FlexLock™ Flex–to–Board & Flex–to–Wire

MORE FLEXIBLE SOLDERING AUTOMOTIVE GRADE CONNECTOR SYSTEM

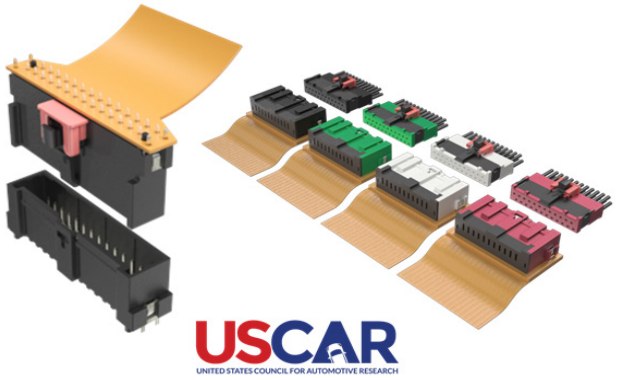
FlexLock™ FPC–to–Board and Flex–to–Wire connector's compact design address the growing demand for automotive application market. The connector design is compliant to USCAR– T2V2 and LV–214 S3 specifications.

The connector has nominal current carrying capacity of 2A per contact to support higher power application.

FlexLock™ 2.54mm pitch is supporting in 10 to 36 positions double row with vertical and horizontal TH configurations, and in 4 position single row vertical and horizontal TH configurations.

FlexLock™ 3.20mm pitch is supporting in 10 to 26 positions double row with horizontal TH configuration.

- USCAR–T2V2, LV–214 S3 compliant
- Re–flow tin plated reduce mating force
- Position from 10 to 36 (2.54mm pitch, double row)
- Position from 4 to 15 (2.54mm pitch, single row)
- Position from 10 to 26 (3.20mm pitch, double row)
- Connector Position Assurance (CPA)



TARGET MARKETS

FEATURES	BENEFITS
▪ Re–flow tin plating process for terminal	▪ Low mating and un–mating force
▪ Current rating 2A with each contact	▪ Meet higher power Amps performance
▪ Terminal Position Assurance (TPA)	▪ Ensures proper terminal insertion position and retention
▪ Hold down	▪ Increase the board grip force
▪ Connector Positioning Assurance (CPA)	▪ Ensures that connectors are properly mated and locked together

TECHNICAL INFORMATION

MATERIAL

- Connector Contact: Copper Alloy
- Housing: High temperature UL94V-0
- Plating: Tin plated
  8µin GXT®/Au

ELECTRICAL PERFORMANCE

- Voltage Rating: 48VAC/DC
- Insulation Resistance: 100MΩ min.
- Contact Resistance: 25mΩ max. (initial)
- Current Rating: 2A
- Low Level Contact Resistance: <25mΩ
- Dielectric Withstand Voltage: 500V AC
- Temperature Rise: +55°C max. for 7.32A

MECHANICAL PERFORMANCE

- Durability: 10 cycles (Tin), 30 cycles (Gold)
- Mating/Un-mating Force: 75N max.
- Terminal Insertion Force: <5N max./pin
- Terminal Retention Force: 15N min.

ENVIRONMENTAL

- Operating Temperature Range: -40°C to +105°C

APPROVALS AND CERTIFICATIONS

- UL E66906
- USCAR T2V2
- LV 214 S3

SPECIFICATIONS

- Product Specification:
  - GS-12-1679 (FlexLock™ 2.54mm & 3.2mm D/R, flex-to-board)
  - GS-12-1535 (FlexLock™ 2.54mm, flex-to-wire)
  - GS-12-1745 (FlexLock™ 2.54mm S/R)
- Product Pitch: 2.54mm, 3.20m
- PCB Termination: 1.60mm
- Packaging Specification: GS-14-2781
- Application Specification:
  - GS-20-0707 (flex-to-board)
  - GS-20-0788 (flex-to-wire)

PACKAGING

- Header: Tape and reel
- Receptacle Housing: Tray
- Cable housing: Bag

TARGET MARKETS/APPLICATIONS

BMS (Battery Management System)
OBC (On-board Charger)
MCU (Micro Control Unit)

Robotics

PART NUMBER SELECTOR–DOUBLE ROW R/A–HEADER–2.54MM

Find part number details using the search box on www.amphenol-cs.com

10158557 — [ ] — **XX** — **X** — **X** — **X** **X** **LF** — Lead-free

BASE NUMBER: 10158557

Configuration	
R	Standard
Blank	For Customer Code

PIN Counts: 10–36	
Example	10pin––– 10
	36pin–––36

Plating Options	
1	1–––8µin GXT® or Gold
2	40µin Tin
3	40µin Tin with Lubrication

