



Products	USA Patent Application & Patent Number
Vehicle Exterior Mirror Casing	US6648484; US9393909; US9663027; US9696000; US10274155; US20190248291; US10589683; US20210031689; US20210031694
Vehicle Exterior Mirror Regulating Mechanism	US6899439; US8075146; US8622559; US9200680
Electrochromic Device For Vehicle Mirror	US6768574; US10286845; US20190232873
Vehicle Exterior Mirror Signal Lighting System	US7690823; US7753571; US8882315; US9696000; US10274155; US20190391321; US10738960; US10780819; US20210031689; US20210031694
Vehicle Exterior Rearview Mirror	US6871970; US9663027; US20190248291
Vehicle Rearview Vision Camera System	US20180093613; US10889245; US20210031694
Vehicle Image Display System	US10819917
Vehicle Electrical Wiring Connector	US10103472; US20190280469
Vehicle Exterior Mirror Folding Mechanism	US7125127; US7572018; US9758100; US9845054; US9950670; US10035459; US10046704; US10077001; US10953803; US20190248291; US20190280469; US10703280; US20210046877
Vehicle Gear Cable Tension Adjusting System (Bowden Cable)	US8967018
Vehicle Gear Shifter Housing	US8122784; US10982754
Vehicle Shift-By-Wire Gear System	US8726756; US10871221; US10927951; US20190331215; US10962108; US9139094; US20190063592; US20210095756
Vehicle Cable Retaining Device	US8997604
Vehicle Gear Shift System	US8757025; US8820187; US9139094; US10927947; US10030762; US10088042; US20190063592; US10941852; US11054487; US10330195; US10982754; US20190331215; US20210025493; US20210102622
Vehicle Parking Brake System	US7987949; US8215462; US8469158
Vehicle Antenna System	US6809692; US8866681; US9653787; US10033091; US10224618; US10305162; US10971812; US10903555; US10840586; US20190386384; US20190386385; US20200006844; US20200006850; US10541469; US10965011; US10693220; US11043737; US20210192093
V2X Antenna System	US11043737; US20210192093
Antenna Receptacle (Aircraft)	US8836589
Antenna Receptacle (Vehicle)	US20200006844; US10965011; US10693220
Vehicle Miniature Antenna System	US7868834; US8866681; US10033091; US10224618



Vehicle Mirror Antenna System	US9343803; US8866681; US9653787; US10903555
Vehicle Sharkfin Antenna System	US10033091; US10224618; US10305162; US10541469; US20200335848
Vehicle Camera Washing System	US10532368; US10335806; US20200023815; US10144395; US10286877; US20210018112; US20200369244; US20200370665
Vehicle Lighting Washing System	US7753287; US8671977; US10532368; US10335806; US20200369244; US20200370665
Vehicle Sensor Washing System	US10882495; US10532368; US10335806; US20200023815; US10144395; US10286877; US20210009085; US20200369244; US20200370665
Vehicle Glass Panel Washing System	US7281671; US8671977; US20200369244; US20200370665
Electromagnetic Fluid Valve	US20210018112
Object Presence Detection Sensor System For Vehicle Perimeter	US6911642; US7378947; US7463166; US7929048; US8044789; US10596979; US20200211398; US20200401818; US20210006691
Heated Camera System For Vehicle	US7645961
Vehicle Driver Diagnosis System	US8734359; US9663047
Exterior Rearview Mirror Camera	US7391014; US7392118; US7929048; US20200211398; US20200401818; US20210006691
Clean / Dirty Camera Detection System For Vehicle	US10922803; US20190391075
Vehicle Camera Calibration System	US10902641
Display Panel Error Detection System For Vehicle	US10453367
Vehicle Camera System	US10996544; US20200401818; US20210006691; US20210122299
Starting Electric Vehicle	US10160327; US11034244
Electric Vehicle Battery Charger	US10286788; US10632855
Vehicle Seat With Pressure Sensor	US8893564
Vehicle Seat Manufacturing	US9452700
List revised and published July 2021 - For detailed product descriptions and specifications, please visit www.ficosa.com	



