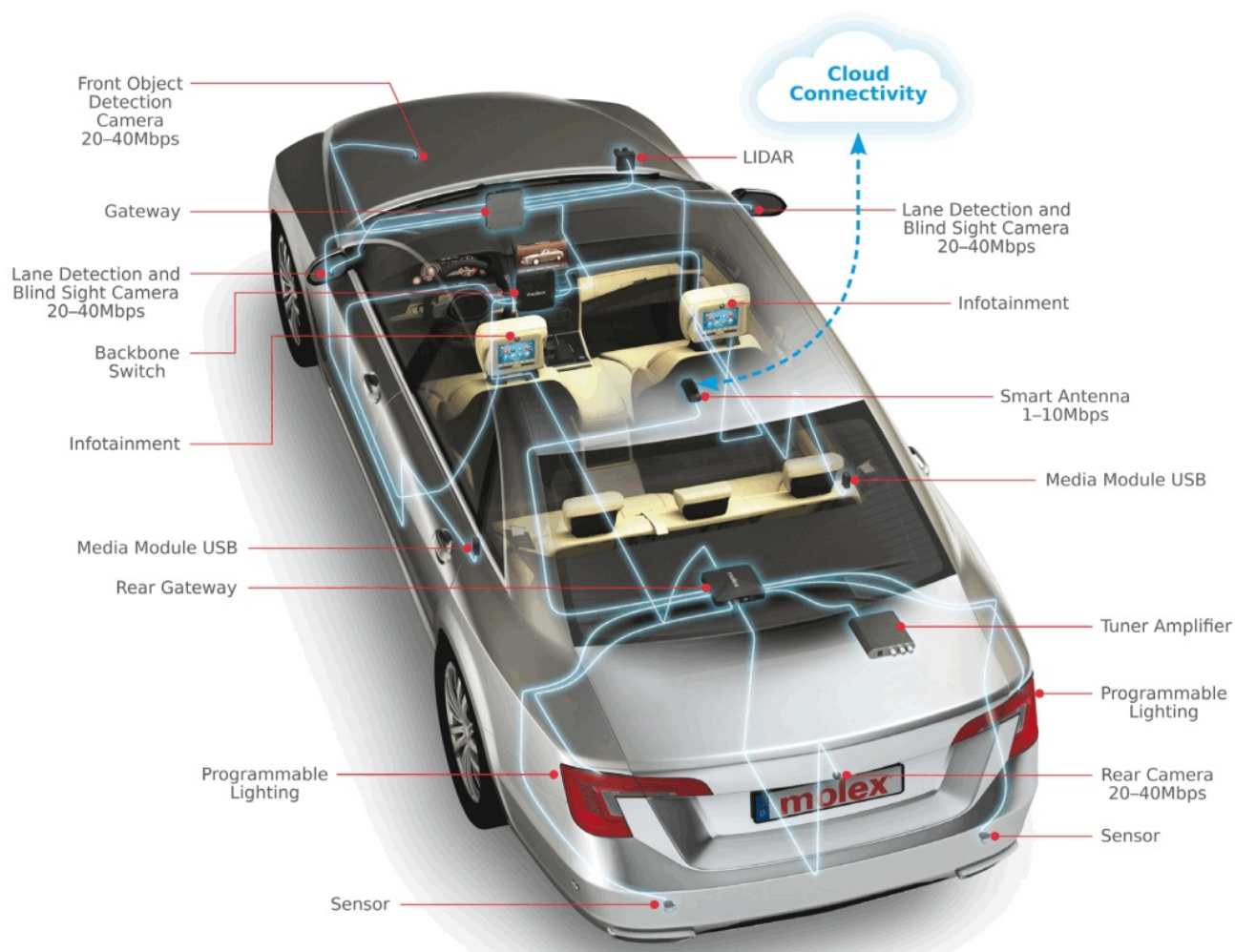
High-Speed Fakra Mini

	Speed	Protocol	Cable type	Description	Application
	20 Gbps	Up to MultiGig Ethernet	Coax	The High-Speed FAKRA Mini (HFM) Coaxial Cable Solution delivers 20 Gbps of data speed for the connected vehicle, supporting any modern radar, camera, lidar, or sensor applications.	Instrument cluster, ADAS, Modules, Camera, Antenna, GPS, Gateway/ Switch, 4K displays, Infotainment, Internet, Navigation, NextGen wireless LAN, Sensors, Surround view.

USB Illuminated

	Speed	Protocol	Cable type	Description	Application
 	480 Mbps	USB 2.0	STP	Delivers data requirements in an illuminated interface for easy mating in all lighting conditions. Custom colors are available and may be formulated to meet most requests. Max. and min. luminosity may also be customized	Infotainment, Navigation, Media modules
	Up to 5 Gbps	USB 2.0/USB 3.0	STP		

Markets	Applications
Automotive	Infotainment
Commercial vehicles	Telematic devices
Farm equipment	Safety and collision avoidance cameras
Motorcycles	In-Vehicle applications
All-terrain vehicles	Navigation systems
Watercraft	Connected vehicle services
Aircraft	Advanced Driver Assistance System (ADAS)



www.molex.com/connected-mobility

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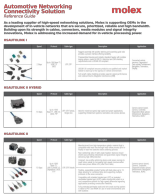
HFM is a registered trademark of Rosenberger.

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Documents / Resources

	<p>molex Automotive Networking Connectivity Solution [pdf] User Guide</p> <p>Automotive Networking Connectivity Solution, Connectivity Solution, Automotive Networking</p>
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References

- [molex.com/connected-mobility](http://www.molex.com/connected-mobility)