Rare Cover Options	
1	Without Rear Cover
2	With Rear Cover

Spacer Options	
0	Without Spacer
1	With Spacer

Coding Type	
1	No Coding Feature Black
2	Green (RAL 6002)
3	White (9001)
4	Bordeaux (RAL 4004)
A	With Coding Feature Coding A Black
B	Coding B Green (RAL 6002)
C	Coding C White (RAL 9001)
D	Coding D Bordeaux (RAL 4004)

PART NUMBER SELECTOR–DOUBLE ROW VERTICAL–HEADER–2.54MM

Find part number details using the search box on www.amphenol-cs.com

10161734 — [ ] — **XX** — **X** — **X** — **X** **X** **LF** — Lead-free

BASE NUMBER: 10161734

Configuration	
V	Standard
Blank	For Customer Code

PIN Counts: 10–36	
Example	10pin––– 10
	36pin–––36

Plating Options	
1	1–––8µin GXT® or Gold
2	40µin Tin
3	40µin Tin with Lubrication

Pick-Up Options	
0	Without
1	With Mylar
2	With Cap

Tail Options	
0	Contact Tail SMT
1	Contact Tail THT L = 1.85
2	Contact Tail THT L = 2.55

Coding Type	
1	No Coding Feature Black
2	Green (RAL 6002)
3	White (9001)
4	Bordeaux (RAL 4004)
A	DIM F 6.73 Black
B	DIM F 6.23 Green (RAL 6002)
C	DIM F 5.73 White (RAL 9001)
D	DIM F 7.23 Bordeaux (RAL 4004)

PART NUMBER SELECTOR–DOUBLE ROW R/A–RECEPTACLE–2.54MM

Find part number details using the search box on www.amphenol-cs.com

10158558	—		—	XX	—	X	—	X	—	X	X	LF	Lead-free

BASE NUMBER: 10158558

Configuration	
R	Standard
N	LV214 S3
B	Special for user (CPA Seperated Wrap)
Blank	For Customer Code

PIN Counts: 10–36	
Example	10pin--- 10
	36pin---36

Plating Options	
1	1---8µin GXT® or Gold
2	40µin Tin

Cover Options	
0	Without Cover
1	With Cover

CPA Options	
1	Without
2	With

Coding Type	
1	DIM F 0 (No Coding) Black
2	Green (RAL 6002)
3	White (9001)
4	Bordeaux (RAL 4004)
A	DIM F 6.65 Black
B	DIM F 6.15 Green (RAL 6002)
C	DIM F 5.65 White (RAL 9001)
D	DIM F 7.15 Bordeaux (RAL 4004)

PART NUMBER SELECTOR–DOUBLE ROW VERTICAL–RECEPTACLE–2.54MM

Find part number details using the search box on www.amphenol-cs.com

10161735	—		—	XX	—	X	—	X	—	X	X	LF	Lead-free

BASE NUMBER: 10161735

Configuration	
V	Standard
Blank	For Customer Code

PIN Counts: 10–36	
Example	10pin--- 10
	36pin---36

Plating Options	
1	1---8µin GXT® or Gold
2	40µin Tin

Pick-Up Options	
0	Without
1	With Mylar

CPA Options	
0	Without
1	With

Coding Type	
1	No Coding Feature Black
2	Green (RAL 6002)
3	White (9001)
4	Bordeaux (RAL 4004)
A	With Coding Feature Coding A Black
B	Coding B Green (RAL 6002)
C	Coding C White (RAL 9001)
D	Coding D Bordeaux (RAL 4004)

PART NUMBER SELECTOR–DOUBLE ROW R/A–HEADER–3.20MM

Note: This table may update not on time, please contact our local sales to confirm the latest information.

10164521 — Y — XX — X — X — X X LF — Lead-free

BASE NUMBER

Connector Style	
R	Right angle

PIN Counts: 10–26	
Example	10pin--- 10
	26pin---26

Packing Type	
0	Tray
1	Tape and reel

Contact Plating
0---40µin Tin

Tail Options
0---All TH, Tail length 2.60mm

Cover Options	
0	Without
1	With

Find part number details using the search box on www.amphenol-cs.com

PART NUMBER SELECTOR–DOUBLE ROW R/A–RECEPTACLE–3.20MM

Note: This table may update not on time, please contact our local sales to confirm the latest information.