Products	EU Patent Application & Patent Number
Vehicle Exterior Mirror Casing	EP2821284; EP2803532; EP2853444; EP3501899; EP3524474; DE60301905; FR2839480; ES2250860; EP1361114; DE112007000230
Vehicle Exterior Mirror Regulating Mechanism	DE60201897; EP1382488; EP1829744; DE602004016063; EP2517930; ES2561931; EP2716927; DE102005050603; ES2254013
Electrochromic Device For Vehicle Mirror	EP3219549
Vehicle Interior Rearview Mirror	EP3744570
Vehicle Exterior Mirror Signal Lighting System	EP1726480; ES2215486; DE112011101860; ES2458428; EP2803532; EP2853444; EP3587914; EP3671018; EP3434969; EP3674795; FR2821308
Vehicle Exterior Rearview Mirror	DE60304385; FR2839027; EP1359053; ES2261897; ES2458428; EP3524474; DE112007000230
Vehicle Rearview Vision Camera System	EP1626290; EP3176035; EP3176037; EP3305597; EP3489087; EP1657568
Vehicle Image Display System	EP3431338
Vehicle Electrical Wiring Connector	EP3539828; FR2871306
Vehicle Exterior Mirror Folding Mechanism	EP1754630; ES2217986; EP2805853; EP2902263; EP3142900; EP3020605; EP3150438; EP3165404; EP3412509; EP3408139; EP3539828; EP3524474; EP2698280; EP3653442; FR2821033; DE602005011133
Vehicle Exterior Rearview Mirror Attachment Device	FR2827232; DE60301905; FR2839480; ES2250860; EP1361114; DE60319597; EP1657456; FR2871121; FR2821033
Vehicle Gear Shifter Housing	DE602006004128; EP1770311; EP3561835; EP3447339
Vehicle Shift-By-Wire Gear System	DE602005012387; EP1752688; DE112007002128; EP2184517; EP2112408; EP2636926; DE102013216719; EP3091256; EP3379370; EP3447340; EP3453925; EP3478990; ES1168934; EP3657049; EP3670968
Vehicle Cable Retaining Device	EP2568184; ES2528965; ES2537345; EP2857264; EP3273112
Vehicle Gear Shift System	DE602006004128; EP1770311; DE102005058244; DE112007002128; EP2515003; EP2532929; EP2636926; ES2444974; EP3128209; EP3306143; EP3379370; EP3447340; EP3478990; EP3483479; EP3495830; EP3561835; EP3645331; EP2628979; ES1168934; EP3447339; EP3657049; EP3670968; EP3653908; EP3779243



Vehicle Parking Brake System	EP1608541; EP1609035; DE102005000804; DE102006016497; EP2557003; DE102012208930; EP3835624
Noise Reduction Device For Vehicle Gear Shift System	EP3809021
Vehicle Antenna System	DE602004010089; EP1616368; DE112008001263; EP2833479; EP3128672; EP3142187; EP3174157; EP3270461; EP3432418; EP3474376; EP3503291; EP3512038; EP3582323; EP3584886; EP3588674; EP3588673; EP3700011; EP1769565; DE602005022720; EP2026473; DE602007010135; EP2109182; EP2128841; ES2775074; EP3838684
Antenna Receptacle (Aircraft)	EP2332213
Antenna Receptacle (Vehicle)	EP3432418; EP3588673; EP3700011
Vehicle Miniature Antenna System	DE602004010089; EP1616368; DE112008001263; EP3128672; EP3142187; EP2109182
Vehicle Mirror Antenna System	DE602004010089; EP1616368; DE112008001263; EP2429028; EP2833479; EP3503291; EP1769565; DE602005022720
Vehicle Sharkfin Antenna System	EP3128672; EP3142187; EP3174157; EP3270461
V2X Antenna System	EP3838684
Vehicle Camera Washing System	EP2949520; EP2949521; EP3168094; EP3333026; EP3272596; EP3501920; EP3501921; EP3318452; EP3597491; EP3466774; EP3767142; EP3741631; EP3741632
Vehicle Lighting Washing System	DE10220579; DE10262093; EP1506109; DE60318843; ES2300586; DE112007001761; ES2318980; EP3272596; EP3501920; EP3501921; EP3318452; ES2319374; EP3466774; EP3741631; EP3741632
Vehicle Sensor Washing System	EP2949520; EP2949521; EP3168094; EP3333026; EP3272596; EP3501920; EP3501921; EP3318452; EP3597491; EP3466774; EP3763580; EP3741631; EP3741632
Vehicle Glass Panel Washing System	DE60314447; EP1572510; ES2287551; DE112007001761; ES2318980; ES2319374; EP3466774; EP3741631; EP3741632
Filter For Vehicle Windshield Washer Pump	EP1410966; ES2249579
Electromagnetic Fluid Valve	EP3767142
Object Presence Detection Sensor System For Vehicle Perimeter	EP3148174; EP1626290; ES2374533; EP1542194; ES2328676; DE60232378; EP1729270; DE602004021433; ES2329683; EP1854666; ES2259543; EP3756949; EP3761113



Heated Camera System For Vehicle	DE60333497; ES2349590; EP1626583
Vehicle Driver Diagnosis System	EP3562394; EP2281506; EP2811474
Exterior Rearview Mirror Camera	EP1626290; ES2374533; EP1640215; ES2283770; DE60312394; EP1657568; EP3756949; EP3761113
Clean / Dirty Camera Detection System For Vehicle	EP3489892; EP3584567
Vehicle Camera Calibration System	EP3531376
Display Panel Error Detection System For Vehicle	EP3343541
Vehicle Camera System	DE202019005397; EP3756949; EP3761113; EP3816723; EP3751834; EP3836529
Image-Based Object Recognition Device For Vehicle	DE202015100437; DE112015005258
Starting Electric Vehicle	EP3147679
Electric Vehicle Battery Charger	EP3038226; EP3361271; EP3185406
Electric Current Measuring Device For Electric Vehicle	EP3306325; EP3842814
Electric Current Measuring Device With PFC Circuit	EP3540448
Electric Vehicle Battery Pack Balancing System	EP3323665; EP2757653
Charging Control Device For Electric Vehicle	EP2757653
Battery Connecting System For Electric Vehicle	EP3421287; EP3525225; EP3223341; EP3843222
Diagnostic System For Contactor Of Electric Vehicle	EP3674127; EP2857851
Shunt Resistance Device	EP3527995
Electric Vehicle Battery Pack	EP2631964
Control System For Electromechanical Contactor Of Electric Vehicle	EP3806127
Power Conversion System For Electric Vehicle	EP3819159; EP3819160
Vehicle Seat With Pressure Sensor	EP2374652; EP2555946; EP2851239
Vehicle Seat Manufacturing	DE102013219056; EP3228495; EP3569106; EP3693212
Bowden Cable For Vehicle Seat Adjustment	EP3569106; DE102006009023; DE102004009332; DE102005048659; EP2281715; EP3812207
Air Pump Valve Device For Vehicle Seat Chamber	EP3489512; EP3660306; EP3599128
Support Structure For Vehicle Seat	EP2374652; EP2555946; DE102007034187; EP2170648; DE10329852; EP2394846; EP1493618; EP3228495; EP3569106; EP3575144; DE102005053948; DE102008050550; DE102008064663; EP2261075; EP2851239; EP3693212; EP3812207
Bowden Cable For Vehicle	EP3462047; DE10146930; DE102005040861; DE102005063551; EP2993364; EP3012472
Dynamic Pneumatic Support System For Vehicle Seat	EP3569106; EP3575144; EP3599128
Vehicle Seat Massage Device	EP3599128
Lumbar Support System For Vehicle Seat	EP3569106; EP3575144; DE102005053948; EP2281715; EP3693212; EP3812207