10164520 — Y — XX — X — X — X X LF — Lead-free

BASE NUMBER

Connector Style	
R	Right angle

PIN counts: 10–26	
Example	10pin--- 10
	26pin---26

Packing Type	
0	Tray
1	Tape and Reel

Contact Plating
0---40µin Tin

Tail Options
0---THT, L=2.15mm w/o HOLD DOWN
1---THT, L=2.15mm with HOLD DOWN

Cover Options	
0	Without
1	With

Find part number details using the search box on www.amphenol-cs.com

PART NUMBER SELECTOR_DOUBLE ROW R/A_HEADER_2.54MM (FLEX-TO-WIRE)

10166409 — Y — XX — X — X — X X LF — Lead-free

BASE NUMBER

Connector Style	
F	Right angle, No standoff & post

PIN Counts: 10–36	
Example	20pin--- 20
	36pin---36

Contact Plating	
1	8µin GXT® or Gold
2	40µin Tin

Rear Over Options
1---With rear cover

Tail Spacer Options
0---Without spacer

Coding Type	
1	No Coding Feature (Black)
A	Coding A Black
B	Coding B Green (RAL 6002)
C	Coding C White (RAL 9001)
D	Coding D Bordeaux (RAL 4004)

Find part number details using the search box on www.amphenol-cs.com

PART NUMBER SELECTOR_DOUBLE ROW_CABLE HOUSING_2.54MM (FLEX-TO-WIRE)

Note: This table may update not on time, please contact our local sales to confirm the latest information.

10166410	—	Y	—	XX	—	X	—	X	—	X	X	LF

Lead-free

BASE NUMBER

Connector Style	
W	Wire Lock

PIN Counts: 10-36	
Example	20pin--- 20
	36pin---36

Contact Plating	
0	40µin Tin

Reserved
0

Reserved
0

Coding Type	
0	No coding (Black)
A	Black
B	Green
C	White
D	Bordeaux

Find part number details using the search box on www.amphenol-cs.com

PART NUMBERS

Description	Part Numbers
FlexLock™, 2.54mm FPC-to-Board Connector Platform, R/A Board Header, 30 Position, Top Latch, Tin (pre-plated)	10158557-R302111LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, VT Receptacle, 30 Position, Top Latch, Tin (pre-plated), USCAR T2V2	10161735-V302011LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, VT Receptacle, 30 Position, Top Latch, Tin (pre-plated), LV214 S3	10161735-N302011LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, R/A Board Header, 30 Position, Top Latch, 8µin GXT® or Au plating	10158557-R301111LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, VT Receptacle, 30 Position, Top Latch, 8µin GXT® or Au plating, USCAR T2V2	10161735-V301011LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, R/A Receptacle, 30 Position, Top Latch, 8µin GXT® or Au plating, USCAR T2V2	10158558-R301111LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, R/A Board Header, 28 Position, Top Latch, Tin (pre-plated)	10158557-R282111LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, R/A Receptacle, 28 Position, Top Latch, Tin (pre-plated), USCAR T2V2	10158558-R282111LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, R/A Receptacle, 28 Position, Top Latch, Tin (pre-plated), LV 214 S3	10158558-N282111LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, R/A Board Header, 4 Position, Top Latch, Tin (pre-plated)	10165157-R041000LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, VT Receptacle, 4 Position, Top Latch, Tin (pre-plated), USCAR T2V2	10165160-V040010LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, VT Board Header, 28 Position, Top Latch, Tin (preplated), A code	10161734-V28322ALF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, VT Board Header, 28 Position, Top Latch, Tin (preplated), B code	10161734-V28322BLF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, VT Receptacle, 28 Position, Top Latch, Tin (preplated), A code	10161735-V28201ALF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, VT Receptacle, 28 Position, Top Latch, Tin (preplated), B code	10161735-V28201BLF
FlexLock™, 3.20mm FPC-to-Board Connector Platform, Board Header, 18 Position, Top Latch, Tin (pre-plated)	10164521-R181000LF
FlexLock™, 3.20mm FPC-to-Board Connector Platform, Receptacle, 18 Position, Top Latch, Tin (pre-plated), USCAR T2V2	10164520-R180001LF
FlexLock™, 2.54mm Flex-to-Wire, R/A header, Top Latch, Tin, USCAR T2V2	10166409 series
FlexLock™, 2.54mm Flex-to-Wire, Cable housing, USCAR T2V2	10166410 series
FlexLock™, 2.54mm Flex-to-Wire, Crimping terminal, USCAR T2V2	10163003-002LF

Find part number details using the search box on www.amphenol-cs.com

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