Commercial Vehicle Exterior Mirror Swivel Device	DE102016102508; DE10144283; DE10138478
Commercial Vehicle Exterior Mirror Telescoping Adjustment Device	EP3235686
Commercial Vehicle Exterior Mirror With Camera	DE102009006109
Monitoring System For Commercial Vehicle	DE102009034283; EP1854666; ES2259543
Commercial Vehicle Exterior Mirror Mounting System	DE102008026039; DE10144283; DE10138478
Commercial Vehicle Exterior Mirror Housing System	DE102016105668; EP3225467; DE10144283; DE10138478
List revised and published July 2021 - For detailed product descriptions and specifications, please visit www.ficosa.com	



Products	Asia Patent Application & Patent Number
Vehicle Exterior Mirror Casing	CN104276090; CN104515050; CN109969087; CN110154903; JP2019163031; CN210027212; CN208585176; CN204109897; CN104163138; CN206900251; CN206900253; CN110126737; CN209987831; CN101374692
Vehicle Exterior Mirror Regulating Mechanism	CN101084138; CN101437706; CN102756690; JP5981210; CN103711805; JP6067526; CN203888705; CN101084138
Electrochromic Device For Vehicle Mirror	CN107187388; JP2017165405
Vehicle Interior Rearview Mirror	CN105882531; JP6517711; CN108216042; JP2018103980
Vehicle Exterior Mirror Signal Lighting System	JP4348461; JP4928243; CN102947131; CN104515050; CN111332191; CN111332189; CN103786650; CN205601708; CN209852171; CN209484481
Vehicle Exterior Rearview Mirror	CN110154903; JP2019163031; CN103786650; CN208585176; CN104163138; CN206900251; CN206900253; CN110126737; CN209987831; CN101374692
Vehicle Rearview Vision Camera System	JP4928243; CN107054222; JP6746480; CN107891811; JP6877311; CN109835259; JP2019094055; JP4423208
Vehicle Image Display System	CN109286783; JP2019018846
Vehicle Electrical Wiring Connector	CN106104936; JP6546934; CN110254357; JP2019163032; CN210126497; CN110303997; CN112510410
Vehicle Exterior Mirror Folding Mechanism	JP4035504; CN100436195; JP4768721; CN104175961; CN104816673; CN106458099; JP6415601; CN105599685; JP6510385; CN106985752; JP6681818; CN108995595; JP2018203251; CN106985755; CN110254357; JP2019163032; CN110154903; JP2019163031; CN108778839; CN104163141; CN205086793
Vehicle Mirror Lens Adhesion Testing Device	CN203178173
Vehicle Mirror Impact Resistance Testing Device	CN203178059
Vehicle Mirror Deflection Angle Testing Device	CN203178054
Vehicle Mirror Natural Frequency Testing Device	CN203177965; CN203177964
Vehicle Mirror Housing Assembly Attachment Structure	CN211667004
Test System For Vehicle Electrical/Electronic Components	CN211669303
Vehicle Gear Shifter Housing	JP5419700; CN110388457; CN210830413; CN204109799; CN206785991; CN206175639; CN212765949; CN212927386



Vehicle Shift-By-Wire Gear System	JP5653039; JP5652846; JP6867415; CN109424736; CN109469726; CN108626380; JP2018158718; JP5042560
Vehicle Cable Retaining Device	CN102996613
Vehicle Gear Shift System	JP5356824; JP5653039; CN107893846; JP2018058580; JP6867415; CN109424736; CN109780193; CN109959331; JP2019089540; JP2019101044; CN110388457; CN110799374; JP2020530145; CN210830413; CN208057921; CN108626380; JP2018158718; CN102818004; CN203172433; CN108302198; CN108700185; CN206781623; CN206900244; CN107150630; CN208885941; CN207554774; CN109416118; CN106838303; CN109707842; CN109630675; CN206175639; JP6806653; CN109838551; CN211975847; JP6823209; CN212765949; CN212927386; CN113007333; CN111637218; CN112984103; JP2021095997
Vehicle Parking Brake System	JP4865715; CN101132955; JP5156388; JP5213848; CN102951134; CN204109799
Noise Reduction Device For Vehicle Gear Shift System	CN203892522; CN210839184; CN112728061
Vehicle Gearshift Testing Device	CN203216653; CN203216721
Vehicle Brake Cable Testing Device	CN203216711
Vehicle Antenna System	KR100821453; CN101682107; JP5033237; CN109672018; JP2019075788; CN109273867; KR100871233
Antenna Receptacle (Vehicle)	CN109273867
Vehicle Miniature Antenna System	KR100821453; CN101682107; JP5033237; KR100871233
Vehicle Mirror Antenna System	KR100821453; CN101682107; JP5033237; KR100871233
Vehicle Sharkfin Antenna System	CN111828453
Vehicle Camera Washing System	CN105128825; JP6584145; CN105128826; JP6576686; CN107930889; JP2018061954; CN108058676; JP2018076055; JP2018020317; CN107640132; CN110733469; CN107930889; CN106694425; JP6902850; CN112240395; CN111959440; CN111981159
Vehicle Lighting Washing System	CN107930889; JP2018061954; CN108058676; JP2018076055; JP2018020317; CN107640132; CN107930889; CN111959440; CN111981159
Vehicle Sensor Washing System	CN105128825; JP6584145; CN105128826; JP6576686; CN107930889; JP2018061954;



	CN108058676; JP2018076055; JP2018020317; CN107640132; CN110733469; CN107930889; CN106694425; JP6902850; CN112193209; CN111959440; CN111981159
Electromagnetic Fluid Valve	CN112240395
Vehicle Glass Panel Washing System	CN111959440; CN111981159
Object Presence Detection Sensor System For Vehicle Perimeter	CN106973256; JP6856338; JP4423208; JP2007522999; JP4751894; JP2021000984; CN112135089; CN112238813; JP2021010165
Heated Camera System For Vehicle	JP4252959
Exterior Rearview Mirror Camera	JP4271149; JP4423208; JP2021000984; CN112135089; CN112238813; JP2021010165
Clean / Dirty Camera Detection System For Vehicle	CN109840911; JP2019096320
Vehicle Camera Calibration System	CN110176038; JP2019169942
Display Panel Error Detection System For Vehicle	CN108269514; JP2018112738
Vehicle Camera System	CN111193847; JP2021000984; CN112135089; CN112238813; JP2021010165; JP2021067950; JP2021092782
Starting Electric Vehicle	CN106926703
Electric Vehicle Battery Charger	CN106915264; CN108398598; JP2018128454
Electric Current Measuring Device For Electric Vehicle	CN107918105; CN113030714
Electric Current Measuring Device With PFC Circuit	CN110277903
Electric Vehicle Battery Pack Balancing System	CN108068653
Charging Control Device For Electric Vehicle	CN209904535
Battery Connecting System For Electric Vehicle	CN109130893; CN110126622
Diagnostic System For Contactor Of Electric Vehicle	CN111381155
Shunt Resistance Device	CN110174540
Control System For Electromechanical Contactor Of Electric Vehicle	CN112631362
Power Conversion System For Electric Vehicle	CN112776632; CN112776631
Bowden Cable For Vehicle Seat Adjustment	CN101400547
Screw Endurance Experiment Rack	CN203894038
Vehicle Cooling Pot Aeration Test	CN203178078
Kettle Test Device For Air Tightness	CN202693214
Kettle Welding Device	CN202685316
List revised and published July 2021 - For detailed product descriptions and specifications, please visit www.ficosa.com	